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of the

Michigan State Medical Society

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Cameron Haight, M.D.



F. W. Niehaus, M.D.

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HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of November 17, 1954

Sixty-nine items were presented to the Executive Committee of The Council at its November 17 meeting in Detroit. Items of chief importance were:

- Multi-phasic screening tests versus Michigan Periodic Health Appraisal plan. The 1954 MSMS House of Delegates' action encouraging periodic health appraisal by doctors of medicine in their private offices was reviewed; a letter proposed to be sent to the officers of county medical societies was presented by the Committee (William Bromme, M.D., R. H. Baker, M.D., and L. Fernald Foster, M.D.) and discussed with Michigan Health Commissioner A. E. Heustis, M.D. The text of the letter, as prepared by the Committee, was approved and ordered mailed to Presidents, Secretaries and Editors of County Medical Societies, together with a copy of the House of Delegates Action on the subject of periodic health appraisal.
- Committee reports. The following committee reports were presented: (a) Committee on Scientific Work, meeting of November 16; (b) Michigan Cancer Conference of October 14—report of C. Allen Payne, M.D., Grand Rapids, Chairman of the Michigan Cancer Co-ordinating Committee; (c) Medical Advisory Committee to United Health and Welfare Fund, meeting of October 28; (d) Committee on National Defense, meeting of November 3; and (e) Rural Medical Service Committee, meeting of October 28.
- Michigan Rural Health Conference of 1955: An official delegate from each county medical society was authorized to attend this conference, as in the past.
- AMA Rural Health Conference, Milwaukee, February, 1955: Official representation from the Michigan State Medical Society was authorized to attend this meeting.
- Financial report for the period ending October 31, 1954, and bills payable were presented; both were approved and payment of bills was authorized.
- C. G. Jennings, M.D., Detroit, was designated as official representative on the planning committee for the Second Citizens Public Health Conference of the Michigan Association of Health Officers, to be held in Ann Arbor, March 3-5, 1955.
- President R. H. Baker, M.D., and Council Chairman William Bromme, M.D., were invited by the AMA Council on Medical Service to speak at a panel in Miami at the AMA Clinical Session, on Sunday, November 29, on implementation of the AMA Program concerning non-service connected disabilities (Veterans Administration).
- L. W. Hull, M.D., Detroit, was appointed as MSMS representative to the Board of Directors of the Adult Education Association of Michigan, upon invitation of the Association.
- G. B. Saltonstall, M.D., Charlevoix, was appointed as MSMS representative to attend the Fourth Annual Meeting of the American Medical Education Foundation in Chicago, January 23, 1955.
- Dr. and Mrs. W. S. Jones, Menominee, were tendered a rising vote of thanks for their magnificent gift of a library of Beaumont books, of the era of 1820. This generous gift to the Michigan State Medical Society will be housed in the Beaumont Memorial at Mackinac Island.
- Michigan Clinical Institute. A request of the Operating Room Nurse group to hold a conference, coincident with the 1955 Michigan Clinical Institute, was given approval by the Executive Committee of The Council after written sanction by the Michigan State Nurses Association.
- Panel with two medical school deans of Michigan on undergraduate medical education, following instruction of the 1954 MSMS House of Delegates, was arranged for Monday, September 26, as a luncheon, as part of the MSMS House of Delegates activities.
- MSMS Annual County Secretaries—Public Relations Conference of January 30, 1955: The tentative program of this all-day conference was presented and approved.
- Committee on Basic Science Act. The Council Chairman reappointed H. A. Furlong, M.D., Pontiac; D. W. Thorup, M.D., Benton Harbor, and C. E. Umphrey, M.D., Detroit as members of the Committee with J. Joseph Herbert of Manistique as advisor; these appointments were confirmed by the Executive Committee of The Council.
- MSMS Field Secretary Warren Tryloff was delegated to assist the Wayne County Medical Society in the preparation of the story of its activities, representing a large urban medical society. The Chair praised Mr. Tryloff for his excellent work in the Detroit office since his appointment in July, 1954.
- A joint meeting with the AMA Delegates and Alternate Delegates from Michigan was held for a discussion of (a) resolution re study by AMA

(Continued on Page 10)

Meat...

in Geriatric Nutrition

Although the nutrient needs for optimal health in the aged are not known to differ significantly from those in younger adults,[1] it has been shown that the daily protein requirements in elderly patients vary from person to person. Ascertained values range from below to above allowances recommended for persons in earlier years of adulthood.[2]

According to criteria such as "physical activity, gastrointestinal structure and function, pathologic disturbances, and chemical balances," it is suggested that an optimal diet for the elderly patient should provide at least 20 per cent of its calories in the form of protein.[3]

For several reasons this high intake of protein appears desirable. Decreased activity in the aged tends to induce loss of tissue protein. Preservation of protein enzymes and of endocrinal harmony necessary for supporting anabolic processes requires adequate protein nutrition. Also, the aged person usually is able to handle the end products of protein metabolism satisfactorily.

Generous amounts of tender lean meat can go a long way in supplying the needs of the aged for top quality protein. From 25 to 30 per cent or more of cooked lean meat is protein. Other valuable contributions include the B group of vitamins and essential minerals, especially iron, phosphorus, and potassium. The easy and almost complete digestibility and the palate appeal of meat constitute physiologic values important in the nutrition of the geriatric patient.

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The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute

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HIGHLIGHTS OF THE COUNCIL

(Continued from Page 8)

of general practice (adopted by 1954 MSMS House of Delegates); (b) resolution re expansion of AMA facilities (adopted by MSMS House of Delegates September, 1954); (c) securing the January, 1956, AMA Congress on Industrial Health to Detroit (from Executive Committee of The Council, October 20); (d) various resolutions from other states to be presented to AMA in Miami, including one from Wisconsin, Louisiana, and from Indiana.

- The Public Relations Counsel's monthly report included: report on county medical society public relations meetings; plans for meeting with AMA representatives on November 18 in Detroit; Diabetes Detection Week campaign; the need for doctors in various areas of the state to volunteer to give physical examinations to boy scouts when they go to camp; TV debut of "Planning Your Career"; Girlstown Foundation; A. D. Brewer, Associate Public Relations Counsel, was authorized to appear on the program of the Michigan Welfare League Panel and to attend the annual meeting of the Public Relations Society of America; Michigan Rural Health Conference scheduled for January 20-21-22 at the Kellogg Center, East Lansing, with the first day's program being on the subject of medical associates, the second on child and youth health and the third day on community health councils.

HARVARD UNIVERSITY PUBLIC HEALTH SCHOLARSHIPS

Scholarships for the Academic Year 1955-56 will be granted to individuals of high professional promise in awards ranging from part tuition to tuition plus a stipend, according to the qualifications and financial needs of the applicants. The Scholarship Funds are limited and are primarily intended for citizens of the United States.

Scholarship applicants must be eligible for admission to the School as a candidate for one of the following degrees: Master of Public Health, Doctor of Public Health, Master of Science in Hygiene, Doctor of Science in Hygiene, Master of Industrial Health.

Scholarships are available to those in the following categories who wish to obtain postgraduate education in the field of public health or in one of the basic sciences related to public health:

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3. *Public Health Nurses* with a college degree and satisfactory field experience

(Continued on Page 92)



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126 North Washington Avenue
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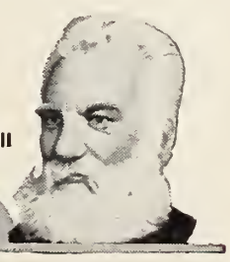
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PR REPORT

A GREATER VOLUME OF LEGISLATION having some bearing on health and medicine is anticipated for the 1955 Michigan Legislature than has been seen in most other recent years. While these words must necessarily be written far in advance of the opening of the 1955 Session, the MSMS Legislative Committee, and a great many county medical societies, have already considered some of the measures almost certain to be presented, and have alerted members what to expect. Since this is the first Legislature to be affected by the 1952 Reapportionment Amendment, and since there has been a great change in the personnel of both houses, organization of committees and the other preliminaries necessary before legislators can really get down to business will delay the introduction of many important bills.

Under reapportionment the House now has 110 seats, rather than 100, and the Senate has thirty-two, an increase of two over the previous membership. In the House are fifty-nine Republicans and fifty-one Democrats, while the new Senate has twenty-three Republicans and eleven Democrats. A complete list of State Representatives and Senators appears elsewhere in this issue. Every MSMS member should know who represents his community in Lansing, and should be prepared, if the occasion appears, to express his views as a citizen on pertinent health matters.

FEDERAL HEALTH LEGISLATION also will be scrutinized carefully by MSMS throughout the new session of Congress. The Legislative Committee, again under the chairmanship of L. A. Drolett, M.D., Lansing, will study and interpret measures introduced in Washington and will make recommendations on the position to be taken by MSMS. O. B. McGillicuddy, M.D., of Lansing, has taken over as the new Vice Chairman of the Legislative Committee. Of top interest on the national level, of course, is the President's re-insurance plan.

NOT SINCE THE PEAK of the post-World War II campaign against socialized medicine have county medical societies displayed such intense interest in public relations activities. That's the consensus of MSMS officers, PR Committee members and staff representatives who have met recently with county groups to discuss projects and long-term programs in a series of meetings all around the state. Undoubtedly there are a number of factors behind this reawakened interest, including the realization that the threat of government medicine is always present, openly or in various disguises. In many areas new leadership has inherited local PR activity, taking over the job with the same enthusiasm found during the so-called "C.A.P." campaign. Meanwhile many leaders of the earlier campaigns have stepped into active committee work and key spots at both the state and national level.

THE FOUNDATION FOR RENEWED PR activity in county societies may be found in the MSMS PR manual "Winning Friends for Medicine," which has been supplied to key people in each society. This is the booklet which outlines the twenty-six-point framework within which MSMS is prepared to give specific help, and which carefully spells out the services available from MSMS. The AMA also has come out recently with a PR manual for use at the county level. This textbook presents the mechanics of organizing and promoting projects in the eight categories which have been most popular and successful at the county level throughout the country. Single copies of this AMA manual are available to county medical society PR chairmen from MSMS headquarters in Lansing.

TELEVISION CONTINUES TO GROW as a medium for medical PR. Newest local TV show scheduled in Michigan is the once-a-month spot from 4:00 to 4:30 p.m. Sunday over WNEM-TV, Bay City, which the Saginaw County Medical Society will produce in February. Meanwhile, on the national ABC network, with WXYZ-TV, Detroit, as the Michigan outlet, a twenty-six-week series of fifteen-minute medical news programs has been inaugurated by Ciba under the title of "Horizons." This show is telecast at 9:15 p.m. Sunday and features Louis H. Bauer, M.D., Past President of AMA and Secretary-General of the World Medical Association.

THE ANNUAL REMINDER is in order: During the legislative session in Lansing, an additional load is thrown upon field secretaries. They will perform their routine duties and get into the field whenever possible, but it will be necessary to limit speaking engagements and other such "outside activities" until the close of the 1955 Legislature.

In the nation's urban population, which has readiest access to the best diagnostic facilities, cancer now leads all other diseases of the respiratory tract as a cause of death among white males.



ELECTRON PHOTOMICROGRAPH

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Roster of Legislators - 1955

With the 1955 session of the Michigan Legislature at hand, and many matters of interest to the medical profession to be considered, it is well for MSMS members to be acquainted with the names of those who represent them in Lansing.

Since there have been a great many changes in the membership of both houses, THE JOURNAL presents here the complete roster of the current Legislature, along with the names of the Michigan Congressional delegation and the elective state officers.

Michigan State Officers

GOVERNOR
G. Mennen Williams, Lansing

LIEUTENANT GOVERNOR
Philip A. Hart, Lansing

SECRETARY OF STATE
James M. Hare, Detroit

TREASURER
Sanford Brown, Bay Port

ATTORNEY GENERAL
John M. Kavanaugh, Carson City

AUDITOR GENERAL
Victor G. Targonski, Wyandotte

UNITED STATES SENATOR
Patrick V. McNamara, Detroit

Congressional Representatives

1st District—Thaddeus M. Machrowicz, Hamtramck
2nd District—George Meader, Ann Arbor
3rd District—Augustus E. Johansen, Battle Creek
4th District—Clare E. Hoffman, Allegan
5th District—Gerald R. Ford, Jr., East Grand Rapids
6th District—Don Hayworth, East Lansing
7th District—Jesse P. Wolcott, Port Huron
8th District—Alvin M. Bentley, Owosso
9th District—Ruth Thompson, Whitehall
10th District—Elford A. Cederberg, Bay City
11th District—Victor A. Knox, Sault Ste. Marie
12th District—John B. Bennett, Ontonagon
13th District—Charles C. Diggs, Jr., Detroit
14th District—Louis C. Rabaut, Grosse Pte. Park
15th District—John D. Dingell, Detroit
16th District—John Lesinski, Dearborn
17th District—Martha W. Griffiths, Detroit
18th District—George A. Dondero, Royal Oak

Michigan House of Representatives

Allegan District—Ben E. Lohman, Hamilton
Alpena District—James P. Mielock, Whittemore
Arenac District—Walter G. Nakkula, Gladwin
Bay District—Richard G. Smith, Bay City
Berrien 1st District—Donald R. Pears, Buchanan
Berrien 2nd District—Harry Litowich, Benton Harbor
Calhoun 1st District—Roy H. Brigham, Battle Creek
Calhoun 2nd District—Fred W. Zinn, Battle Creek
Charlevoix District—Clarence B. Meggison, Charlevoix
Chippewa District—Clayton T. Morrison, Pickford
Delta District—Einar E. Erlandsen, Escanaba
Eaton District—Andrew W. Cobb, Elsie; Carroll C. Newton, Delton
Emmet District—John Kilborn, Petoskey
Genesee 1st District—James J. Collins, Flint; Albert R. Horrigan, Flint; Roger B. Townsend, Flint 5
Genesee 2nd District—George A. Gillespie, Gaines
Gogebic District—Louis Mezzano, Wakefield
Grand Traverse District—Arnell Engstrom, Traverse City
Gratiot District—T. Jefferson Hoxie, St. Louis
Hillsdale District—Frederick J. Marshall, Allen
Houghton District—D. J. Massoglia, Laurium
Huron District—George Dunn, Pigeon
Ingham 1st District—Willard I. Bowerman, Jr., Lansing; Harold W. Hungerford, Lansing
Ingham 2nd District—John J. McCune, Lansing
Ionia District—Lloyd Gibbs, Portland
Iron District—Gilbert L. Wales, Stambaugh
Isabella District—Hugh D. Johnston, Rosebush
Jackson 1st District—Wilfred G. Bassett, Jackson
Jackson 2nd District—Leo Miller, Jackson
Kalamazoo 1st District—Wade Van Valkenburg, Kalamazoo
Kalamazoo 2nd District—Cyril H. Root, Kalamazoo
Kent District—Andrew Bolt, Grand Rapids; Edward A. Borgman, Grand Rapids; Thomas J. Whinery, Grand Rapids
Kent 2nd District—Harry T. Emmons, Byron Center
Kent 3rd District—Glenn Hunsberger, Grand Rapids
Lapeer District—Louis C. Cramton, Lapeer
Lenawee District—Rollo G. Conlin, Tipton
Macomb 1st District—William Romano, Van Dyke
Macomb 2nd District—John T. Bowman, Roseville
Macomb 3rd District—George C. Steeh, Mt. Clemens
Marquette District—Dominic Jacobetti, Negaunee
Mason District—Kenneth O. Trucks, Baldwin
Menominee District—James Goulette, Iron Mountain
Midland District—Joseph A. Cavanaugh, Midland
Monroe District—Charles J. Golden, Monroe
Montcalm District—Fred O. Olsen, Sheridan
Muskegon 1st District—Walter H. Nill, Muskegon Heights
Muskegon 2nd District—F. Charles Raap, Twin Lake
Newaygo District—Clyde E. Cooper, White Cloud
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Oakland 3rd District—Richard C. Van Dusen, Detroit
Oakland 4th District—Theodore F. Hughes, Berkley
Oakland 5th District—Vernald E. Horn, Royal Oak
Oakland 6th District—Walter T. McMahon, Hazel Park
Ottawa District—George M. Van Peursem, Zeeland
Presque Isle District—Emil A. Peltz, Rogers City
Saginaw 1st District—Thomas M. Burns, Saginaw
Saginaw 2nd District—Holly E. Hubbell, Saginaw
Shiawassee District—Adrian DeBoom, Owosso
St. Clair District—Harry J. Phillips, Port Huron; Herb Clements, Deckerville
St. Joseph District—John W. Fletcher, Centreville
Tuscola District—Allison Green, Kingston
Van Buren District—Edson V. Root, Jr., Bangor
Washtenaw 1st District—George Wahr Sallade, Ann Arbor
Washtenaw 2nd District—Joseph E. Warner, Ypsilanti
Wexford District—Charles A. Boyer, Manistee

(Continued on Page 22)

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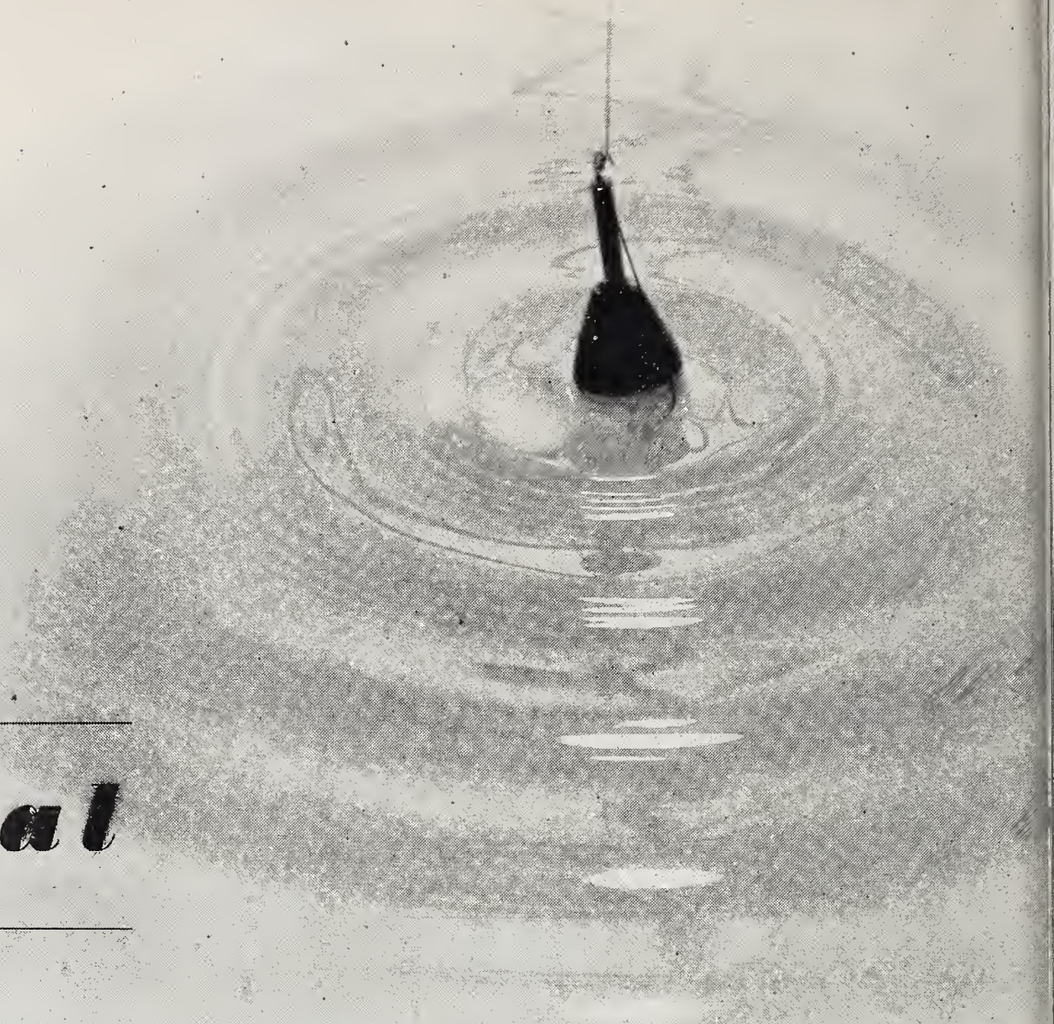
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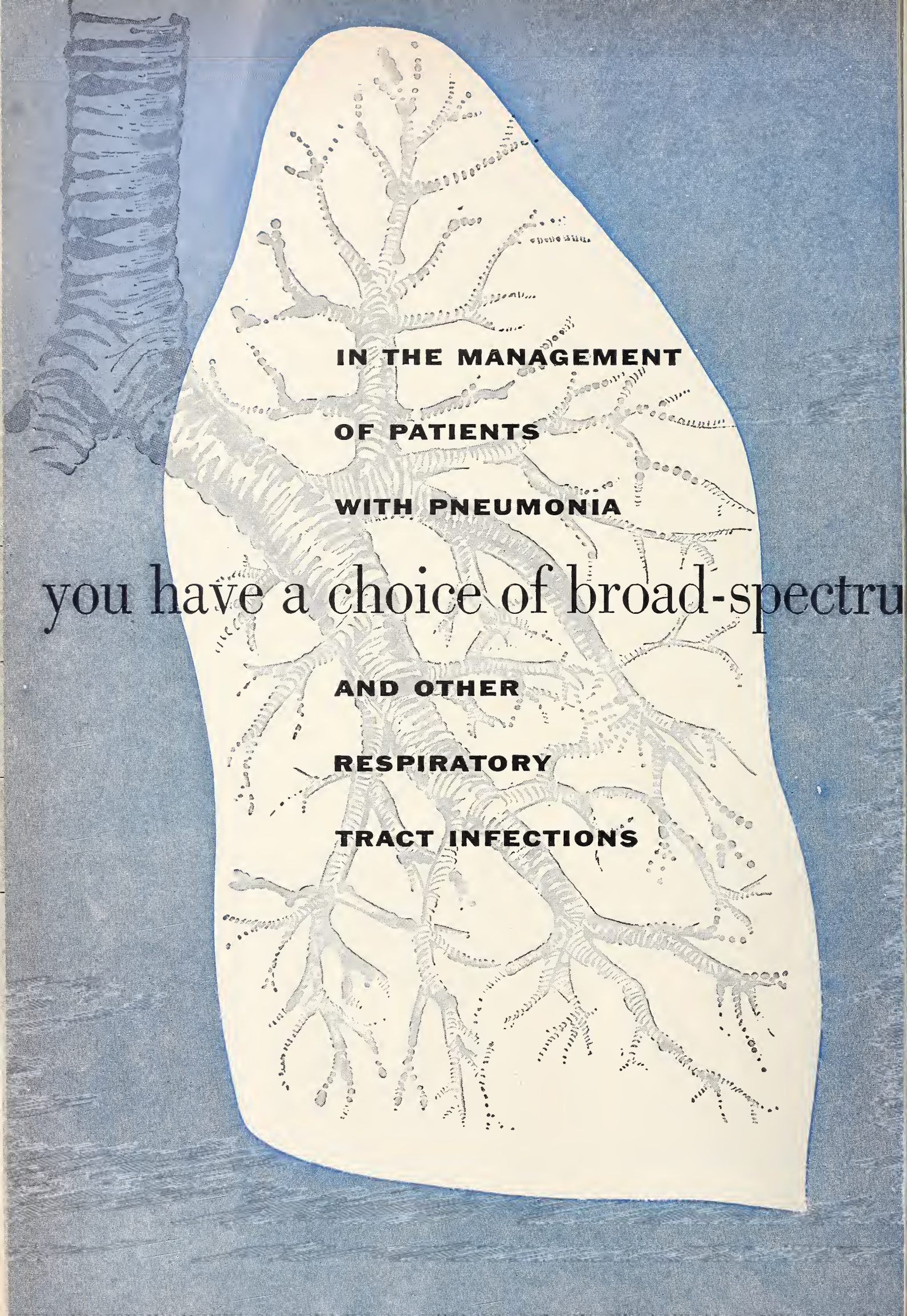
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1. *O'Regan, C., and Schwarzer, S.: J. Pediat. 44:172 (Feb.) 1954.*
2. *Waddington, W. S.; Bergy, G. C.; Nielsen, R. L., and Kirby, W. M. M.: Am. J. M. Sc. 228:164 (Aug.) 1954.*

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Detroit 7th District—T. John Lesinski and Michael Novak
Detroit 8th District—Edwin A. Fitzpatrick and John Joseph Penczak
Detroit 9th District—Charles M. Diggs and Adam Sumeracki
Detroit 10th District—Fred R. Dingman and Joseph J. Kowalski
Detroit 11th District—George H. Edwards
Detroit 12th District—Ramond D. Dzendzell and Josephine D. Hunsinger
Wayne 13th District—Robert E. Waldron, Grosse Pointe Park
Wayne 14th District—Chester Wozniak, Hamtramck
Wayne 15th District—Joseph I. Jackson, Highland Park
Wayne 16th District—Lucille H. McCollough, Dearborn
Wayne 17th District—Edward L. McGee, Ecorse
Wayne 18th District—William R. Copeland, Wyandotte
Wayne 19th District—Coleman A. Stanislaw, Taylor Center
Wayne 20th District—Hiram McNeeley, Inkster
Wayne 21st District—Leonard E. Wood

Michigan Senate

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District 3—Cora M. Brown, Detroit
District 4—Charles S. Blondy, Detroit
District 5—Stanley Novak, Detroit
District 6—Carlton H. Morris, Kalamazoo
District 7—Robert E. Faulkner, Coloma
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District 9—Creighton R. Coleman, Battle Creek
District 10—Haskell L. Nichols, Jackson
District 11—Fred Nicholson, Warren
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District 13—Garland B. Lane, Flint
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District 20—Arthur Dehmel, Unionville
District 21—Patrick J. Doyle, Dearborn
District 22—Clarence F. Graebner, Saginaw
District 23—Clyde H. Geerlings, Holland
District 24—Lynn J. Francis, Midland
District 25—Bert J. Storey, Belding
District 26—Don Vander Werp, Fremont
District 27—John Minnema, Traverse City
District 28—Charles T. Prescott, Prescott
District 29—Frank Andrews, Hillman
District 30—Edward H. Gibbs, Perkins
District 31—Philip Rahoi, Iron Mountain
District 32—Leo H. Roy, Hancock
District 33—Lewis G. Christman, Ann Arbor
District 34—Frank D. Beadle, St. Clair

FAIR DEALERS STILL MAN THE CIVIL SERVICE

"On June 28, 1934, the late President Roosevelt issued an Executive order which removed civil-service protection from all 177 employes of the national soldiers' home at Johnson City, Tenn. In their places were appointed deserving Democrats. Three years later, in November, 1937, a second Executive order placed the new appointees under the protection of civil service of which their predecessors had been deprived.

"This episode is typical of how the spoils system worked. By means of 72 laws and countless Executive orders, New and Fair Deal employes were blanketed in their jobs.

"Of the personnel heads of Government departments and agencies who decide today who shall be hired, fired and promoted under civil-service regulations, 45 are appointees of Presidents Roosevelt and Truman. Six who were appointed by President Coolidge and Hoover are still in their jobs. President Eisenhower has been able to name just three of these strategically placed officials.

"The consequence is that, when President Eisenhower or his Cabinet members and agency heads ordered across-the-board job cuts, the New Deal-Fair Deal personnel authorities naturally sacrificed the Republicans first. Of the handful of applicants for whom the Republican National Committee has succeeded in getting jobs, some bounced back a few days later, their positions eliminated. In some cases the jobs were recreated and filled with Democrats.

"The truth is that, because of the way the civil-service system has operated, we have a thin layer of Republicans at the top of the Eisenhower administration, and below them a mass of New Dealers and Fair Dealers in secondary policymaking jobs. The result is that Republican policies are frequently sabotaged or perverted out of recognition.

"Philip Young, Chairman of the Civil Service Commission, reported to Congress on January 13 of this year that, of some 2,400,000 Federal employes, 193,574 have been granted civil-service status noncompetitively. He might have added that many others took no more than an oral test to confirm them in jobs which they acquired in the mushrooming Government agencies of the Roosevelt-Truman era. Probably not over one-quarter of our civil-service employes have taken what our British cousins would regard as real competitive examinations.

"Today, for the first time in American history, we have an administration which cannot even hire its own policy personnel. A vigorous move by the Eisenhower administration to fill 800 key policy jobs has thus far failed, so well-protected and tenacious are the New and Fair Dealers who hold down the jobs.

"I am utterly convinced that the American people are being fooled if they think they have a true civil service. Some corrective legislation is imperative. One of the hottest issues in the 1954 campaign may be the need to end the perpetuation of the discredited New Deal and Fair Deal policies in our Government."—THOMAS E. MARTIN, Republican Congressman, Iowa, quoted by Paul Shafer, M.C. (Mich.) from *Saturday Evening Post.*

The Place of Enriched Bread in the Reducing Diet

It is universally acknowledged that the only effective means of weight reduction is restriction of caloric intake. Furthermore, it is acknowledged that no single food can be branded as fattening, that the solution to the problem is sensible limitation of the amounts of all foods eaten.

That enriched bread has a place in the modern reducing diet is evidenced by its inclusion in many weight reduction programs recommended by authorities in the fields of metabolism and internal medicine. Such a diet has recently been included in a pamphlet published by one of the nationwide organizations concerned with national health and the increasing problem of obesity.

This diet, a conventional reducing diet providing 1,200 to 1,400 calories per day, allows a balanced variety of basic foods including bread. Note the sample menu.

Enriched bread is far more than just a carbohydrate food, as is often the mistaken concept. Moreover, in itself, it is not a "fattening food," since only the calorically excessive diet can induce increase in body weight. Three slices of enriched bread provide only 189 calories, yet this amount makes a worthwhile contribution of biologically applicable protein, B group vitamins, and valuable minerals including iron and calcium. Of even greater importance to the person dieting is the gustatory attractiveness which bread lends to the meal.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



BREAKFAST

4 ounces tomato juice
1 boiled egg — 1 slice of toast
1 teaspoon butter — Coffee with milk



LUNCH

Liverwurst sandwich
(1 ounce meat, mustard, lettuce)
Celery — Small bunch grapes
1 cup of milk



DINNER

Roast chicken (3 slices, or 3 ounces)
Broccoli — 1 teaspoon butter
Asparagus — Fresh fruit cup
Tomato-cucumber salad, vinegar — Coffee or tea with milk



BEDTIME

Orange or ½ banana — ½ cup milk

MICHIGAN BAKERS ASSOCIATION, INC.
IN CO-OPERATION WITH
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Heart Beats

Giving emphasis to the fact that mankind's only hope for successfully combatting diseases of the heart and circulation is through intensified medical research, Frank Van Schoick, M.D., Jackson, President of the Michigan Heart Association, has announced that five vital heart research projects in Michigan have received financial grants totaling $24,350.00 from the Association's Memorial Fund.

"The Michigan Heart Association," Dr. Van Schoick stated, "established the Memorial Fund five years ago at the request of many persons who had expressed the desire to make memorial contributions to the Association in memory of a friend, relative or associate who had died of heart disease. Such contributions" he added, "are entirely unsolicited and they are used exclusively for heart research studies aimed at the conquest of America's Number One Health problem—heart disease."

The Heart Association president pointed out that cardiovascular diseases are responsible for about 52 per cent of the nation's deaths, constitute a leading cause of disability and are responsible for a "staggering economic loss by reason of lost productivity." He said that research provides the only means of untimely bringing about the prevention of death and disability caused by heart and circulatory diseases.

"Research is a laborious, time-consuming, complex and costly task," Dr. Van Schoick continued. "It involves frequent excursions down blind alleys. It requires the piecing together of hundreds of bits of information, somewhat in the manner that a jig-saw puzzle is assembled, without any assurance whatsoever that the final pattern will mean a thing."

"Yet heart research must be continued for if and when the causes of heart disease are discovered and identified, it should then be possible to establish means of prevention and cure. For these reasons," Dr. Van Schoick concluded, "Memorial Contributions to the Michigan Heart Association are used solely and completely for heart research studies and no administrative costs whatever are charged against such gifts."

The following research projects are receiving grants from the Association's Memorial Fund during the current fiscal year:

Name	*Institution*	*Description of Study*
A. J. Boyle, M.D.	Wayne University College of Medicine Detroit, Michigan	Plasma Colloid Stability in Normal and Atherosclerotic Subjects.
D. Bohr, M.D.	University of Michigan Department of Physiology Ann Arbor, Michigan	Further Studies Dealing with the Terminal Vascular Bed and the Renal Vasoexcitor Material and A Study of the Mechanism Responsible for Endogenous Control of Renal Vascular Resistance.
J. A. Johnston, M.D.	Henry Ford Hospital Detroit, Michigan	Nutritional Studies in Rheumatic Fever.
I. F. Duff, M.D.	University of Michigan University Hospital Ann Arbor, Michigan	Investigation of the Mechanism of Blood Coagulation with Special Reference to the Problems of Thromboembolic Disease.
J. J. Jasper, Ph.D.	Wayne University Detroit, Michigan	A Study of Serum Surface Tension in Atherosclerosis.

In addition to the Memorial Grants, the following research investigators are receiving grants from the Michigan Heart Association during the current fiscal year.

Name	*Institution*	*Title of Project*
L. T. Iseri, M.D.	Wayne University College of Medicine Detroit, Michigan	Fluid and Electrolyte Metabolism in Edema Formation Due to Cardiac and Renal Causes.
H. K. Hellems, M.D.	Wayne University College of Medicine Detroit, Michigan	Investigation of the Effects of Exercise and Commonly Used Cardiovascular Drugs on Myocardial Blood Flow and Metabolism in the Human Subject.
F. D. Dodrill, M.D.	Harper Hospital Detroit, Michigan	Mechanical Heart Project.
J. L. Wilson, M.D.	University of Michigan Department of Pediatrics Ann Arbor, Michigan	Investigation of the Effects of Cyanotic Heart Disease and Its Relief on Cerebral Function.

C. Lam, M.D.	Henry Ford Hospital Detroit, Michigan	Experimental Cardiovascular Surgery.
S. W. Hoobler, M.D.	University of Michigan Department of Internal Medicine Ann Arbor, Michigan	Studies in Hypertension.
Cameron Haight, M.D.	University of Michigan Department of Surgery Ann Arbor, Michigan	Cardio-Respiratory Function Before, During and After Thoracic Operations on Patients with Pulmonary or Cardiac Disease.
T. M. Brody, M.D.	University of Michigan Department of Pharmacology Ann Arbor, Michigan	Metabolic Effects of the Cardiac Glycosides on Heart Mitochondria.
N. E. Clarke, M.D.	Providence Hospital Detroit, Michigan	Chemotherapy of Rheumatic Fever.
P. Jordan, M.D.	Wayne University College of Medicine Detroit, Michigan	Experimental and Clinical Study of the Physiologic Effects of Valvular Prosthetics and Hypothermia Upon the Circulation.
J. D. Fryfogle, M.D.	Mt. Carmel Hospital Detroit, Michigan	Arterialization of the Coronary Sinus by Communication to the Left Ventricular Cavity.
W. H. Seegers, Ph.D.	Wayne University Department of Physiology and Pharmacology Detroit, Michigan	Blood Coagulation: Purification of Inhibitors and Mechanism of Their Action.

Michigan researchers who are retaining funds from previous grants are: N. L. Avery, M.D., Blodgett Memorial Hospital, Grand Rapids; E. H. Drake, M.D., Henry Ford Hospital, Detroit; F. D. Rights, Ph.D., Wayne University, Detroit; J. L. Blodgett, M.D., Grace Hospital, Detroit; and R. A. Gerisch, M.D., Harper Hospital, Detroit.



AMA Washington Letter

THE MONTH IN WASHINGTON

Because this is a new Congress and under new leadership, a number of new bills can be expected in the health field. But the Democrats also can be expected to devote a vast amount of time to health legislation that was previewed last session by the Republicans.

In fact, one of the more prominent bills on the list, that providing federal reinsurance of health insurance plans, was subjected to lengthy hearings before it finally met defeat in the House late in the last session. So thoroughly was it dissected then that it will be surprising if the friends of reinsurance can find anything else favorable to say about it, or its critics can find anything else wrong with it. How this Republican bill will fare in Democratic committees now is one big question.

There is always the possibility, of course, that some of the major bills to be presented again will be so amended that new decisions will be called for. For example, the administration's experts all fall have worked tirelessly to make the reinsurance bill more palatable.

Like the reinsurance bill, the proposal to revamp the procedure for distributing public health grants to states was well worked over last session. It passed the House, but the Senate committee was unable to untangle all the knots it discovered, so there was no final action. This, too, is up again this year, labeled as difficult and touchy but nonpartisan.

Another well-advertised bill coming up for action is that to set up a program of contributory health insurance for federal employes. Last session a Senate committee held a one-day hearing on this bill, admittedly merely to get the proposition "on the record" so it could be freely discussed between Congresses. A task force from the Civil Service Commission has been trying to hammer out a more workable version of the bill, and has found the task a formidable one. But despite the complications, Congress will be asked to enact some bill of this type.

Although the bill definitely is of Republican origin, there is no reason to expect that it will receive a hostile reception from the Democrats in either House. It is generally accepted as a too-long delayed attempt to bring the federal government into line with private industry.

The bill for expanding medical care for military dependents has about the same history. After months of planning and conferences, bills were introduced last year in House and Senate to get the idea out into the open for the benefit of Congress and the public. Because the plan is so highly controversial, however, no hearings were held last session. The same bill is going before Congress again.

Here the fundamental issue is whether military hospitals and uniformed physicians shall supply the preponderance of this service to dependents, or the dependents shall be treated largely by civilian physicians and in civilian hospitals.

Last session the Defense Department prepared the draft of a bill to set up a number of military medical scholarships. Because bills originating on one department that might affect another first must be submitted to the later for comment, this bill was turned over to Mrs. Hobby's Department of Health, Education, and Welfare. There it rested until after Congress adjourned. The 84th Congress will be asked to enact the bill, possibly as an alternative to extending the Doctor Draft, which is scheduled to expire next July 1.

Efforts will be made, but not necessarily with the Eisenhower administration's help, to enact some sort of legislation for federal guarantee of hospital mortgage loans. This subject was gone into in great detail last session by Mr. Wolverton's House Interstate and Foreign Commerce Committe, but the committee finally turned down Mr. Wolverton and refused to report out the bill for action. It had widespread labor support last year, but was opposed by the AMA as discriminatory, in that it would offer more assistance to closed-panel practice than to other forms of medical practice.

Indications are that Mrs. Hobby's department will sponsor legislation to aid medical schools, a subject that was not taken up in the last Congress but that attracted considerable attention in years past.

The chance that both of a pair of twins will be affected by tumor if one develops a cancer is much greater for identical twins than non-identical twins.

* * *

When both of a pair of twins are affected, the chances that the tumor will be similar in both is much greater when the pair are identical.

* * *

The age of twins at onset of the tumors (when both of a pair are affected) is more nearly the same when the pairs are identical.

for greater safety in streptomycin therapy...

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Squibb Streptoduocin
Streptomycin and dihydrostreptomycin in equal parts

Distrycin has an important advantage over streptomycin. It has the same therapeutic effect but ototoxicity is greatly delayed. Since the patient is given only half as much of each form of streptomycin as he would have on a comparable regimen of either one prescribed separately, the danger of vestibular damage (from streptomycin) or cochlear damage (from dihydrostreptomycin) is significantly lessened.

Signs of vestibular damage appear in cats treated with Distrycin as much as 100 per cent later than in animals given the same amount of streptomycin.



Cat treated with streptomycin shows no nystagmus after whirling.



Cat given the same amount of Distrycin has normal reflex.

On dosage of 1 Gm. per day for 120 days, ototoxicity was as follows*:

	Vestibular damage % of patients		
	Mild	*Moderate*	*Total*
Streptomycin	12	6	18
Dihydrostreptomycin	6	0	6
Distrycin	0	0	0

	Cochlear damage % of patients		
	Mild	*Moderate*	*Total*
Streptomycin	0	0	0
Dihydrostreptomycin	12	3	15
Distrycin	0	0	0

**Heck, W.E.; Lynch, W.J., and Graves, H.L.: Acta oto-laryng. 43:416, 1953.*

Distrycin dosage is the same as for streptomycin. In tuberculosis the routine dose is 1 Gm. twice weekly, in conjunction with daily para-aminosalicylic acid or Nydrazid (isoniazid). In the more serious forms of tuberculosis, Distrycin may be given daily, at least until the infection has been brought under control.

Distrycin is supplied in 1 and 5 Gm. vials, expressed as base

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American Medical Association

Eighth Annual Interim Meeting

The Seventh Medical Public Relations Conference was held Sunday, November 28, 1954, at the McAllister Hotel, Miami, the day before the AMA Interim Session. The program started with a showing of "A Life to Save," a new AMA film produced for use of state and local medical societies. Very good.

Edward Jelks, M.D., of Jacksonville, Florida, Chairman, spoke on "Liaison for Public Relations, Board of Governors, and Florida Medical Association." George F. Lull, M.D., Secretary and General Manager of the AMA, spoke on "Why We Are Here." Elmer Hess, M.D., Erie, Pennsylvania, President-Elect of the AMA, in delivering the keynote address, said: "The backbone of medical ethics is summed up in just one phrase, 'service to suffering humanity,' and the practice of medicine is an individual, personal service to which every patient is entitled, regardless of his means." Urging physicians to strive for a better understanding of the general public's problems, Dr. Hess said, "Words alone are not sufficient to convince a cynical public of the humanitarian purposes of medicine. Let us not just try to *convince* the public; let it *do* for the public." Leo E. Brown, Director of Public Relations, AMA, presented "The Basic Eight" the AMA's new Public Relations manual for county medical societies.

Immediately following a buffet luncheon, a Panel Discussion was held on "What About Business Office Consultants?" Floyd F. Winslow, M.D., Rochester, New York, Chairman of the Public Relations Committee of the Medical Society of the State of New York, acting as chairman, opened the discussion and introduced the panel members: James O. Kelley, Executive Secretary of the Medical Society of Milwaukee County, Milwaukee: Paul Revenaugh, Chicago, Professional Business Management; George W. Slagle, M.D., Battle Creek, Councilor, Michigan State Medical Society, and Allison E. Skaggs, Battle Creek, Professional Management. The panel used the prescribed hour in presenting the subject and in asking and answering questions, including invited questions from the floor. Very instructive and from appearances interesting to the audience. Daniel Mich, Editorial Director of *Look* magazine, speaking on "Why Magazines Write About Medicine," said that the main reason lies in the personal nature of the subject and boils down to the fact that people like to read about themselves." Every reader survey shows a continuing high interest in medical subjects, and the net effect of the increased interest has been good for both the profession and the public."

The next item of the program was a panel discussion on matters growing out of veterans' affairs and the AMA policy: "After the Policy, What?" The moderator was Russell B. Roth, M.D., Committee on Veterans' Medical Affairs, Medical Society of the State of Pennsylvania. The panel was composed of Rowland B. Kennedy, Jackson, Mississippi, Executive Secretary, Mississippi State Medical Association; Robert H. Baker, M.D., Pontiac, Michigan, President Michigan State Medical Society; Richard R. Graham, Oaklahoma City, Executive Secretary, Oklahoma State Medical Association; and Hartwell Joiner, M.D., Gainesville, Georgia, Chairman, Veterans' Affairs Committee, Medical Association of Georgia. During the discussion each told of the problems in his own state and efforts at solution, and stressed the difficulty of finding a common ground, especially since the statement of policy by the AMA House of Delegates. It was pointed out that the problem is a House of Delegates affair, not one for the public relations conference which cannot set policies. It can only advise and attempt to carry them out. Discussion was quite wide and included a statement by William Bromme, M.D., Chairman of The Council, MSMS, and chairman of a very active and very successful joint committee representing the medical, dental, and four major veterans' organizations. Since the Michigan committee has been active, there have been no more blasts at the medical policy from the Michigan veterans' organizations.

There were two preview showings of medical subjects, "Night Call," presented on DuPont's Cavalcade of America, Tuesday evening, December 7, 1954, and "Medical Research News" Ciba's new fifteen-minute television program to be presented early in 1955.

This conference was attended by over 350 physicians and others interested in Medical Public Relations.

• • •

The sessions of the House of Delegates, the policy-making part of the American Medical Association, started early Monday morning and continued throughout the day and the evening. Reports, new business and resolutions were the order of the day. Each was referred to the appropriate Reference Committee. The sessions of Wednesday, December 1, were devoted to the reference committees' reports, followed by whatever action seemed right. The attendance was remarkably complete. Every Michigan delegate was present and active. Geriatrics, medical ethics, internships, grievance committees, hospital accreditation, oste-

(Continued on Page 30)



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Proteus vulgaris is a Gram-negative organism commonly involved in

urinary tract infections • septicemia

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(Continued from Page 28)

opathy, the doctor draft law state-subsidized medicine and malpractice insurance problems were among the major subjects of discussion and action by the House of Delegates.

During the meeting, the AMA Board of Trustees also announced the appointment of a thirteen-member Commission to make a comprehensive survey of the various types of plans through which the American people receive medical services. The Commission, headed by Dr. Leonard W. Larson of Bismarck, North Dakota, member of the Board of Trustees, will begin work immediately and will require at least a year to complete its survey.

Named as the 1954 General Practitioner of the Year was Dr. Karl B. Pace of Greenville, North Carolina, whose selection by a special committee of the Board of Trustees was announced at the opening session of the House of Delegates on Monday by Dr. Dwight H. Murray of Napa, California, Board Chairman. Dr. Pace received the medal and citation, presented annually for community service by a family doctor, from Dr. Walter B. Martin of Norfolk, Virginia, President of the American Medical Association, immediately after the announcement.

Other highlights of the opening session were addresses by Dr. Martin; Mr. Seaborn P. Collins, National Commander of the American Legion; Mrs. Oveta Culp Hobby, Secretary of Health Education and Welfare, and Mr. Edwin J. Faulkner, President of the Woodmen Accident and Life Company of Lincoln, Nebraska.

Opposing viewpoints on the controversial proposal for reinsurance of health insurance plans, which was shelved by Congress last July and is expected to come up again, were voiced before the House of Delegates by Mrs. Ovcta Culp Hobby and Edwin J. Faulkner.

Making a flying visit to Miami, Mrs. Hobby, Secretary of Health, Education and Welfare, appeared before the House to explain why the Eisenhower Administration strongly supports the reinsurance proposal. Later Mr. Faulkner, of Lincoln, Nebraska, President of the Woodmen Accident and Life Insurance Company, told the members of the House that the reinsurance plan would add nothing to the present rapidly expanding and successful health insurance field.

Mr. Faulkner, who is a Past President of the Health and Accident Underwriters Conference, has been one of the nation's outspoken critics of any government plan.

Here is a brief summary of what Mrs. Hobby said:

"In seeking to further this objective, we in the Department of Health, Education and Welfare, and you in the American Medical Association have, as I have mentioned, agreed on a number of major means.

"We have agreed, for example, that the system of voluntary health insurance is an effective mechanism through which the majority of Americans can help pay their medical care costs. We are on common ground in the objective of strengthening and supporting the healthy growth of this system.

"The President has proposed a system of health reinsurance which, in our opinion, would further this mutual objective. In brief, despite the remarkable gain in the number of people having some protection from prepaid insurance and the increase in insurance benefits, the dollar gap between total private expenditure for medical care and that part paid for by insurance continued to widen.

"The health reinsurance proposal does offer the opportunity to provide more people with health insurance and to provide better health insurance. It offers this opportunity to the 30 million people not now covered but who can afford to purchase voluntary health insurance. And it offers the opportunity for improved coverage for a sizable segment of the 99 million who now have some health insurance.

"The health reinsurance proposal represents what we believe to be a necessity. It offers opportunity for self-help without subsidy.

"Several weeks ago I had a most interesting meeting with the members of your Liaison Committee—Dr. Walter Martin, Dr. Dwight Murray, Dr. James Reuling, Dr. David Allman and Dr. Frank Wilson. Out of that meeting came a plan to set up a joint task force with representation of the American Medical Association and the Department to clarify areas of concern and to identify more clearly that segment of the population that cannot be covered by health insurance.

"May I say that the reinsurance proposal, I firmly believe, will encourage the medical profession, insurance organizations, and government to work together on a project for the improvement of the health of the great majority of the people of the nation. We need your help to accomplish this great objective."

Here is a brief summary of what Mr. Faulkner said:

"The trifling volume of health reinsurance business now being done reflects not inadequate reinsurance facilities in the private market, but an absence of need for reinsurance. In point of fact, establishment of a Federal Health Reinsurance fund would bring government into direct competition with private reinsuring companies that are serving the market adequately. The proviso that federal reinsurance will not be offered when private reinsurance is available at comparable terms and rates means little when it is remembered that the federal plan would be capitalized with public monies, initially subsidized for operating expenses and would pay no taxes.

"Those who oppose the establishment of a Federal Health Reinsurance plan believe it would raise false hope for a more rapid expansion of health insurance while contributing nothing to the realization of that hope. Government reinsurance of health insurance plans would introduce no magic into the field of financing health care costs."

Reinsurance does not increase the ability of the insurer to sell protection to the unwilling buyer. Reinsurance does not reduce the cost of insurance. Reinsurance does not make insurance available to any class of risk or geographic area not now within the capabilities of voluntary insurers to reach.

Seaborn P. Collins, of Las Cruces, New Mexico, National Commander of the American Legion,

(Continued on Page 32)

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ıe One Filter Cigarette that ally Tastes like a Treat.

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On sale now along with the other members of the Old Gold Family—new Old Gold Filter Kings sell at a popular filter price. Whichever kind of cigarette you prefer, just make sure it's one of the family . . . America's First Family of Cigarettes.

True filter—true flavor—The effective filter that lets real flavor through. Pure white . . . never too loose . . . never too tight—this easy draw filter makes every puff taste like a treat.

Doctors: Today Old Gold Filter Kings are sold in most U. S. cities, and our distribution is expanding every day. If your city does not yet have Filter Kings, simply write to P. Lorillard Company, 119 W. 40th St., New York 18, N. Y., and special arrangements will be made to make them available to you.

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(Continued from Page 30)

called for an end to name-calling and propaganda in the field of medical aid for veterans.

Acknowledging that the Legion and the AMA differ on the question of what treatment should be handled by Veterans Administration hospitals, Collins said:

"We of the Legion do not like to see hospitalized veterans made the victims of a controversy which cast unnecessary and unfounded suspicions upon their entitlement to hospital care. You do not like that either. You couldn't, and still honor your obligation to comfort and heal the sick.

"If we agree on that point, then we ought to try in all sincerity to broaden the agreement—and remove this particular controversy from the area of name-calling and propaganda."

Collins said the Legion was as much opposed as the AMA to socialized medicine and "neither expects nor wants the government to give carte blanche entitlement to medical care to all veterans."

But he added:

"You know, as do I, that a percentage of our citizens must inevitably ask for help—because of disaster, misfortune and other circumstances beyond their control.

"The American Legion simply believes that this percentage of our citizens, when they are honorably discharged war veterans, have earned the necessary care as beneficiaries of the federal government. We believe the American people have accepted, approved and activated that philosophy through legislation enacted by the Congress.

"We further believe that the country does not want or expect its veterans to impoverish themselves beyond possibility of economic recovery before seeking needed medical care through the Veterans Administration."

Mr. Collins told the House that he is willing to appoint qualified Legion representatives on a committee to take part in joint Legion-AMA study of veterans' hospitalization. Later during the meeting the Board of Trustees announced appointment of a three-man committee to meet with the Legion on the issue of veterans' medical care. The members of the AMA committee are Dr. Elmer Hess, Dr. David Allman and Dr. Louis Orr.

New AMA Geriatrics Unit

The House of Delegates passed a Pennsylvania resolution which directed:

"That the AMA Board of Trustees consider the creation of an organization on geriatrics within the present structure of the American Medical Association, the purpose of which shall be: (1) to develop and assist committees on geriatrics and gerontology originating from constituent state associations and component county societies of the American Medical Association; (2) to act as a liaison between such state and county committees so there shall be a free flow of information between all levels of organized medicine on the subject of geriatrics; (3) to make available to the American people such facts, data and opinions concerning the subject of geriatrics as may be considered of value in alleviating social and medical problems created by the increasing population of older age groups; and (4) to perform such other duties as will improve and advance the medical care rendered to people of the older age group."

Medical Ethics

Accepting a recommendation in a report of the Council on Constitution and Bylaws, the House amended Section 7 of Chapter I of the Principles of Medical Ethics so that it now reads as follows on the subject of patents and copyrights:

"A physician may patent surgical instruments, appliances and medicines or copyright publications, methods and procedures. The use of such patents or copyrights or the receipt of remuneration from them which retards or inhibits research or restricts the benefits derivable therefrom is unethical."

In another action involving medical ethics, the House rejected a Kansas resolution which would have removed Section 8 of Chapter I from the Principles of Medical Ethics. The Reference Committee on Miscellaneous Business, in recommending disapproval of the resolution, said:

"The American Medical Association would fail to assume a vital responsibility if no provision is included in the Principles of Medical Ethics regarding the problem of ownership of drug stores and dispensing of drugs by physicians. . . . It is possible that some phases of this principle are susceptible of amendment or change, but certainly the entire principle should not be discarded."

Report on Internships

Acting on the report of the Ad Hoc Committee on Internships, the House accepted a recommendation of the Reference Committee on Medical Education and Hospitals that "the data and judgments of the Ad Hoc Committee on Internships will provide valuable guidance to the Council on Medical Education and Hospitals and with this in view it is recommended that the report be referred to the latter for their further study and guidance." Following are a few excerpts from the report of the Ad Hoc Committee on Internships:

"It is our opinion that graduates of foreign medical schools should be considered for intern appointment in approved hospitals only when there is satisfactory evidence that:

"1. Language difficulties will not seriously impair the program.

"2. The same educational standards are applied to graduates of foreign schools as to graduates of approved American medical colleges.

"3. The appropriate state licensing board approves. . . .

"The Committee believes that the present standards detailing only the number of annual admissions, autopsy rate, number of beds and assignment of an intern to from 15 to 25 beds, are without significant meaning unless and until every local situation is reviewed 'on the grounds' and with full opportunity for discussion between the representative of the accrediting body and representatives of the hospital's governing board and its medical staff. . . .

"Had the 'two-thirds rule' remained a requirement and been rigidly applied to the two consecutive intern years 1952-53 in combination with 1953-54 it would have removed 448 hospitals, cancelled 4,205 internships to which 784 students were matched in those years and reduced the number of internships available to 6,766. . . .

(Continued on Page 34)



ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 44,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

It is another of the more than 30 organisms susceptible to

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(Continued from Page 32)

"The Committee suggests consideration of some requirement based on filling a percentage of approved internships and a time limit to eliminate some of the unhealthy aspects of the present situation. The following requirement is recommended: Any internship program which in two successive years does not obtain one-fourth of its stated intern complement be disapproved for internship training.

"As applied to the figures for 1952-53 in combination with 1953-54, this requirement would have removed 277 hospitals, cancelled 2,139 internships to which 80 students were matched in those years and reduced the number of internships available to 8,832."

Grievance Committees

In order to improve efficiency and maintain high standards in the operation of grievance or mediation committees, the House endorsed the principles of two similar resolutions introduced by the Colorado and Mississippi delegations and asked the Board of Trustees to appoint a committee to study and report on recommended standards for the operation of such services. Both resolutions had emphasized the valuable public service aspects of grievance committees and had suggested that the committee appointed by the Board of Trustees be composed of representatives from constituent societies in which grievance committees have been effective and useful.

Hospital Accreditation

In place of an Indiana resolution protesting certain situations arising in connection with hospital inspections, the House adopted the following substitute resolution to resolve the problems in question:

"Resolved, that the Secretary of the American Medical Association be directed to request that the Joint Commission on the Accreditation of Hospitals supply a copy of the letter of notification regarding the results of the survey of each hospital to the Hospital Administrator, to the Chief of the Professional Staff and to the Chairman of the Governing Board of the hospital."

Osteopathy

The House concurred in the following supplementary report of the Board of Trustees on the osteopathic situation:

"Contingent on the receipt of the report from the Committee to Study the Relations Between Osteopathy and Medicine of its 'on campus' observations of osteopathic schools, the House of Delegates in June, 1954, agreed to hold in abeyance any action on this important subject until this meeting.

"The Committee, after meetings and extensive negotiations with the American Osteopathic Association, has now made final arrangements for visiting five of the six schools of osteopathy, and these plans have been approved by the Board of Trustees.

"It is the recommendation of the Board, therefore, that consideration of this matter be held in abeyance by the House of Delegates until the June, 1955, meeting, at which time the Committee expects to have a complete report of its findings concerning the nature, scope and quality of education in schools of osteopathy."

The Doctor Draft Law

The Reference Committee on Medical Military Affairs considered several reports and resolutions involving the doctor draft law, and then proposed the following policy statement which was adopted by the House of Delegates:

"(A) That on the basis of current information the House of Delegates commend and express itself as being in complete accord with the Board of Trustees and its Council on National Defense that the 'Doctor Draft Law' should not be extended after June 30, 1955, and that the House of Delegates further express its confidence in the ability of the Board of Trustees and its Council on National Defense to properly handle any new situation which may develop in regard to this highly complex and involved problem.

"(B) That the Board of Trustees and its Council on National Defense continue to study the problem of providing the best possible medical service for members of the armed forces and that they make recommendations to the Department of Defense at the earliest possible time for a more permanent solution to the problem, giving special attention to the further development of a career medical corps with adequate compensation therefor."

State-Subsidized Medicine

Most controversial issue at the Miami meeting was a resolution on "Policy on Medical Practice by Tax Supported Medical Schools," introduced by the Mississippi State Medical Association. This resolution provided that:

"The American Medical Association reaffirm its unalterable opposition to socialized and state subsidized medicine regardless of the form which it may assume, and

"The House of Delegates of the American Medical Association is of the opinion that these principles should be considered by constituent and component medical societies together with all other facts pertinent to the local situation in all controversies arising in the employment of medical faculty by state (tax) supported medical schools and be fully considered in effecting action within the framework of this policy."

The Reference Committee on Medical Education and Hospitals agreed with that portion of the resolution regarding "unalterable opposition to socialized medicine" but recommended that the resolution be referred, without approval or disapproval at this time, to the Council on Medical Service which currently is studying the various aspects of this subject. The House adopted the reference committee's recommendation.

Malpractice Insurance

Two resolutions and a Board of Trustees supplementary report—all dealing with the problems and difficulties in obtaining satisfactory professional liability insurance—were considered together by the Reference Committee on Insurance and Medical Service. The House of Delegates accepted the reference committee report which said: "Inasmuch as the Board of Trustees has reported that

(Continued on Page 36)

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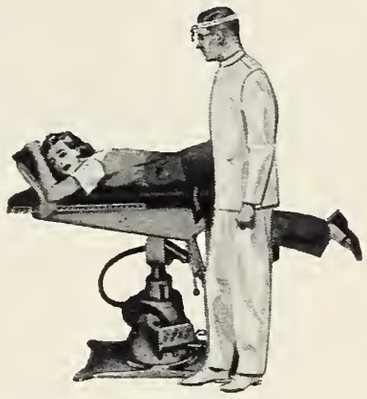
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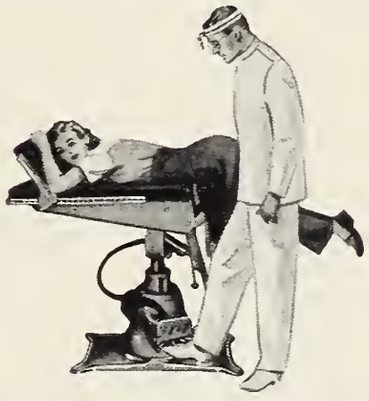
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(Continued from Page 34)

there is in progress a study on the subject, we feel that we can well await the recommendations that the Board is planning to make at the next session. Due to the apparent emergency aspect of the problem, the Board of Trustees is urged to report to the membership as soon as possible, through its component societies, on the progress of this urgent study."

Opening Session

Dr. Walter B. Martin, AMA President, declared at the opening session that "medicine belongs to the people" and physicians are "merely the purveyors" of medical care. Dr. Martin stressed that physicians have an obligation to the people that "goes beyond our own private practice and into the community," and he also emphasized the importance of "continued effort to meet the medical needs of the low-income and other non-insurable groups."

Awards and Contributions

At the closing session of the House of Delegates, the American Medical Association received a citation for pioneering in helping to bring educational television to the American public. James Keller, chairman of the Miami Citizens Committee for Educational Television, presented the award on behalf of the National Citizens Committee for Educational Television. Dr. Martin accepted the citation for the AMA.

At the same session, the Utah State Medical Society, represented by Dr. George M. Fister of Ogden, presented a check for $10,355 to the American Medical Education Foundation to aid in relieving the financial plight of the nation's medical schools. The contribution was received by Dr. Louis H. Bauer, President of the Foundation, who also announced that a check for $1,000 had been contributed by the Southern Medical Association.

1957 Clinical Meeting

Philadelphia was chosen as the place for the 1957 Clinical Meeting, the dates of which will be announced later. Invitations also had been received from Denver, Detroit, Mexico City and Washington, D. C. The Clinical Meeting will be held in Boston in 1955 and in Seattle in 1956.

Health Fair

As the AMA Clinical Meeting came to a close on Thursday, December 2, a health fair for the public opened in Miami's Bayfront Auditorium under the auspices of the Dade County Medical Society. The fair, which was open through Sunday with more than eighty exhibits featured, marks the first time that such an event has been held in connection with the AMA Clinical Meeting.

Registration toward the end of the third day of the Clinical Meeting included 3,167 physicians; 3,441 guests including residents, interns, nurses and others, and approximately 900 exhibitors and exhibitors' guests—for a grand total of more than 7,500. Final total registration at the 1953 Clinical Meeting in St. Louis was 7,716.

The scientific meetings were well attended, and produced much new information which will be published soon. One of Michigan's doctors made the public press as follows:

(From *Miami Daily News*, Nov. 30, 1954)

"Psychiatry and religion have a common goal—'to help each person develop the capacity to love unselfishly'—an internationally known psychoanalyst told the Mental Health Society of Southeastern Florida.

"Sigmund Freud's concept of love is entirely in harmony with St. Paul's concept of love," Dr. Leo Bartemeier, Detroit, Michigan, chairman of the American Medical Association's Committee on Mental Health, told listeners in the packed auditorium of the Dade School Administration Building. Some stood at the rear of the auditorium, which seats 330.

How Aims Coincide

Psychiatrists and clergymen of all faiths are learning how to work together, Dr. Bartemeier said, but "this most encouraging understanding between psychiatry and religion is very recent.

"Religion and psychiatry are separate functions in the service of mankind. They are and can be of tremendous help to one another.

"But the psychiatrist must remember that he is a physician ministering to the ill; the clergyman must remember that he is a theologian ministering to spiritual needs."

Ideally, Dr. Bartemeier said, a psychiatrist should "have an understanding of moral values and must have respect for the traditions of religious faith"; a clergyman should feel free to consult with a psychiatrist and should know when to do so.

"There Is No Conflict"

Pointing out that, traditionally, most people take their personal problems first to the family doctor or minister, Dr. Bartemeier said many doctors and clergymen possess "helpful intuitive understanding."

"We have 160,000,000 people and only 8,000 psychiatrists," he said. "There never will be enough psychiatrists.

"Clergymen and physicians do not need to become psychiatrists. But because they deal with people so closely, there is an urgent need that they get some scientific knowledge of personality structure and that they develop an awareness of themselves and the effect they have on the people they work with."

In the past 10 years, he said, an increasing number of clergymen have sought training which would help them understand emotional problems.

There is no real conflict between psychiatry and religion, he added.

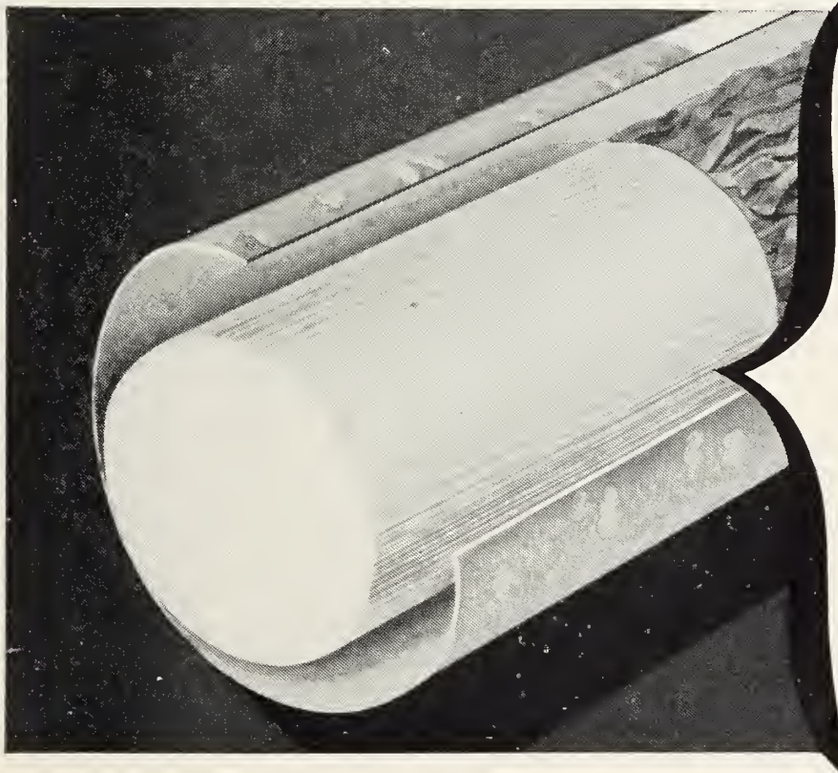
"There are lots of people who don't think they're religious, but I suspect that, deep inside, they have religious feelings.

"Man tends primarily to be religious."

Other Michigan men on the program were: Joseph A. Johnston, M.D., Detroit—"Nutrition in Relation to Infection;" Dwight C. Ensign, M.D., and John W. Sigler, M.D., Detroit—Scientific Exhibit: "Osteoarthritis-rheumatoid Arthritis—Diagnosis and Treatment"; William L. Lowrie, M.D., W. Earl Redfern, M.D., and Brock E. Brush, M.D., Detroit—"Conservative Management of Diabetic Food Complications"; James Barron, M.D., and L. S. Fallis, M.D., Detroit—"Tube Feeding."

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Editorial Opinion

THE MICHIGAN STATE MEETING

The president and yours truly attended the annual meeting of the Michigan State Medical Society. The hospitality was wonderful and the business meeting very interesting. Strangely enough one heard discussion on such points as "How does an assistant get paid from a prepaid plan?" "How can the fees of one group be brought into balance with those of other groups?"

They have an interesting method of hearing resolutions on all aspects of the agenda and then referring them to reference committees. These committees study the resolutions and bring back a composite one for the consideration of Council. It certainly cuts down on the amount of discussion on the floor of the house.

The House of Delegates for the annual meeting of their prepaid plan is the same as for the association. This seems very sensible indeed.—*Ontario Medical Review,* November, 1954.

MANTLE OF MARS

There seems to be general agreement that our nation will be compelled to maintain an elaborate military establishment for an unpredictable number of years. There is too wide a gap between the philosophies of the west and the east for easy bridging by a series of treaties or a score of years. If we are committed to strengthening our military protection must we not look forward to the changed day when all citizens are or have been part of the military force?

When most citizens have become veterans the problems of their medical care will have become so much a function of government that it will be unnecessary to debate whether or not a local community can furnish the facilities for certain of them. There will be too few civilians to man the facilities or furnish the funds and government, in setting up a behemoth to protect the individual, in fact, will have made him ever so much more dependent on government.

In the total nature of this preparation, however, certain accessory activities assume proportion. Every man will be expected to provide years of his life in military training and military service—through extension of the present draft mechanics or universal military training. If he is able-bodied he will serve as a combat soldier; if he has defects, he will be used in some non-combat capacity. This will, in its impersonal operation, minimize the curious exemptions which have made many heroes and not an inconsiderable number of gold-brickers in the past and present experience.

For the medical support of these expanded military units there will be a demand for doctors far in excess of training capabilities. But reason may enter this problem also. All doctors will be liable for a tour of duty related to their individual physical status—some with the combat units, some with the support troops and some in specialized situations. This period of assignment might well come at the time when the period of training has ended and before the physician has established his roots within a community. There is something to be said for the governmental subsidization of a percentage of the medical class as a method of developing "career" physicians.

The problem is very complex. Many traditional points of view may well need examination as we shift toward a larger military organization.—Editorial by WILLIAM BROMME, *Detroit Medical News,* November 22, 1954.

NEW DISEASE DISCOVERED

Jerome W. Conn, M.D., Ann Arbor, has discovered a new disease. He has worked out the cause and treatment of a severe form of kidney disease which has puzzled researchers for years. The disease previously known as potassium-losing nephritis, he has named "Primary Aldosteronism."

Dr. Conn revealed primary aldosteronism, a new clinical syndrome, to medical students and doctors of the University of Michigan Journal Club; also to members of the Detroit Oto-Laryngological Society who attended the Middle Section meeting of the American Laryngological, Rhinological and Otological Society, held at the Sheraton-Cadillac in Detroit, January 24, 1955. By invitation, Dr. Conn presented a paper entitled "Present Concepts of the Activities of the Pituitary-Adrenalin Mechanism and of the Adrenal Steroids."

A part of this discussion appeared in the January issue of *The Journal of Laboratory and Clinical Medicine.*

The most prognostically favorable group of lung cancers comprises those in which exploration and resection are done with reasonable dispatch after the abnormal shadow is discovered on survey.

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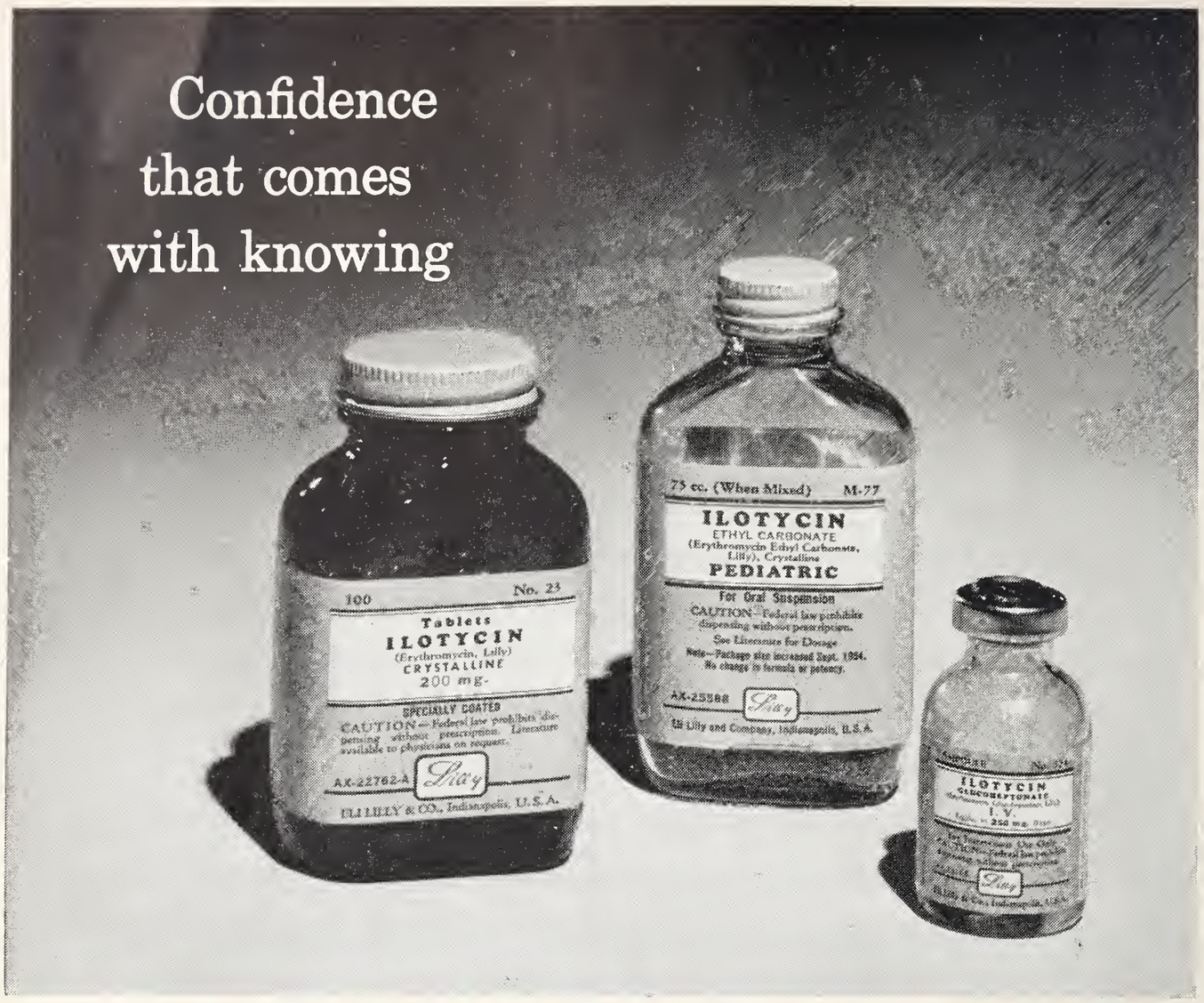
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1. Heller, E. M.: The Treatment of Essential Hypertension. *Canad. Med. Assn. Jour.*, 61:293, Sept., 1949.

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The JOURNAL
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Coarctation of the Aorta

By Cameron Haight, M.D., Herbert Sloan, M.D.
and
William F. Rubel, M.D.
Ann Arbor, Michigan

SURGICAL CORRECTION of coarctation of the aorta, although of recent origin, has now become a relatively frequent operation. Excision of a coarctation and direct end-to-end anastomosis of the aorta was first performed by Crafoord[3] in October, 1944, and shortly thereafter by Gross.[5] This paper will analyze the findings in the patients with coarctation who have been seen at the University of Michigan Hospital since January 1, 1948, and the results obtained in the thirty patients for whom operation has been done.

In considering the undertaking of any major surgical procedure the morbidity and mortality of the disease must warrant the operation. The poor prognosis of patients with coarctation has been well shown in the work of Reifenstein, Levine and Gross[6] and Abbott.[1] Over 60 per cent of the patients so afflicted died before or during their fortieth year, the average age of death being approximately thirty-five years. The mortality is due mainly to complications of the abnormality, consisting of rupture of the aorta, subacute bacterial endocarditis or endarteritis, congestive failure and intracranial hemorrhage.

The symptoms in the patients in this series consisted mainly of headache, easy fatigability of the extremities, coldness of the feet, and shortness of breath, or a combination of these symptoms. A number of the patients complained of no symptoms, although minor symptoms could be elicited on direct questioning. Thirty-four per cent of the patients were entirely without symptoms.

The diagnosis in the vast majority of cases can be made on physical examination alone. In the present series the diagnosis was made in 61.7 per cent of the cases during the course of the routine physical examination. In 11.7 per cent of the patients the diagnosis was first suspected on roentgen examination. Collateral vessels over the thorax and upper abdomen were common in adults but were by no means constant. They were seen or palpated in 52 per cent of all patients on physical examination and in 62.5 per cent of the adult patients.

Hypertension, which has been defined as a systolic pressure exceeding 140 mm. Hg. and a diastolic pressure exceeding 90 mm., was present in all except two patients. The blood pressure in the legs was less than that in the upper extremities in all patients.

The cardiac findings were variable, but most commonly a systolic murmur was present at the base of the heart and posteriorly along the left border of the mid-thoracic portion of the spine. A basal diastolic murmur was occasionally present and was generally attributed to either aortic regurgitation due to a bicuspid aortic valve or, particularly if a machinery-like murmur was present, to patency of the ductus arteriosus. Bicuspid aortic valves are stated by Gross[4] to be present in 40 per cent of the cases of coarctation at autopsy. Basal diastolic murmurs were present in 17.7 per cent of the patients in the present series. In two-thirds of these patients the basal diastolic murmur was attributed to aortic regurgitation, presumably due to a bicuspid aortic valve, and in the remaining

From the Department of Surgery, University Hospital, University of Michigan, Ann Arbor, Michigan.
This study has been sponsored by a research grant from the Michigan Heart Association.
Presented at the Fifth Annual Michigan Heart Day of the Michigan Clinical Institute, March 12, 1954.

one-third the murmur was due to patency of the ductus arteriosus.

Roentgen examination of the chest was found to be a valuable diagnostic aid. The almost pathognomonic finding in the roentgenogram of the chest was notching of the ribs due to enlarged intercostal arteries. This sign was not commonly seen in children but was the usual finding in adults, being noted in 64.3 per cent of the adult patients in this study. Other roentgen signs which have been found valuable were a widening of the left superior mediastinum due to enlargement of the left subclavian artery, a lack of prominence of the aortic knob, an indentation of the left border of the aorta at the site of the coarctation and an anterior and mesial deviation of the esophagus at or near the site of coarctation, as demonstrated by a barium swallow. We have found angiocardiography of considerable aid in evaluating the site and anatomy of the aortic obstruction. This procedure has been used in all of the patients for whom operation has been undertaken and in fifteen of the patients for whom operation has not been done. Before the availability of aortic grafts, it proved most useful in excluding from operation those patients who were believed to have an anatomical condition unsuitable for end-to-end anastomosis. Operation was not undertaken for six patients primarily on the angiocardiographic findings.

The selection of patients for operation has undergone some modification since our early experience in the treatment of this anomaly. It is our opinion that operation should be advised for most patients, especially those in the younger age groups, in whom a definite clinical diagnosis can be made, and in whom the angiocardiogram reveals a suitable anatomical situation for either an end-to-end anastomosis or an aortic graft. This attitude, however, is considerably modified by the age of the patient and associated cardiovascular defects. The ideal age for operation is believed to be during the second decade. Because of the uncertainty of the growth of the anastomosis in children below the age of ten years, operation is generally deferred, if their condition warrants. The older age groups present increasing technical hazards due to the atherosclerotic changes in the aortic wall. These changes occur relatively early in coarctation and are frequently well established by the third decade. While the risk is considerably greater in the older age groups, operation has been performed successfully in a patient in the fifties.[4] The presence of severe aortic regurgitation has been generally regarded as a contraindication to surgery, as have advanced myocardial changes in patients in the older age groups.

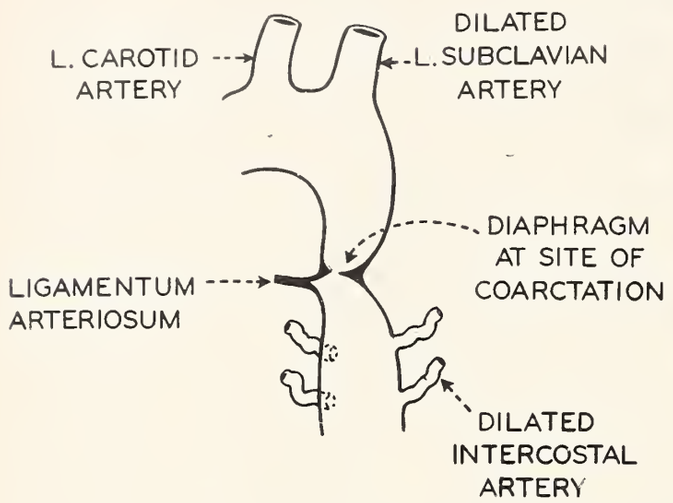


Fig. 1. Diagram of the usual adult type of coarctation of the aorta. Minor variations in the level of the coarctation are to be expected, although not depicted.

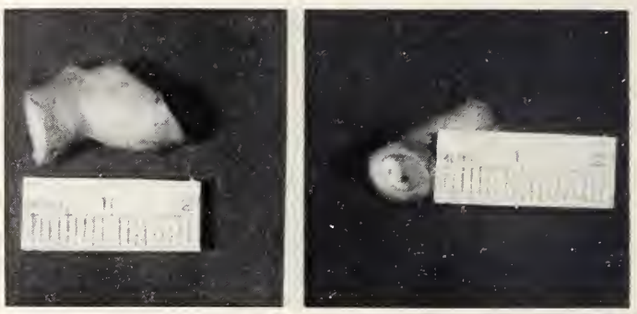


Fig. 2. Photograph of a resected area of coarctation. The external diameter of the aorta is considerably greater than that of the lumen which has been reduced to a pin point size by a membranous diaphragm at the level of maximum narrowing.

The patients for whom operation was done consisted of seventeen males and thirteen females. In the entire series of patients with and without operation, the ratio of males to females closely approximated 2:1, with males predominating, as described by Gross.[4] The ages of the patients for whom operation was undertaken ranged from seven months to thirty-nine years, with a mean age of 19.7 years at the time of operation. The thirty patients underwent a total of thirty-one operations, there being one instance of an aneurysm of the aorta immediately distal to the coarctation. As excision of the aneurysm and coarctation with

end-to-end anastomosis was impossible, the operation was terminated and subsequently an aortic graft was successfully inserted for this patient. The lack of collateral vessels at operation in another patient made it probable that the aorta could not be clamped safely for the necessary length of time without untoward complications. The operation was terminated without any definitive procedure being done. The remaining twenty-eight patients underwent excision of the area of coarctation and restoration of the lumen of the aorta was obtained by end-to-end anastomosis. The usual anatomical finding at operation is depicted in Figure 1 and an example of the resected area of coarctation is illustrated in Figure 2. Two patients had aneurysms of the intercostal arteries which were successfully excised in conjunction with the coarctation. There was one instance of a large patent ductus arteriosus which was ligated at the time of correction of the coarctation. The important complicating anatomical findings at operation are presented in Table I. Anastomosis of the subclavian artery to the distal aorta, as originally suggested by Blalock and Park[2] was not used in any of the patients in this series. The major technical difficulty has centered about the handling of the extremely fragile, thin-walled, dilated and tortuous intercostal arteries. Aortic grafts have been available for a relatively short period and a graft has been used only in the one patient with the aortic aneurysm.

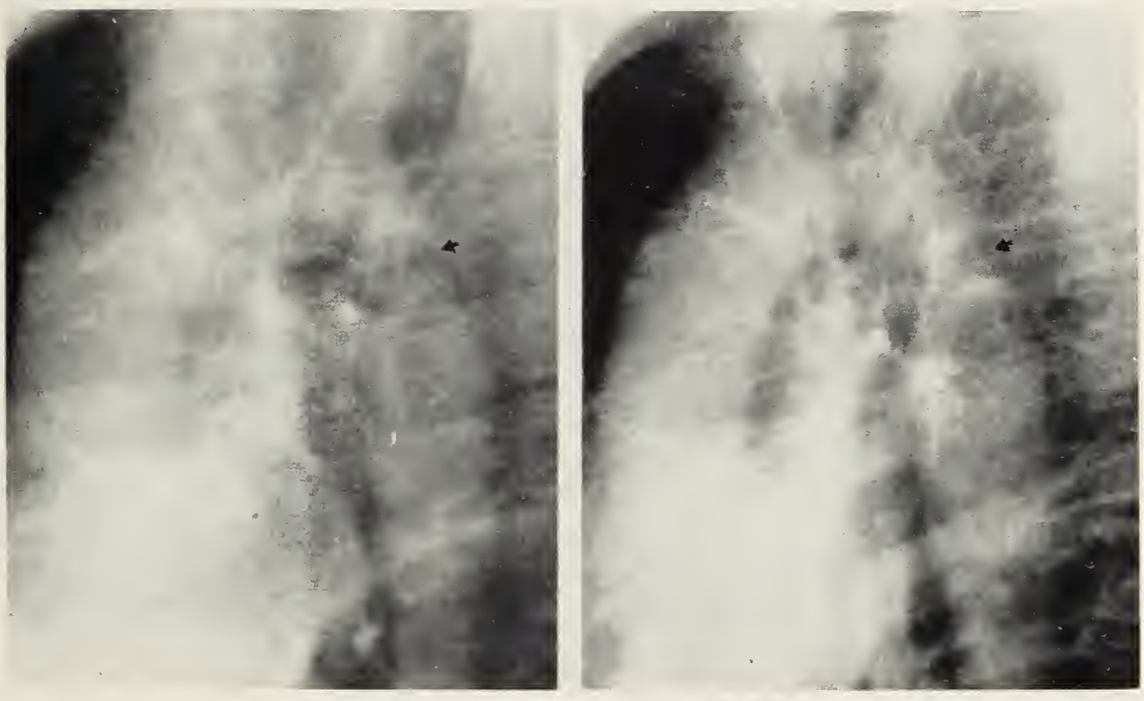


Fig. 3. Preoperative (left) and postoperative (right) angiocardiograms. The location of the coarctation is shown before and after operation.

TABLE I. COARCTATION OF AORTA
Complicating Anatomical Findings at Operation

Aneurysm of intercostal artery below coarctation	2
Aneurysm of distal aorta	1
Hypoplasia of left subclavian artery	2
Patent ductus arteriosus	1
Hypoplasia of distal aorta	1
Hypoplasia of aorta proximal to coarctation	1

The postoperative course following correction of coarctation of the aorta has not differed significantly from the usual thoracotomy patients. There has been no instance of any deleterious effect attributable to occlusion of the aorta during the operative procedure. The blood pressure in the upper extremities tends to drop slowly after operation, the maximum effect generally not being obtained until the second or third postoperative week. Smaller degrees of improvement have been noted up to two months. In subsequent follow-up studies, the blood pressure is generally found to approximate the level obtained during the first or second month after operation.

Serial postoperative roentgen examinations of the chest have shown no important changes from those observed before operation. The rib notching has remained essentially unchanged. As most of the patients in this series showed no appreciable cardiac enlargement in the roentgenograms before

operation, there has been no significant difference in the heart size following operation. There has been no suggestion of an aneurysm at the site of the anastomosis.

stance of incipient aneurysm was detected. We believe that a postoperative angiocardiographic study is indicated in any case in which the result has been unsatisfactory.

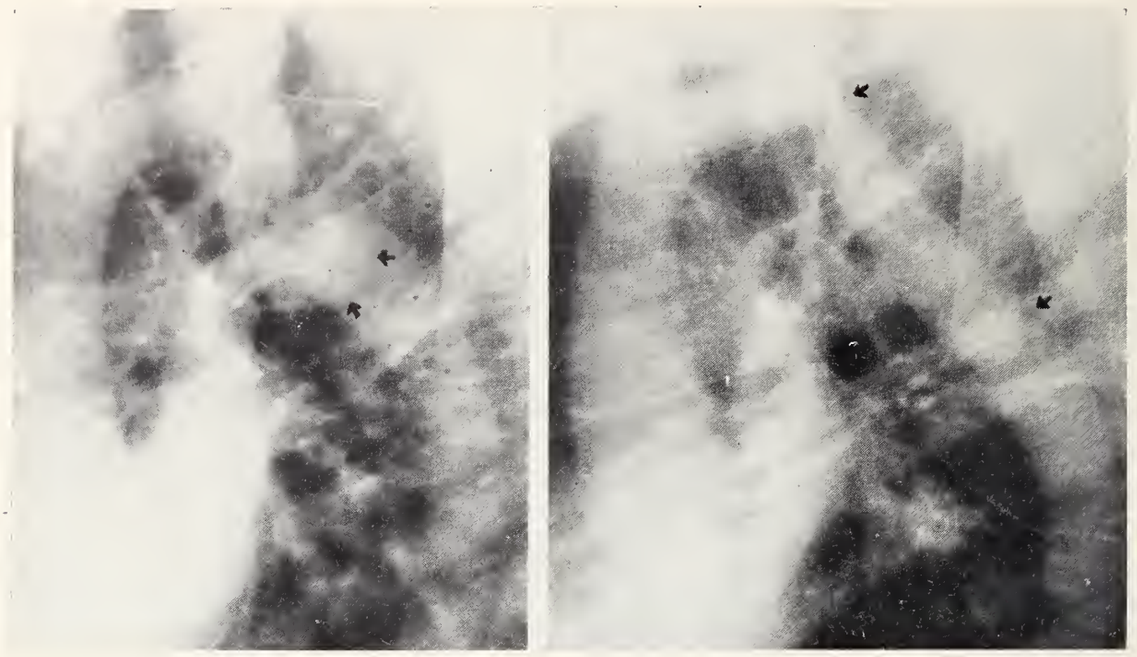


Fig. 4. (Left) Preoperative angiocardiogram reveals an aneurysm (depicted by arrows) of the aorta immediately below the level of the coarctation. (Right) Postoperative angiocardiogram shows the location of the aortic graft which was inserted after resection of the coarctation and aneurysm.

Postoperative angiocardiograms have been obtained in five patients, four of whom had some clinical finding which suggested the need for this type of study. In one of these patients the result is classified as unchanged. In this patient, hypoplasia of the distal aorta was found at the time of the operation and an estimated 8 mm. diameter of the lumen at the site of the anastomosis at operation was considered unsatisfactory. In another patient whose result was classified as fair the postoperative angiocardiogram showed a satisfactory lumen at the site of the anastomosis (Fig. 3) and no demonstrable explanation for the unsatisfactory drop in the blood pressure. The condition of the aortic graft was also evaluated in this manner, the preoperative and postoperative angiocardiograms being shown in Figure 4. In one patient with mild symptoms questionably referable to vascular insufficiency of the left upper extremity, the examination revealed a normal caliber of the left subclavian artery. In the fifth patient whose clinical result was excellent, a satisfactory appearance of the aorta, which was expected in this case, was demonstrated in the angiocardiograms, as well as a demonstrable decrease in the diameter of the collateral arteries. No in-

All except two patients have been evaluated recently. One of these patients was in excellent condition when last seen, as was evident from the fact that he had been accepted for enlistment in the United States Army. Twenty patients, or 66.6 per cent, are considered to have an excellent result, the criteria being the complete relief of symptoms and the absence of hypertension, i.e., a blood pressure not exceeding 140 systolic and 90 diastolic. If a second group of patients with a blood pressure not exceeding 155 systolic and 100 diastolic and with complete, or almost complete, relief of symptoms is established, seven patients, or 23.3 per cent can be classified as having obtained a good result. Of the remaining three patients, numbering 10 per cent of the total, one has achieved complete symptomatic relief but only fair reduction in blood pressure. The symptoms of one patient have been essentially unchanged by operation, although there has been a delayed lowering of the blood pressure. The remaining patient was the one for whom an exploratory operation was done. Thus twenty-seven patients, or 90 per cent, can be said to have achieved an excellent or good result. There were no deaths in

(Continued on Page 56)

Factors of Vasoconstriction and Vasodilation in Shock

By Mark Nickerson, Ph.D., M.D.
Winnipeg, Manitoba

SHOCK IS A complex and poorly understood syndrome, and although many definitions of this condition have been offered, none has proved to be sufficiently satisfactory to be generally accepted. However, to the average clinician the predominant feature of shock is an abnormally low blood pressure which may or may not be accompanied by other signs such as palor and coldness of the skin, sweating, etc. The arterial pressure can be easily and quite accurately measured, and consequently, it is understandable that it should attract major attention. However, preoccupation with blood pressure has led to the neglect of other equally or more important factors. The blood pressure is a significant determination only when it is related to the condition of the peripheral vascular bed. A normal or elevated pressure operating in the face of severe vasoconstriction may actually induce less blood flow than a much lower pressure associated with peripheral vasodilatation. It is the blood flow rather than the blood pressure which maintains the viability of tissues.

In the treatment of shock, adequate restoration of blood volume with whole blood and/or other fluids to compensate for hemorrhage or loss into damaged tissue is of undisputed benefit. This procedure is frequently effective in raising the blood pressure, and may produce even greater benefit to the circulation by improving the cardiac output and reflexly reducing peripheral vasoconstriction. Other procedures for raising the blood pressure are of much more questionable benefit. In particular, I should like to raise some questions regarding the desirability of the routine use of vasoconstrictor agents for this purpose. Considerable evidence is accumulating to indicate that a rise in blood pressure due to vasoconstriction may be more harmful than beneficial in most hypotensive conditions. Indeed, it is probable that in most, if not all cases of shock the body itself is producing an undesirably high degree of vasoconstriction.

As a result of the work of Cannon and others we have come to think of the sympathetic nervous system as one of the major agencies through which the body maintains homeostasis, and it is difficult to envisage its action as deleterious. However, this system was evolved during a period before the advent of blood transfusions and blood banks when our ancestors were never faced with the problem of surviving in the borderland between reversible and irreversible shock. Their requirement was to be able to run or fight efficiently. If they were injured sufficiently to preclude this, survival was out of the question. A system which is geared to sustain skeletal muscle function at top efficiency may not be as useful in the body's attempts to maintain a critical minimum oxygenation of various tissues following severe hemorrhage or trauma.

It has been known for many years that severe vasoconstriction, such as that resulting from sympathetic nerve activation following decortication[7] or from infusion of large amounts of sympathomimetic amines[4] will produce irreversible shock. Such severe vasoconstriction may lead to the loss of 25 per cent or more of the total circulating blood volume within two hours, and this is associated with a progressive decline in arterial pressure, followed by death within a few hours. Vasoconstriction *per se* appears to be the cause of this circulatory deterioration and death; prevention of vasoconstriction by sympathectomy or adrenergic blockade provides effective protection.

Shock in humans probably never is produced purely on the basis of excessive vasoconstriction. However, it is important to recognize that vasoconstriction tends to induce hemoconcentration, and if sufficiently severe and prolonged, may lead to irreversible shock. It is of even more practical importance to note that milder adrenergic vasoconstriction, superimposed on blood loss or trauma, predisposes to the development of shock. It is generally recognized that factors such as pain, cold, strong emotional stimuli and asphyxia, all of which lead to vasoconstriction, tend to potentiate the development of shock in humans. However, these factors are difficult to evaluate critically. In experimental shock it has been established that the infusion of relatively small amounts of epinephrine, or activation of sympathetic vasoconstriction by buffer nerve section will accelerate circulatory failure following hemorrhage.[14]

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Vasoconstriction is more pronounced in traumatic than in hemorrhagic shock, presumably because of a reflex response to afferent nervous impulses from traumatized areas. Animals subjected to trauma die with a residual blood volume well above that adequate to maintain life in animals subjected to hemorrhage.[21] However, after dorsal root section to eliminate vasoconstriction reflexly induced by afferent nerve impulses, animals subjected to trauma survive until their circulating blood volume has dropped to levels comparable to those lethal to animals subjected to hemorrhage.[19] Conversely, the production of reflex vasoconstriction by sciatic nerve stimulation in animals subjected to hemorrhage, although it causes a significant increase in mean blood pressure, results in death at circulating blood volumes comparable to those at which death occurs in the traumatized animals.[11] It appears safe to conclude that adrenergic vasoconstriction can significantly potentiate the development of shock which is due primarily to other factors.[20]

The final test of vasoconstrictor or any other type of therapy in shock is whether, under conditions of a uniform degree of trauma, a significantly higher survival rate is found among treated than among untreated individuals. Clinical reports on the use of vasoconstrictors in shock are extremely difficult to evaluate. The current enthusiasm for the use of norepinephrine in the treatment of hypotension has produced many reports. However, most of these involve only a small number of cases and the pretreatment condition of different patients varies widely. Where controls are included at all, they usually consist of cases treated during some previous period when many features of management in addition to the use of a vasoconstrictor may have been different. Until more extensive series involving the use of a vasoconstrictor in alternate cases are available, conclusions regarding the efficacy of vasoconstrictors in the treatment of shock must be based upon the results of animal experiments in which the degree of trauma or hemorrhage can be controlled. The immediate response of dogs in shock to the administration of a sympathomimetic vasoconstrictor is almost identical to that seen in man. The blood pressure is increased, the pulse is improved, and the animals become more active and alert.[6] However, the mortality is at least as high as among untreated animals, and the duration of survival is usually not increased. These observations emphasize the fact that a good pressor response to the agent employed cannot be taken as evidence that the individual's chances of survival have been increased.

The cardiac output is actually decreased when sympathomimetic agents are administered to animals in shock, and sagittal sinus and other venous oxygen saturation determinations have provided no evidence for increased blood flow.[6,14] Unfortunately, adequate cerebral blood flow measurements have not been made following the administration of sympathomimetic amines to animals or humans in shock. However, it is known that in normotensive humans the rise in blood pressure following norepinephrine administration is associated with a decrease rather than an increase in cerebral blood flow.[16] The fact that adrenergic vasoconstriction may adversely affect the cerebral circulation is suggested also by the observation that dogs subjected to traumatic shock are particularly prone to develop signs of severe central nervous system depression, frequently to the extent of functional decerebrate rigidity.[21]

The general status of protection against death from shock by vasoconstrictor agents can be summarized by saying that I have been unable to find in the literature any report of controlled experiments in which any pressor agent, administered in any dosage schedule, in any type of shock has improved the survival rate. No adequate studies with norepinephrine have been published, but it should be pointed out that the fact that this amine has been demonstrated to be the mediator of most sympathetic nerve activity[5] does not endow it with unique properties. It is simply another primary amine with a relatively short duration of action and with vasoconstrictor properties which are more prominent than its cardiac stimulant action. Other agents with very similar properties have been known and studied for many years.

Additional information regarding the role of vasoconstriction in the genesis of irreversible shock may be obtained from data on the effects of chemical or surgical interference with vasoconstriction. One feature of the response of animals without sympathetic vasoconstrictor activity which must be kept in mind, but which is not related to shock as we usually consider it, is the reduction in acute bleeding volume. If sympathetic activity is blocked and a large artery is then opened, the animal will die after the loss of a smaller amount of blood than would be the case if the sympathetics were intact.

This is not shock. Death usually occurs within a few minutes and there is no prolonged period of irreversible hypotension. If the blood is readministered, even after the cessation of respiration, the animal can recover rapidly without residual effects. When blood is removed slowly or fractionally, an organism with a considerable inhibition of sympathetic vasoconstriction appears to be capable of adjusting to the reduced blood volume to essentially the same extent as the normal animal.

One of the important features of hypotension due to vasodilatation is that it is usually well tolerated over extended periods of time. It is a common laboratory observation that following high transection of the spinal cord, the mean arterial pressure may fall as low as 30 to 50 mm. Hg and remain there for 24 hours or longer without permanent deleterious effects. Hemodilution rather than hemoconcentration occurs during the period of vasodilator hypotension.[12,13] If the pressure is reduced to a comparable level by bleeding or any other procedure associated with compensatory vasoconstriction, irreversible shock usually develops within a few hours.

Vasodilator hypotension produced by other procedures also appears to be well tolerated. Severe hypotension induced by continuous stimulation of the carotid or aortic depressor nerves can ultimately kill an animal. However, many hours of continuous stimulation are required to produce death, and the state of irreversible hypotension characteristic of shock does not develop until shortly prior to death. Even after many hours of severe hypotension, cessation of stimulation will allow the blood pressure and the animal to recover. It is also of interest that severe vasodilator hypotension produces only a minor potentiation of the deleterious effects of hemorrhage and that the administration of plasma or whole blood markedly prolongs survival without causing a significant increase in blood pressure.[12,13]

Inhibition of vasoconstriction considerably reduces the deleterious effects of both trauma and hemorrhage. The salutary effect of reducing vasoconstriction by blocking afferent stimuli from traumatized limbs has been mentioned above. Even more favorable results have been obtained with a generalized blockade of sympathetic vasoconstrictor activity. Animals pretreated with the adrenergic blocking agents Dibenamine or Dibenzyline[10] have been shown to maintain a higher cardiac output and a better peripheral blood flow than control animals during graded hemorrhage and particularly following trauma. Oxygen transport, total oxygen consumption, arterial blood pH and plasma bicarbonate reserve all remain above the values found in untreated controls,[2] and capillary stagnation of blood is much reduced or absent. In Dibenzyline-treated animals the capillary blood flow remains surprisingly good even during drastic hypotension.[24] In addition, hemocencentration is absent or occurs more slowly in the treated animals. Partial inhibition of sympathetic vasoconstriction appears to exert a more favorable effect than complete inhibition, but even extensive blockade allows animals to survive at blood pressures fatal to controls.

Sympathectomized animals or animals pretreated with Dibenamine or Dibenzyline to block sympathetic activity prior to hemorrhage respond much better than do controls to retransfusion following a period of hypotension. The immediate rise in blood pressure following the retransfusion of blood may be less than that seen in the controls. However, the increase is more sustained and a much higher percentage of the animals go on to ultimate recovery.

The basis for the greater resistance to shock in animals in which vasoconstriction has been inhibited is not clearly understood, but it is probably related to a reduced peripheral resistance which improves blood flow and reduces tissue anoxia during periods of hypotension. In general, the cerebral and coronary circulations maintain a rate of flow adequate to sustain the viability of the perfused tissues until extremely low pressures are reached. Indeed, coronary blood flow is reduced much less than cardiac work during periods of hypotension, and consequently, the myocardium should have a fully adequate blood supply.[3]

It appears probable that splanchnic blood flow is a major factor in determining the reversibility or irreversibility of shock. Although the role of VDM, the vasodepressor material released from the liver during periods of hypoxia, in the pathogenesis of shock is still debatable, it has been established that this material tends to appear in the blood stream at about the time that shock becomes irreversible.[18] VDM is not found in the blood stream of animals treated with Dibenzyline and then subjected to shocking procedures, and it has been demonstrated that the livers of these animals, in contrast to the controls, retain their capacity to inactivate VDM under aerobic conditions.[17] These

TABLE I. PROTECTION AGAINST DEATH FROM SHOCK BY PROCEDURES INHIBITING ADRENERGIC VASOCONSTRICTION

Investigators	Shocking Procedure	Treatment	Mortality	
			Control	Treated
Freeman et al., 1938 (8)	Hemorrhage	Sympathectomy	79	0
Wiggers et al., 1948 (23)	Hemorrhage	Dibenamine	70	40
Glasser and Page, 1948 (9)	Hemorrhage	Tetraethyl-ammonium	93 65	56 4
Wiggers et al., 1950 (22)	Hemorrhage	Dibenamine	70	10
Remington et al., 1950 (14)	Hemorrhage	Dibenamine	92	28
Remington et al., 1950 (15)	Trauma	Dibenamine	93 100	10 11
Baez et al., 1952 (1)	Hemorrhage Trauma	Dibenzyline Dibenzyline	62 72	0 8
Beck and Lotz, 1953 (2)	Hemorrhage	Dibenamine	80	40

differences in the response of control and Dibenzyline-treated animals are probably related to a more adequate liver circulation in the latter.

The final and most vital consideration in an evaluation of the effects of vasoconstriction on the shock process is the effect of blockade of sympathetic vasoconstriction on mortality from shock. Many experiments in several different laboratories have now adequately demonstrated that surgical or chemical sympathectomy can protect a high percentage of animals from death due to otherwise lethal shock. Data from several groups of workers who have studied this problem are tabulated in Table I. In these experiments the conditions were carefully standardized so that the control and experimental animals received the same amount of stress. The improvement in survival induced by blockade of adrenergic vasoconstriction is of sufficient magnitude to be well beyond the range of chance variation.

The interaction of various factors in initiating and perpetuating the vicious cycle of circulatory failure referred to as shock is most complex. The sequence of events depicted in Figure 1 is only an approximation, but it does serve to illustrate several important points. Reduced effective blood volume and vasoconstriction are key factors in this cycle. The mechanisms by which a reduced circulating blood volume induces vasoconstriction are fairly well established, but the mechanisms by which vasoconstriction causes a further reduction in blood volume have been less adequately worked out. It now appears probable that hemodynamic factors are more important in this process than is increased capillary permeability resulting from tissue anoxia. In spite of this uncertainty as to mechanism, it is clear that vasoconstriction does lead to a reduction in effective blood volume and thus perpetuates the shock process.

The primary importance of reduced blood volume and vasoconstriction in the development of shock is emphasized by the fact that it is only at these two points that efforts to treat developing shock have been successful. A low systemic arterial pressure is also listed as one step in the shock cycle. However, efforts to combat shock by raising the arterial pressure directly with vasoconstrictors have been singularly unsuccessful. Reasons for this failure are suggested in the diagram. Raising the blood pressure with an agent such as norepinephrine may affect the cycle adversely in both directions, *i.e.*, by increasing vasoconstriction and by reducing cardiac output.

Most of the available data on the development of shock have been obtained on relatively normal animals and probably can be transferred safely to patients with fairly normal circulatory systems. However, in the presence of severe artherosclerosis the situation may be somewhat different. A marked reduction in the velocity of blood flow may predispose to the development of thrombosis in sclerotic vessels. When this occurs the considerations discussed above no longer obtain. However, it would be a mistake to assume from this that the routine use of vasoconstrictors to prevent or correct hypotension in patients with atherosclerosis is desirable. Blood pressure is not the only factor which determines velocity of blood flow. Vasoconstriction peripheral to the point of measurement may produce stasis in the face of a normal or elevated pressure. It is difficult to predict the interrelationship of pressure and vasoconstriction in determining the velocity of flow in any given vascular bed; and unfortunately, no measurements bearing directly on this problem have been reported. However, until adequate data are available, it should be borne in mind that the presence of severe atherosclerosis may modify the application of laboratory observations to the treatment of shock in patients.

Summary

Evidence has been presented to indicate that excessive vasoconstriction is an important factor in the genesis of shock. Hypotension associated with vasodilatation is usually well tolerated for long periods of time, whereas comparable hypotension

associated with vasoconstriction leads to irreversible shock within a few hours. The only procedures which have been found consistently to reduce mortality following hemorrhage or trauma are

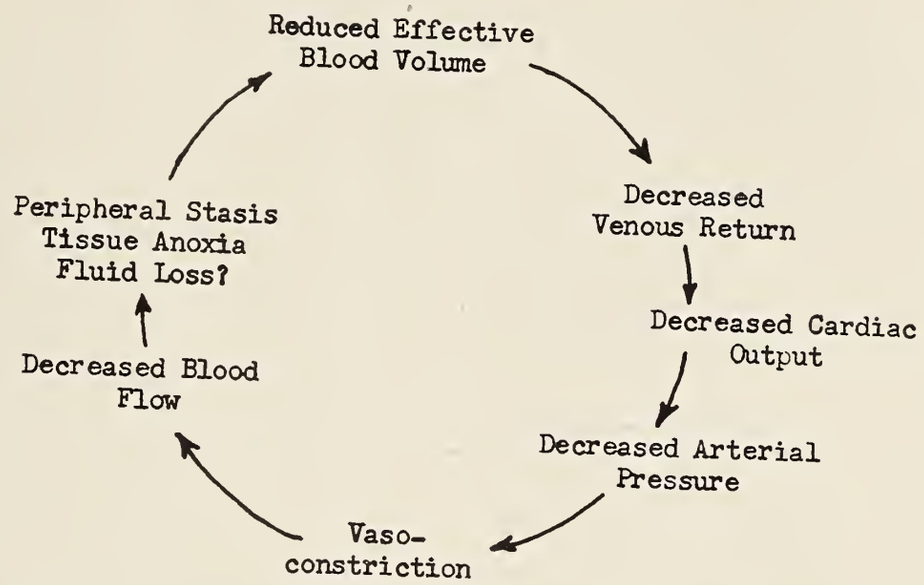


Fig. 1. Schematic representation of the cycle of events leading to the perpetuation of circulatory inadequacy in shock.

those which increase the circulating blood volume or reduce vasoconstriction. Preoccupation with hypotension, an obvious and readily measured sign of shock, has led to the frequent use of vasoconstrictors in therapy. These agents are usually effective in raising the blood pressure, but a consideration of the role of vasoconstriction in the evolution of shock indicates that they are more likely to be deleterious than beneficial, and this conclusion is emphasized by the fact that these agents have never been shown to improve the survival rate in any type of shock produced under controlled conditions.

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Standard Management of Myocardial Infarctions

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AFTER A period of thirty years of general recognition of the disease, there should appear in our hospitals a flexible, but in general, a standardized management of coronary occlusion and its consequent infarction in the wall of the myocardium.

A standardization of management is in force with reference to syphilis, tuberculosis, diabetes, peptic ulcer, cerebral thrombosis, arthritis, hypo- and hyperthyroidism—to mention only a few commonly encountered conditions in the field of Internal Medicine.

So why should we not adopt some generally accepted program for a commonly fatal disease in an aging population and one especially prevalent in the medical profession of which about 35 per cent are victims.

That a problem exists here may be demonstrated by Table I concerning the mortality figures of 483 of 600 consecutive cases in an open-staff hospital in Michigan.

In the table each staff physician is identified by a letter and the results of his effort to save a case of coronary occlusion are shown. The mortality percentage varies between fifty-five plus per cent and seventeen plus per cent. In the former a general practitioner has been in practice for thirty years, and seems to avoid asking for consultation regarding these critically ill patients.

For some reason unanimity of opinion is not present even among the major medical centers, and divergent viewpoints are not rapidly being resolved. The picture is reflected more flagrantly in hospital staffs of the open type.

The points upon which differences of opinion seem chiefly to rest are the following:

1. *Use of anticoagulants.*
2. *Bed rest versus chair rest.*

TABLE I. MORTALITY BY PHYSICIANS

M.D.	No. Patients	% 486 Cases	% Mortality
A	112	23	29
B	98	20	17
C	72	15	33
D	73	15	34
E	41	8	31
F	19	4	21
G	18	3	55
H	14	3	28
I	11	2	27
J	11	2	45
K	9	2	33
L	5	1	0
Total	483	29%	100

3. *The use of drugs,* particularly atropine sulph. and papaverine HCl.
4. The recognition and interpretation of *Prognostic Signs.*
5. Salt restriction.
6. Use of drugs to counteract shock.
7. Psychological components.
8. When is healing complete and permission for *increased physical activity* to be granted?

There are other controversial points, but space permits only the discussion of the ones I have just outlined.

In my experience in observing 600 cases, of which I was directly responsible for about one-fifth, the following program seemed to result in the lowest long-term mortality rate.

Use of Anti-Coagulants

Experience in more than 1000 cases as collected for the American Heart Association, has proven statistically that anticoagulant therapy is indicated almost invariably in the following types of cases: in those with a massive infarction, producing shock, a continued pulse pressure less than 20 mm., or an arm to tongue circulation time above 25 seconds, irregular rhythm, i.e. heart block, auricular fibrillation, and in congestive heart failure. It is also indicated in those cases where the patient is over age 55 chronologically or has a previous history of emboli. The contrast was dramatic for cerebral, visceral and peripheral emboli. The treated cases showed less than one-third the embolitic phenomena of the controls.

One starts with depot heparin intramuscularly or thromexan to obtain a rapid drop in prothrombin concentration between 25 and 39 per cent of the normal control and then continues with varying daily doses of dicoumerol by mouth. I prefer the higher level of 35 to 40. This procedure, of course, necessitates daily venepunctures.

From the Medical Service of St. Joseph Mercy Hospital, Ann Arbor, Michigan.
This paper was presented at the 33rd annual Collar-Penberthy Clinical Conference in Traverse City, Michigan, July 29, 1954.

TABLE II. DEATH RATES

442 controls in six weeks	23.4% died
589 treated in six weeks	16% died

1031 cases collected by the American Heart Association

If a hospital is fortunate enough to have an intern staff, the responsibility for dicoumerol dosage should be delegated to one intern—rotating the job at suitable intervals.

Contraindications include recent post-operative cases, jaundice, open wounds, blood dyscrasias, any liver disease, or nephritis with nitrogen retention and microscopic hematuria, Vitamin C or K deficiency, renal insufficiency, late pregnancy, subacute bacterial endocarditis, the presence of an active peptic ulcer or other ulcerative lesions of the gut.

TABLE III. THROMBOEMBOLITIC COMPLICATIONS

(From the American Heart Association)

Control Group	42 per hundred
Treated Group	13 per hundred

Total Thromboembolitic Complications	Mortality Percentage
442 Controls (in six weeks)	26%
589 Treated	11%

Bed Rest Versus Chair Rest

During the first fourteen days enforced and absolute *bed rest;* feeding the patient and permitting a commode once daily. I wish someone would build a commode mounted upon a scales in order to keep an accurate chart of the patient's weight. There should be no visitors, no telephone and no mail. The diet should consist of 1,200 calories in four feedings. These patients frequently are meticulous and ano-erotic, requiring a bowel movement daily so that mild laxatives usually are necessary. Chair treatment during this period or subsequent periods *until six to eight weeks have elapsed is not practical.*

The "chair management" as championed by several authorities has yielded an overall mortality of 28 per cent. In the final analysis gross mortality percentages must determine the value of any given plan of therapy. Exponents of the "chair management" base their arguments largely upon (a) psychological factors, and (b) better physiological rest to the injured myocardium. Neither are clearly tenable, and until further evidence is available for analysis, I would suggest that we continue the time-tested practices in the management of coronary occlusion, and those which give the best short and long-term fatality rate.

Use of Drugs

The use of anticoagulants has been discussed. Digitalis is contraindicated except to control the heart rate in auricular fibrillation. The use of atropine, as advocated by the late Dr. Gilbert of Chicago, does not seem to be as advantageous as that of papaverine HCl. Papaverine HCl has several advantages over atropine. It has less side effects, it relieves pain—controls the rhythm—preventing extra systoles. Papaverine also dilates the adjacent coronary branches, thereby limiting the area of infarction.

For the first week the drug should be given intramuscularly every four hours in doses of ½ to 1 grain, usually the latter dosage. Later 1½ grains (0.1 gm) by mouth is sufficient and should be continued for three to six months (and if extra systoles appear—almost indefinitely).

It is understood, of course, that the immediate control of pain is paramount. For this purpose morphine is the drug of choice, and in a typical case 1 to 2½ grains usually are necessary. In occasional cases its intravenous use is indicated. Here it is given as ¼ grain in 5 ccs. of normal saline.

The initial pain, or compressive sensation of a coronary occlusion rarely may not appear, i.e., it is a silent occlusion; it may be referred only to the epigastrium, to the mid-spine, only to the elbows and in several other regions. In many cases it suggests to the patient a gastrointestinal or gall-bladder affliction. The "pain I never had before" usually predominates, although the failure to recognize the unusual or more bizarre types of discomfort is responsible for more deaths than is generally realized

Oxygen.—In cases of clear-cut coronary occlusion called to the physician's attention as an emergency, oxygen has an inestimable value. Oxygen by tent at 8 liters per minute, or by nasal catheter at 4 liters should be instituted immediately.

The philosophy here is that possibly one does not immediately recognize the seriousness of the injury. It is therefore encumbent upon him not to underestimate the problem confronting him.

The patient and family realize that he has had a heart attack. "They fear the worst; they hope

for the best." The oxygen tent becomes a natural adjunct in early management and is clearly acceptable to the patient. Use it in all cases until you can, with time, determine its actual necessity.

Oxygen definitely helps to relieve pain, reduces the heart rate as well as the respiratory rate, allays anxiety and engenders confidence.

The blood pressure, pulse rate, signs of failure such as venous engorgement, liver tenderness, congestive rales, and heart rhythm are of value in determining the time oxygen may be discontinued.

Prognostic Signs

There are means of determining the good risk from the bad risk patient and thus the need for anticoagulant therapy. These "poor risk" patients should receive anticoagulants. "Good risk" patients, if they can be recognized with certainty, do not always need anticoagulants However, this latter statement is not universally accepted.

A rising temperature to 104 degrees, increasing white blood count to 20,000, falling blood pressure to 80 mm. and faint cyanosis of the nail beds as well as any cardiac arrhythmia are the indications of a possibly fatal outcome, and the continued need for oxygen. The electrocardiogram also is of distinct value in prognosis. Among other things a persistent displacement of an S-T segment offers the probability of an extension of the infarcted area, a ventricular aneurysmal formation, and a persistent disturbance of rhythm, an involvement of the intraventricular septum.

These signs are seldom apparent when the patient is first seen, but one should not fail to anticipate them. *Therefore the use of oxygen until the patient's status clarifies itself may mean the difference between life and death.*

Salt Restriction

The dietary needs of these patients consist of meeting only the caloric requirements, usually about 1200 calories. The objective here is to maintain a lowered metabolism and a decreased need for the transportation of oxygen by the heart.

A diet of protein 80 grams, CHO 150 grams, plus the 30 grams of fat usually is satisfactory if supplemented by ascorbic acid 200 mg. and the Vitamin B complex.

Moderate salt restriction is advisable, 2 to 4 grams. However, if circulatory failure is present or impending, a low sodium diet—400 mg. must be used.

In diabetics with coronary occlusion it is necessary to control the blood sugar accurately because should hypoglycemia appear as the result of overdosage of insulin, a new coronary attack can be precipitated, or a cerebral vascular accident encountered.

Use of Drugs to Counteract Shock

The occasional *initial shock rendering the patient unconscious* does not necessarily indicate a poor prognosis.

There are two schools of thought with respect to its management. One group of prominent cardiologists would try actively to combat shock with drugs such as ephedrine and other synergistic compounds.

Another equally prominent group of physicians reason that the markedly decreased blood pressure, which dominates the picture, is a compensatory and protective mechanism and should suffer no interference. You should not whip-up a tired horse, they say, because he may expire anyway. So it is with the myocardium.

In general, I am inclined toward the latter view, and I base this opinion upon experience. If a person does not die during the first few minutes, but rather shock supervenes, he is in an oxygen tent. The use of coramine intravenously in doses of 5 ccs. at intervals will maintain respiratory activity and frequently is life saving. Papaverine HCl intravenously also is of distinct value. This is not a peripheral vasomotor shock at all, but a sudden left ventricular failure often in the presence of a normal sinus rhythm.

Psychological Components

With reference to the psychological components in patients with coronary occlusion there are a few simple rules:

1. Listen to the patient's heart every day. He expects such an examination and it is necessary. The appearance of a systolic murmur at the apex (aneurysm) or at the tricuspid area (rupture of septum) as well as changes in rhythm or rate are of significant importance in care and prognosis.

2. Mild sedation with phenobarbital is advisable in most cases because these patients in general react emotionally in an exceptionally vigorous manner. These emotional reactions (often inborn) are reflected through the hypothalamic area of the brain to the organs usually under supervision

of the vagus nerve. The most desperate complication in the latter stages of a convalescence is a morbid depression which may last indefinitely.

Continual encouragement for the patient constitutes half the battle. The relatives must be more accurately informed, but even in desperate instances, warned to maintain a hopeful attitude.

Surgical Assistance for the Arteriosclerotic Heart

The final controversial issue is with respect to surgical intervention in selected cases of myocardial infarction. I have at present a number of cases of both angina pectoris and left ventricular aneurysm whose lives might be prolonged in the first instance by improving the blood supply to the myocardium, and in the second by pericardial grafts placed over the ventricular defect. To my mind such surgical procedures should be done more often. A decision cannot be made until six months have elapsed. However, the most decisive obstacle is the reluctance of the patient and his relatives to sanction the procedures.

It is to be hoped that in the not too distant future surgery will become more applicable in solving the problem of cardiac injuries caused by coronary disease.

To summarize, I would consider the following initial chart orders to constitute a standardized program of management for the routine case of coronary occlusion.

1. Relieve pain by morphine, oxygen, papaverine.
2. A sub-maintenance and low salt diet.
3. Oxygen for the time necessary to determine the extent of myocardial injury, i.e., EKG, blood pressure, white blood cell count, temperature and cardiac rhythm. (ESR of little value.)
4. Absolute rest in bed for fourteen days, permitting commode, plus feeding the patient. Following this period one can decide upon the damage incurred to the myocardium by occlusion of a vessel. Then follow a very conservative course for another six weeks.
5. Antibiotic therapy for any intercurrent infection.
6. No visitors, except immediate family, no mail or telephone; special nursing during this time.
7. Blood pressure readings B.i.d. for two weeks.
8. Bi-daily auscultation of the heart, rhythm, strength of sounds, friction rub, and appearance of a systolic murmur at apex or the tricuspid area.
9. Anticoagulant therapy (when not contraindicated) to maintain a prothrombin concentration between 25 and 39 per cent of nornal for six weeks.
10. The 2-2-2 Rule of Rest avoids many failures. For moderately severe to severe cases this rule is mandatory.

2 months absolute bed rest
2 months mild activity
2 months moderate activity

Re-evaluation of case in six months before full activity is permitted—include fluoroscopy, EKG, and vital capacity if possible.

VASOCONSTRICTION AND VASODILATION IN SHOCK

(Continued from Page 49)

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Alcoholism and Cardiovascular Disease

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THE DISCUSSION of alcoholism generates many reactions. As stated by Roger I. Lee "alcohol is a highly inflammable subject whether you apply a word or a match to it." Alcohol has been used as a medicament or beverage since dawn of the human race. Very probably "home brew" was used early in human development. There are many references in early records such as the biblical reference in regard to looking on "wine when it is red." Its abuse is recorded in English literature. Ben Johnson, when observing an alcoholic addict, remarked "but by the grace of God there go I." The influence of alcohol affects all types of human endeavor such as politics, diplomacy, justice, church, safety and health. In regard to clergy the incidence is related regarding the old priest on the west coast of Ireland preaching a temperance sermon to his flock at a time when English landlords were not exactly popular, stated: "What makes you shoot at your landlords? It's drink. What makes you miss them? It's drink." In passing it might be of interest to know that Paul Revere fortified himself with buttered rum before his famous ride.

Alcohol affects health both directly and indirectly. These effects are closely related and need to be considered together. Alcoholism as a public health problem ranks first in importance with 50,000,000 adult drinkers. It is estimated there are 700,000 chronic alcoholics. Having been admonished regarding the inflammability of these statements a sober analysis is necessary. Alcoholism is a sociologic problem in which medicine has a vital interest. This is shown by the organization for the study of the problem by such groups, Yale School of Alcohol Problems, Research Counsel on Problems of Alcohol, and the National Committee on Alcohol Hygiene. The attitude to, and the users of alcoholic beverages can be grouped as follows: (1) the abstainers; (2) occasional or social drinker; (3) the regular, excessive *but* controlled drinker (estimated 2,250,000), and (4) the chronic uncontrolled addict (estimated 700,000). The consumption per day of a moderate drinker according to the Estes Rule is (1) alcohol 1½ ounces; (2) whiskey, 3 ounces; (3) wine, ⅔ pint, and (4) beer, 1 quart. Of the adult population 76 per cent of men and 56 per cent of women were drinkers. It is also noted that the gap between men and women is less since 1940 with less differentiation of social behavior between the sexes. Force of basic social trends is reducing the proportion of total abstainers. This classification is based chiefly on mental and psychic reactions to alcohol. The pharmacologic effects are not impressive on any tissue except the effect on the brain. Even in the brain the reactions are dependent of the psychic pattern of the individual, accentuating their basic patterns. It may even unearth recognized potentialities. By depressing inhibitory centers there is a freer play of elemental behavior. After ingestion, alcohol is very rapidly absorbed. It is well known that the amount of food in the stomach, dilution of the beverage has great influence on rate of absorption. On an empty stomach alcohol can be detected in the blood in five minutes and maximum concentration is reached in one hour. The blood contains the highest concentration, with brain tissue next.

The immediate effect of alcoholic concentration in tissue and blood determine the degree of intoxication. This, however, varies with individuals and the degree of tolerance which has been developed. Alcohol is eliminated through oxidization. An adult weighing 144 pounds will oxidize 10 cc. of alcohol per hour, or about 1 pint of whiskey in twenty-four hours. From 1 to 5 per cent of unchanged alcohol is eliminated through kidney and lungs. The amount varies with amount ingested.

The direct pharmacologic effects of alcohol on the circulation are not impressive. Studies made early in the 20th century by Dixon, show some disturbance of rhythm and an increase in rate with low dilutions. The increase in the cardiac output occurred with increase in rate. Low dilutions caused peripheral dilatation but strong dilutions caused contraction. Recent studies (by Grollman) showed a transient rise in pulse rate and blood pressure and a 10 per cent increase in cardiac output which persisted for thirty minutes.

Peripheral vasodilatation is usually accepted as a definite effect of alcohol. Reedy studied this in connection with other vasodilating drugs. He obtained an increase in peripheral temperature in a vasospastic disturbance of lower extremities, but no increase of temperature in subjects with arterio-

sclerotic disease. But several of the latter stated that their legs felt warmer. He concluded that alcohol was more inconstant, unreliable and less effective than Priscoline.

Alcohol has value as a food. The caloric value of alcohol is 7 calories per gram. Body can oxidize 10 cc. per hour producing 70 calories of heat or 2 ounces of whiskey, 1½ ounce (1 jigger)=110 calories in three hours. This could furnish a significant part of the caloric requirement. This spares protein, fats and carbohydrates. This, however, furnished "lone wolf" calories without vitamins or other protective elements. In some countries where wine and beer are a part of the dietary a considerable part of the caloric intake comes from this source. Leverton emphasizes its importance as a cause of obesity and a cause of failure in reduction programs. In addition to its caloric value in the moderate drinker is the stimulus of overeating. Obesity is frequently of great importance in the cause, precipitation and continuance of heart failure and symptomatic hypertension.

The excessive drinker and especially the alcoholic addict may eat little food depending chiefly on alcohol for calories. This is particularly true when the victim is on a "bender." At a lower economic level his finances may permit only the purchase of alcoholic beverages and accompanies other unhygienic environment. This leads to a deficiency state. In the cardiovascular system it is manifested as the "beri-beri" or "alcoholic heart" of recent writers. Some authors have described cases identical clinically and pathologically with Asiatic beri-beri. Full blown cases are relatively uncommon in U.S.A. During this period it was estimated that this deficiency was a factor in 20 per cent of moderate alcoholic. The reports above noted come from larger cities during the 1930 decade. While probably the amount of alcohol consumption has not decreased, the food supplies probably are better during the last decade. Yater suspected this deficiency, resembling beri-beri heart disease, in cases of cardiac disease, which do not present a definite etiological cause, such as congenital, rheumatic, coronary heart disease. It has been noted that deficiency disease in chronic congestive failure is often due to the alcoholic component in the diet. Frequently the surcease of alcoholic indulgence in this distress is of such magnitude as to create a deficiency state. This condition is noted more frequently in whiskey and gin drinkers, much less frequently in beer drinkers and rarely in wine drinkers. The "Münchner Bierherz" probably was due to the enormous fluid intake, deficiency state and unrecognized hypertension. It is worthy of note that this cardiopathy nearly disappeared with the perfection of a clinical sphygmotonometer. Effective therapy is accomplished by use of vitamins and proper nutrition.

The relationship of alcohol to arteriosclerosis is chiefly of historic interest. Cabot in 1904 quoted Nothnagel's "Specielle Pathologie and Therapie." Alcohol is considered by practically all writers on arteriosclerosis as the chief if not the most important cause." Cabot took issue and reported 283 cases drinking one quart of whiskey daily under fifty years of age with only 17 per cent showing arteriosclerosis. There were ninety-five cases of arteriosclerosis under fifty years of age of whom 17 per cent were alcoholics. Eberhard showed less deposition of cholesterol in aorta of rabbits if fed alcohol with cholesterol diet. White reported drinking of much alcohol rarely found in history of patients with angina pectoris. Reported 750 cases of these 1.1 per cent drank heavy. 8.4 per cent of controls drank heavy. 61.7 per cent drank some, 64.4 per cent of controls were abstainers. Osler early stated that arteriosclerotics were devotees of Venus (love), Bacchus (wine), Mars (military), and Vulcan (strenous life). Leary states "if aorta at sixty years is consistently that of forty years with history of alcoholism the conviction becomes complete that there is an association between alcohol and the absence of arteriosclerosis." It was also noted that alcoholics had less cholesterol gall stones. This effect on cholesterol has also been noted in pre-insulin diabetes at a time when alcohol was a favorite therapeutic agent. Probably the absence of arteriosclerosis in diabetics at that period was due to an early death, and with insulin their span of life is sufficiently increased to permit formation of this process.

With the advent of critical study of arteriosclerosis such as are reported at the Society for the Study of Arteriosclerosis, alcohol, as a cause or prevention, has received no mention.

There is little direct effect of alcohol on the heart muscle. In fatal cases the myocardium contains about the same amount of alcohol as other muscles. Its direct toxic effect is slight. Loomis experimentally demonstrated that failure of respiration with near lethal doses of alcohol caused hypoxia of the myocardium resulting in heart

failure. This concentration of alcohol would not be reached except in fatal intoxication. Alcoholic indulgence probably is a frequent precipitating factor in congestive and coronary failure. The overfilled stomach with beverages and food produces unfavorable pressure under the diaphragm which is augmented by cardiogastric nerve reflexes which may result in coronary spasm, or increased circulatory load. With the accompanying euphoria of alcoholic indulgence, physical and mental activity (probably purposeless) is increased. The individual overestimates his prowess and exceeds his normal capacity in all activities. Not infrequently this occurs with coitus. This event is illustrated in the quotation from "Macbeth" when the porter says to MacDuff "It provokes the desire but takes away the performance," explains the occurrence of a coronary accident at this crucial moment.

The use of alcohol as a therapeutic agent in cardiovascular disease is limited. It may relieve tension and anxiety by depression of inhibitory centers. This may be valuable in relieving depressed mental states, particularly in the aged. Trousseau called wine "the milk of old age." It may also have a food value. Many of these elderly patients are also victims of coronary artery disease. This condition is favorably influenced by its sedative and its vasodilating effect. Some patients are emphatic in the relief obtained in angina pectoris. When good effects are achieved the patient should be encouraged to use it, but the euphoric stage is to be avoided.

In peripheral vascular disease whiskey has its chief claim as a medicinal agent. As shown by Reedy, the temperature of the extremities in vasospastic vascular disease is increased indicating improvement of the circulation. This response was not noted in arteriosclerosis of the extremities but the patients obtained the subjective sensation of warmth, possibly indicating less circulatory effect. This condition may be a valuable measure. As this disease is of long duration, it may result in excessive use and addiction. Better effects are achieved by priscoline. In circulatory collapse alcohol probably has little value. The effect is probaby from reflex stimulation of the mucous membrane of the mouth and stomach.

COARCTATION OF THE AORTA

(Continued from Page 44)

the series of patients for whom operation was undertaken. The results according to age groups are summarized in Table II.

TABLE II. COARCTATION OF AORTA
Results in 30 Patients

Age	Number of Patients	Unchanged	Fair	Good	Excellent
1-9	1	0	0	0	1
10-19	16	1	0	5	10*
20-29	11	1	1	2	7
30-39	2	0	0	0	2
Total	30	2	1	7	20

*One Case—re-exploration and insertion of graft.

Summary

The present study comprises a review of the patients with coarctation of the aorta who have been examined in the five-year period beginning on January 1, 1948, and an analysis of the results of operation in all patients who have been operated on prior to October 1, 1953. Ninety per cent of the thirty patients with operation obtained an excellent or good result. The condition of two patients remains relatively unchanged. Resection of the coarctation was not done in another patient because of the absence of collateral circulation. In view of the decreased longevity of most patients with coarctation of the aorta, operative correction is advisable unless specific contraindications exist.

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The Hemorrhagic States

I. The Thrombocytopenic Disorders

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THE PURPOSE of this article is three-fold: (1) to present an organized diagnostic approach to those hemorrhagic disorders which result from a deficiency of platelets in the circulating blood, (2) to emphasize and discuss some of the unusual and difficult diagnostic problems which may be encountered in the better known conditions, and (3) to describe in some detail, several of the recently recognized entities.

The only bleeding that is normal occurs at the menses and during childbirth. Any other bleeding should always remind the clinician that a hemorrhagic diathesis may exist. While asymptomatic and transitory purpura may be the first or only clinical sign, sudden fulminating uncontrollable hemorrhage into the skin and/or from the mucous membranes may present the physician with one of the most critical of all medical emergencies. A few scattered petechiae may be the first sign of a disease, which at that moment, may be threatening the life of the patient. Even this meager sign is the signal for an immediate and pains-taking investigation. It cannot be overemphasized that a prompt and accurate diagnosis is indicated in every case of hemorrhagic disease.

Platelets in Blood Coagulation

While it is true that the physico-chemical intricacies of blood coagulation will continue to challenge the best thought of many investigators for a long time to come, it is also true that our growing knowledge of coagulation has increased the precision of diagnosis of the hemorrhagic states and has stimulated the development of technical methods with which hitherto unrecognized defects in the clotting mechanism may now be detected. On the other hand, it is equally true that unquestionable facts are scarce. Indeed, it may be emphasized that any current theory of blood coagulation can amount to little more than an inadequate attempt to piece together many different, isolated, clinical and experimental observations which have been given variable, and often conflicting interpretations. Nevertheless, we may be encouraged that certain recent investigations have contributed to a better understanding of coagulation and have defined several previously unrecognized clinical entities.

Since the turn of the century it has been generally accepted that prothrombin and thromboplastin react in the presence of calcium to form thrombin. Fibrinogen is thought to react with the thrombin, thus formed, to produce fibrin (clot). The work of Quick,[31] Conley[10] and Biggs[7] and their associates has established beyond question that platelets are involved with these substances in the process of normal coagulation. Brinkhous[9] and Quick[32] have shown that both platelets and a globulin fraction of the plasma proteins (antihemophilic globulin) are essential to the generation of thrombin from prothrombin. Quick[32] has suggested that antihemophilic globulin (AHG) is the precursor of thromboplastin and that the former is converted to thromboplastin by the action of platelets. Working with purified prothrombin in Seeger's laboratory, Johnson and her associates[25] have observed a thromboplastin-like activity during the interaction of platelet extract and a partially purified globulin fraction of plasma. They believe this plasma globulin is probably the same as antihemophilic globulin (AHG). These investigators found that purified prothrombin can be activated to thrombin by platelet extract and the plasma globulin in the presence of calcium. This thromboplastin activity varied with the amount of platelet extract and plasma globulin present. More recently, Biggs and MacFarlene[6] have presented experimental data which they believe indicates that thromboplastin is generated by a mixture of platelets, AHG and the serum accelerator (Factor VII) in the presence of calcium. Their results indicate that a reduction in the amount of any one of the first three factors results in a corresponding decrease in the amount of thromboplastin generated. These authors have written: "Together, these factors form a thromboplastin as powerful as any that can be extracted from tissues. There can be little doubt that the platelets are the main source of an essential thromboplastin—generating material and that a deficiency of platelets, whether naturally or artificially produced, has important effects upon thrombin generation."

Whatever the manner in which they engage in

TABLE I. MECHANISMS OF THROMBOCYTOPENIA

I. Disorders Involving the Bone Marrow
  1. Panmarrow hypoplasia—aplasia
  2. Foreign cell invasion
  3. Myelofibrosis—myelosclerosis
  4. Selective megakaryocyte damage
  5. Idiopathic megakaryocyte defect
  6. Idiopathic erythroid hyperplasia (Acute erythremic myelosis—Di Guglielmo)
  7. Deficiency diseases—nutritional states
II. Disorders Involving the Spleen
  1. Primary hypersplenism
  2. Secondary hypersplenism
III. Thrombocytopenia Due to Circulating Platelet Agglutinins (immuno-thrombocytopenia)
IV. Allergic Thrombocytopenia
  1. Food allergy
  2. Drug allergy
V. Thrombocytopenia of Undetermined Pathogenesis
  1. Thrombotic thrombocytopenia
  2. Hemangioma in infants

the mechanism of blood coagulation, there can be no reasonable doubt that the platelets are indispensable to normal clotting. Accordingly, the first step in the diagnosis of any case of bleeding suspected of being due to the hemorrhagic diathesis, is to determine if a clinically significant thrombocytopenia exists. There are certain technical difficulties inherent in all of the platelet counting methods now in current use. Thrombocyte counts, as done in the average clinical laboratory, are frequently valueless. The blood smear should always be carefully examined, not only to estimate if the platelets are numerically adequate, but also, to determine if they are morphologically abnormal. Fortunately, there are several simple laboratory procedures which suffice to verify that bleeding is due to a thrombopenia. Since it has been conclusively demonstrated that the speed and degree of clot retraction is dependent upon the number of platelets in the blood,[31] the very simple clot retraction test may be used for this purpose. Clot retraction is always delayed in proportion to the degree of existent thrombopenia. The bleeding time which is a less reliable index of bleeding due to thrombopenia, is usually increased. One hour after clotting, the serum prothrombin will be greater than the normal of 10 to 30 per cent and will be elevated in proportion to the platelet deficiency (impaired prothrombin utilization3).[31,32] The plasma prothrombin and the clotting time are normal.

Thrombocytopenic Disorders

The clinical aspects of bleeding due to thrombocytopenia usually differ from those due to the other disturbances of coagulation. The bleeding tends to be more superficial. It usually presents as petechiae and ecchymoses of the skin and/or oozing from the mucous membranes. In the non-thrombocytopenic disturbances, the bleeding is often more deep-seated and subcutaneous and intramuscular hematomas are frequent peripheral manifestations. Massive hemorrhages into or from other parts of the body are common. Such bleeding is often produced by trauma.

An organized diagnostic approach to the thrombocytopenic diseases is presented in Table I. In this table, these disorders are presented according to the mechanism by which they are produced. From such a perspective, clinical investigation is simplified and accurate diagnosis is facilitated.

Disorders of the Bone Marrow

Panmarrow Hypoplasia or Aplasia.—Hypoplastic and aplastic anemia are terms used to designate different degrees of the same disorder, i.e., decreased blood formation within the bone marrow. In the former, the hematocytogenic activity of the marrow is only decreased; in the latter, it is at a standstill. At the onset of this disease, it is usual for all marrow elements to be simultaneously affected and as a result, there is anemia, granulopenic leukopenia and thrombocytopenia. Rarely, general marrow insufficiency may begin with the involvement of only one cell strain and in these cases the presenting clinical manifestation will be only anemia, only infection or ulceration, or only bleeding, depending upon which cell is first to become sufficiently cytopenic. When the bone marrow megakaryocyte is the first cell to be affected, the resultant thrombocytopenia and bleeding can readily lead to an erroneous diagnosis of idiopathic thrombocytopenic purpura if hypocellularity for the red and white cell precursors in the bone marrow has not yet developed, or is not recognized. Only a careful examination of the sternal marrow aspirate can distinguish the two conditions. In idiopathic thrombocytopenia the megakaryocytes are always normal in number and usually they are increased in all stages of development; in hypoplastic anemia, these cells are markedly decreased or entirely absent.

After the marrow has become hypoplastic for all three cell strains, the condition may be confused with several other clinical entities. Perhaps

the most frequent error is that of mistaking acute subleukemic leukemia for this disorder. It should be remembered that acute subleukemic leukemia often does not present adenopathy and/or splenomegaly. Moreover, the white count is often leukopenic and not infrequently, the leukemic cells cannot be found, or are not recognized, in the blood smear. Only an examination of an adequate sample of concentrated marrow tissue will make the differentiation with certainty. Even though hypocellularity of the marrow aspirate is unquestionable, this finding alone, must not be used to differentiate subleukemic leukemia and hypoplastic anemia. There are those cases of leukemia in which the leukemic cells are so densely and tenaciously packed within the marrow cavity that not only will the aspirate be moderately or severly hypocellular, but also, there may be so few leukemic cells in the aspirate that they may be entirely overlooked. Whenever smears from aspirated bone marrow are significantly hypocellular, and few or no abnormal cells are recognized, other marrow areas should be aspirated. Several other observations may be helpful in the differentiation of the two conditions. Leukemic cells, particularly leukemic lymphocytes and leukosarcoma lymphocytes, are more fragile than normal cells and the finding of a significant increase of degenerated cells in smears of both the blood and the bone marrow suggest the possibility of leukemia. On occasion, leukemic cells may be found in the smears made from the top layer of the centrifuged hematocrit when they cannot be found in routine smears.

In addition to hypoplastic anemia, there are other disorders that must be considered in the differential diagnosis when the bone marrow aspirate is significantly hypocellular.

1. Metastatic malignancy may be so densely packed at or near the elected site of aspiration that little or no fluid can be recovered. Tumor cells may be so few in number that they may not be recognized even by experienced observers.

2. Almost invariably, the marrow aspirate from cases of marrow fibrosis (myelofibrosis) are markedly hypocellular and if the spleen has not yet enlarged, these findings are almost certain to lead to a diagnosis of hypoplastic anemia. Myelocytes and/or normoblasts are frequently found in the peripheral blood in myelofibrosis and if these are present, the physician can be certain that the case is not hypoplastic anemia. A surgical biopsy should always be done whenever myelofibrosis is suspected.

3. Not infrequently, the marrow aspirate is definitely hypocellular in idiopathic thrombocytopenic purpura. The writer has had several cases of this disorder in which the sternal and spinous process aspirates were moderately or severely hypocellular. Finally, adequate marrow tissue and normally cellular smears were obtained from the iliac crest. It is the writer's suspicion that it is the megakaryocyte hyperplasia in the marrow tissue that causes this tissue to cling to the surrounding marrow structures with unusual tenacity, thereby making it difficult to aspirate adequate marrow concentrate.

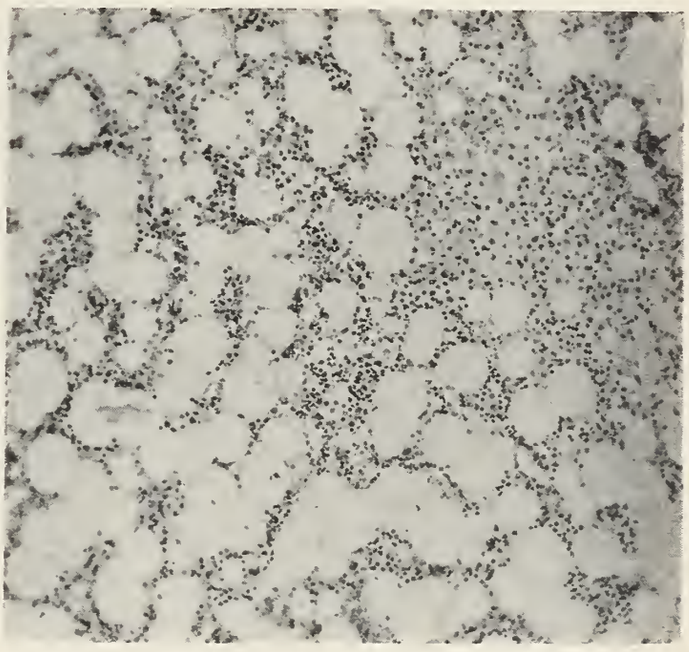


Fig. 1. Autopsy Section, hypoplastic anemia. Note island of cellular marrow. (x 120)

There are several other diagnostic difficulties in hypoplastic anemia that are concerned with the proper evaluation of bone marrow smears. The bone marrow architecture of some cases may not be universally hypoplastic. Isolated islands of cellular marrow tissue may be scattered through the marrow cavity. Even though these remaining foci are usually of small microscopic dimensions, it is entirely possible to aspirate a sufficient number of them with the result that the smear may appear to be normally cellular. An example from the writer's experience is shown in Figure 1. However, repeated aspirations will consistently produce many smears that are unquestionably

hypocellular and the megakaryocytes will be sparse or absent in all smears.

In rare cases of hypoplastic anemia, a significant reciprocal lymphopoiesis may occur secondary to the granulopenia. Not only may such cases show a reciprocal lymphocyte infiltration of the marrow, but there is also likely to be an adenopathy which may be generalized. These findings have led to the diagnosis of lymphatic leukemia.

Still other cases may reveal a considerable concentration of plasma cells in the marrow and this feature may suggest plasma-cell myeloma. Whenever the marrow aspirate contains a significant number of plasma cells but is otherwise hypoplastic for nucleated red cells and white cells, the clinician should be most cautious about making the diagnosis of plasma-cell myeloma. If the patient has been treated recently with one of the marrow toxic drugs mentioned below, or been exposed to one of the toxic physical or chemical agents, he should be more wary. Tragedy can be added to tragedy if such a patient is treated with urethane or stilbamindine without first substantiating the diagnosis with an all-out clinical and laboratory investigation. The marrow plasma cells found in hypoplastic anemia are morphologically normal and are usually not numerous. In myeloma, even the more mature cells present a blotchy chromation pattern of the nucleus which distinguishes them from normal plasma cells which have a wheel-spoke arrangement of chromation. Moreover, immature myeloma cells will often be found. These cells have a large centrally-placed nucleus often having one large or several smaller nucleoli. They vary in size up to 40 microns and exhibit anaplastic features. Some cells have a ropy highly basophilic cytoplasm and a relatively mature nucleus while others will show an immature nuclear pattern together with a light-colored homogeneous cytoplasm similar to that seen in the more mature cells. This asynchronism indicates pathological maturation. Cells with two or more nuclei may be frequent and when present, they indicate rapid proliferation. Whenever these primitive cells are recovered from the marrow, even though the aspirate is hypocellular for the other cells strains, myeloma is likely.

The peripheral blood and bone marrow findings should always be correlated with the clinical aspects. The following is a summary of the important clinical and laboratory features of hypoplastic and aplastic anemia.

1. No weight loss and no anorexia
2. Normal BMR
3. Usually, but not invariably, there is no lymphadenopathy
4. No splenomegaly
5. Granulopenic leukopenia (no myelocytes)
6. Thrombocytopenia (platelets normal)
7. Normochromic, normocytic anemia unless there has been hemorrhage (no normoblasts)
8. Reticulocytes usually decreased
9. Red cell fragility normal
10. Normal sedimentation rate
11. High plasma iron (non-utilization)
12. Panmarrow hypoplasia or aplasia

If the above criteria are fulfilled, and there is no history of toxic, physical, chemical, or drug factors and there is no evidence of any underlying disease process to which marrow hypoplasia may be a sequela, then the diagnosis of primary idiopathic hypoplastic anemia, with or without coexistant myelofibrosis, may be established.

Hypoplastic or aplastic anemia may occur secondary to an insult by some marrow toxic agent. Infrequently it is found in association with some other disease. It is pertinent to the diagnosis and management of every case that the clinician make certain that the patient has had no contact with any such agent or is not ill with any disease which may cause panmarrow hypoplasia. The following substances are capable of producing this type of anemia: benzol, benzene drugs, aniline, toluol, trinitrotoluene, carbon tetrachloride, trichlorethylene, gold salts, arsenicals, dinitrophenol, sulphonamides, x-radiation, radium, other radioactive material and hair dyes. The therapeutic use of certain other drugs including some of the antibiotics has been reported to be followed by hypoplastic and aplastic anemia. The reader is referred to a recent article by Osgood[30] on drug-induced hypoplastic anemias. The writer has recently seen a case of rheumatoid arthritis who had been treated for two weeks with butazolidin and who was found to have severe panmarrow hypoplasia two months after the completion of this therapy. The patient seems to be recovering. Hypoplastic anemia may be associated with vitamin B deficiency, overwhelming infections, sprue, pellagra, fatty diarrhea, hookworm disease, kala-azar, severe malnutrition, nephritis, myxedema and old age. Rarely it oc-

curs in the late stages of pernicious anemia, hemolytic anemia, polycythemia, lymphatic leukemia and myeloid leukemia.

Foreign Cell Invasion of the Bone Marrow.—The following diseases are capable of invading the bone marrow at the expense of the megakaryocytes, thereby producing thrombocytopenia and the hemorrhagic state. Acute monocytic and lymphatic leukemia and leukolymphosarcoma are particularly apt to be ushered in with clinical bleeding. More slowly, but eventually, chronic lymphatic leukemia also invades the marrow. Reticulum cell sarcoma, hemangiosarcoma, carcinoma, Gaucher's disease, Hodgkin's disease and multiple myeloma may do so on occasion. Myeloid leukemia, which is a myeloproliferative rather than a myeloinvasive disease, almost invariably does not develop a critical thrombopenia until late in the disease, if at all.

Because bone marrow plasmacytosis and hyperglobulinemia are emphasized as having considerable importance in the diagnosis of multiple myeloma, some recent observations are worthy of mention. In a study of sixty patients with marrow plasmacytosis, Klein and Block[26] have found an increase of plasma cells in twenty-two diseases other than myeloma. Moreover, a significant increase of plasma globulin occured in 80 per cent of these cases. Fadem and McBirnie[17] have reported finding as many as 23 per cent plasma cells in the bone marrow of Hodgkin's sarcoma, monocytic leukemia and lymphosarcoma. Bing[8] and Baryd[4] have observed an increase of these cells in monocytic leukemia, aplastic anemia, infectious mononucleosis, acute and chronic infections, granulomas, measles, carcinoma, sarcoidosis, hepatic cirrhosis, lymphogranuloma inguinale, polyarteritis nodosa and kala-azar. Thus it is obvious that when marrow plasmacytosis and/or hyperglobulinemia are observed, and particularly in those cases where x-rays fail to reveal the typical osteolytic lesions of myeloma, all laboratory and clinical data will need to be subjected to careful evaluation and correlation if an occasional diagnostic error is to be avoided. It should be mentioned that plasma cells, particularly the immature forms, may so closely resemble basophilic erythroblasts and early basophilic normoblasts that at times, even an experienced hematologist may have difficulty with their identification.

Subleukemic leukemia should be briefly mentioned because, not infrequently, it is erroneously diagnosed as other conditions. This is a form of leukemia in which the usual features are present but in which the total leukocyte count is either normal or markedly leukopenic. Usually, but not invariably, if the blood smears are thoroughly searched, the leukemic cells can be found. All types of leukemia, including leukolymphosarcoma, may "masquerade" with a leukopenic white count. This form of leukemia is most often acute but it may be subacute or chronic. A series of cases reported by Sturgis[37] points out the frequency with which it occurs: 11 per cent of his cases of chronic lymphatic leukemia, 53.8 per cent of the acute lymphatic leukemias, and 52.9 per cent of the leukolymphosarcomas were of the subleukemic variety. These facts are important in diagnosis. Since it is the acute form of the disease that is likely not to show the distinguishing features of adenopathy and splenomegaly, and since this form almost invariably invades the bone marrow and displaces the megakaryocytes, it is readily seen from these facts and figures that acute subleukemic lymphatic leukemia and acute subleukemic leukolymphosarcoma may be misdiagnosed as idiopathic thrombocytopenic purpura. For the same reasons acute subleukemic monocytic leukemia may also be mistaken for thrombocytopenic purpura. If the clinical and hematologic aspects are carefully sought for, the possible tragedy of splenectomy can be avoided.

The following clinical and laboratory features are the essential diagnostic criteria of the myelophthisic state:

1. Weight loss is progressive
2. BMR is elevated but iodine metabolism is normal
3. There may be deep bone pain due to primary or metastatic skeletal lesions
4. X-ray evidence of bone erosion
5. Bence-Jones protein in urine, plasma, or both
6. Granulopenic leukopenia (myelocytes present)
7. Anemia is often macrocytic and resembles pernicious anemia but may be hypochromic if there is hemorrhage (normoblasts usually present and polychromasia and stippling are frequent)
8. Reticulocytosis is common
9. Thrombocytopenia (atypical platelets and/or megakaryocyte fragments should suggest bone marrow disorder)
10. Red cell fragility often increased
11. Sedimentation rate increased
12. Foreign cells present or absent in the blood
13. Foreign-cell infiltration in the marrow

Myelofibrosis and Myelosclerosis.—These disorders begin insidiously. They are slowly progressive and often compatible with relatively long life. They may elude diagnosis for many years. Hence, recent contributions concerning the pathogenesis and pathological histology of these poorly understood conditions, justify more than a passing comment.[11,23,38,39,42]

Histologically, they occur in two forms. The "pure" form reveals only varying degrees of fibrosis and/or sclerosis of the bone marrow. This variety is considered to be either idiopathic or secondary. Etiology for the secondary group has been ascribed to such factors as physical and chemical agents, liver dysfunction, endocrine diseases, chronic hemorrhage or hemolysis, and cardiovascular diseases. The "mixed" form is characterized by marrow fibrosis and/or sclerosis in histological association with such lesions as myeloid leukemia, polycythemia, megakaryocyte myelosis, follicular lymphoma, Hodgkin's sarcoma, reticulum cell sarcoma, tuberculosis, and metastatic carcinoma. Obviously, the "mixed" forms may cause great difficulty in diagnosis.

Almost invariably the spleen is enlarged. The liver and lymph nodes may be palpable. The envolvement of these organs is due, either to the compensatory formation of blood (myeloid metaplasia), or to fibrous tissue proliferation therein. Fibrosis and sclerosis of the bone marrow (myelofibrosis and myelosclerosis) eventually replaces the normal hematopoietic parenchyma to such an extent that definite changes occur in the peripheral blood. Anemia of varying degrees and white counts ranging from moderate leukopenia to moderate leukocytosis, with or without immature granulocytes and nucleated red cells in the circulating blood, are the common abnormal hematologic features. Standard textbooks and much of the current literature fail to comment on the number and morphology of the circulating platelets in these syndromes. A recent publication[23] reports three cases of "pure" myelofibrosis having marked thrombopenia. One case had purpura. While thrombopenia is not uncommon in myelofibrosis, resultant bleeding manifestations seem to occur infrequently. The writer has recently studied three "pure" cases. There was pancytopenia in all three, the thrombopenia being mild to severe. However, none of these patients had developed the hemorrhagic state. Nevertheless, it cannot be over-emphasized that, regardless of the underlying disease and no matter what the mechanism of the thrombopenia, when no or few platelets are present in the circulating blood, the patient's life is in constant danger.

It is important to remember that the spleen may not be detectably enlarged—at least, not in the early course of the disease. In one of the writers cases mentioned above, the spleen was greatly enlarged; in another, it was palpable at the costal margin; the third case had a two-year clinical history and yet, the spleen could neither be palpated nor percussed. All three cases were histologically proven by surgical biopsy. Figure 2 reveals extensive marrow fibrosis in the case without splenomegaly. Figure 3 presents an autopsy section of normal marrow for comparison.

Unless marrow fibrosis is associated with myeloid leukemia or polycythemia, the marrow aspirate will be moderately to severely hypocellular. Whenever marrow hypoplasia or aplasia is associated with splenomegaly, myelofibrosis should be suspected.

The great importance of differentiating myelofibrosis or sclerosis from leukemic or subleukemic leukemia, and particularly from idiopathic thrombocytopenic purpura, is no longer academic. The therapy for leukemia and splenectomy for thrombocytopenic purpura, are contraindicated. These are usually life-shortening therapeutic procedures when misapplied to marrow fibrosis and sclerosis. If an awareness for this disorder is maintained, a consideration of the clinical aspects, together with an accurate interpretation of adequate meticulously prepared smears of the blood and aspirated marrow, will usually arouse the suspicion of the clinician. It is recommended that the diagnosis always be confirmed by histological sections prepared from surgical biopsy material obtained from the sternum, spinous process of iliac crest. Therewith, the associated lesions of the "mixed" forms will be revealed. It should be the rule-of-thumb to do a surgical biopsy of the marrow whenever: (1) myelofibrosis is suspected, (2) whenever an attempt at needle aspiration of the marrow results in a "dry tap," or (3) whenever the aspirate is significantly hypocellular for normal marrow elements in a patient with splenomegaly whose peripheral blood contains myelocytes, and/or nucleated red cells, and/or reticulocytosis.

Selective Megakaryocyte Damage or Inhibition.—Thrombocytopenia, without leukopenia or

anemia, may be produced by selective toxic damage to megakaryocytes or by toxic inhibition of platelet production from these cells. Certain industrial chemicals, drugs, physical and radioac-

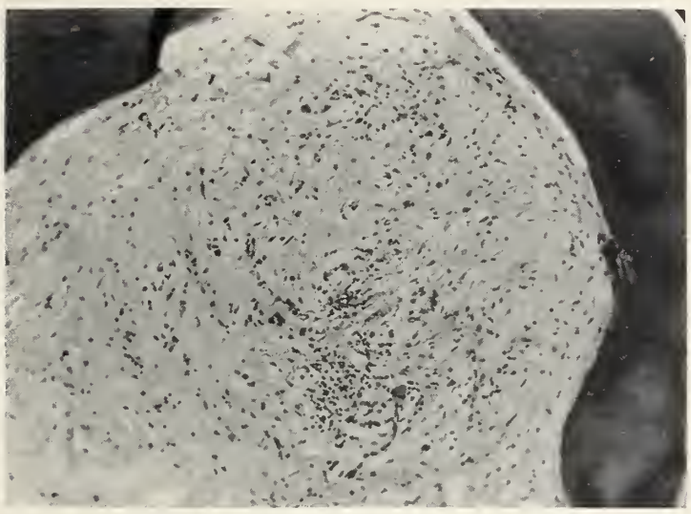


Fig. 2. Biopsy section from case of myelofibrosis without detachable splenomegaly. (x 120)

tive agents, virus diseases and bacterial infections have been incriminated as etiologic agents.

This disorder will need to be unequivocally differentiated from idiopathic thrombocytopenic purpura. A comprehensive inquiry into the history regarding contact with toxic agents or diseases and a careful thorough examination of aspirated bone marrow is essential. The marrow examination in these cases is a painstaking procedure. Usually 50 to 100 megakaryocytes will need to be examined with the oil-immersion lens. In order to recover this many cells, at least one, and often several smears must contain concentrated marrow tissue. Megakarocytes cling tenaciously to the island of marrow tissue and are usually not found in adequate numbers in the surrounding marrow fluid to provide a sufficient number of cells for examination. If the sternal aspiration fails to recover concentrated marrow tissue, there should be no hesitation in sampling the posterior spinous processes, iliac crest or the ribs.

If the toxic mechanism has damaged the megakaryocytes, they will be decreased or absent and they will reveal karyorrhexis of the nuclei and vacuolation of the cytoplasm and nuclei. Phagocytosis of specific cellular debris may also be in evidence. In some cases, fragmentation of the megakaryocyte cytoplasm is the only abnormality observed.

If the toxic mechanism is inhibitory in action, the megakaryocytes will be morphologically normal and often they are numerically adequate. However, platelet production from these cells is sharply reduced or entirely absent. Since this is

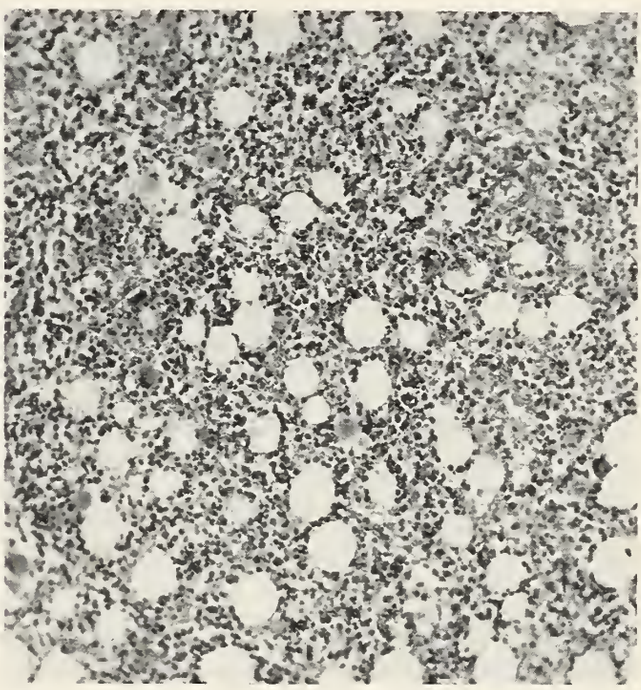


Fig. 3. Autopsy section of normal marrow. Compare with Figures 1 and 2. (x 120)

also the bone marrow picture seen in idiopathic thrombocytopenic purpura which not uncommonly follows an acute infection, and since an identical picture may also be produced by an acute infection(toxic megakaryocyte inhibition), it may be impossible to differentiate these two conditions if there has been a recent antecedent infectious disease. When this diagnostic problem arises it is usually wise to postpone splenectomy. The writer has recently observed two cases of thrombopenia following measles. In one case, the megakaryocytes were markedly reduced and they revealed definite morphological abnormalities.[28] In the other, these cells were numerically adequate and exhibited no evidence of cell damage. However, platelet proliferation was not observed. Both cases recovered spontaneously. Ackroyd[2] has reported three cases of thrombocytopenic purpura following measles. One case died of intracranial hemorrhage.

Idiopathic Megakaryocyte Defect. — Several cases of thrombocytopenic purpura have recently been reported to be associated with morphologically abnormal platelets and megakaryocytes.[22,33] It is believed by the authors that these are variants

of idiopathic thrombocytopenic purpura (I.T.P.) but they have given the name of "thrombopathic thrombocytopenia" to this disorder. However, until more cases are described and convincing

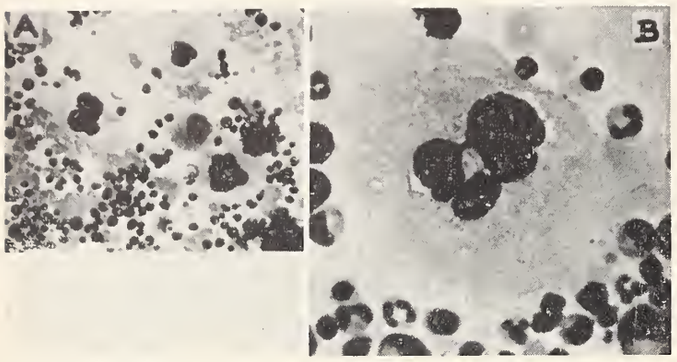


Fig. 4. Megakaryocytes in idiopathic megakaryocyte defect (thrombopathic thrombopenia). Note amorphous appearance of cytoplasm and lack of granularity. By courtesy of the author, Dr. William Dameshek, and the publishers, Grune and Stratton.

evidence is presented to show that they are actually a special variety of I.T.P. and that they do not merely represent the hematologic aspects of one or more unrecognized intrinsic disorders or extrinsic insults, the writer has classified this hemorrhagic condition among the bone marrow disorders under the heading of "idiopathic megakaryocyte defect."

Dameshek and his group have carefully studied a case of thrombopathic thrombopenia which deserves attention.[22] The patient was a nine-year-old boy who had experienced ecchymoses from the age of eighteen months. Thrombocytopenia was not discovered until age two. Transfusions were necessary for subsequent episodes of nose bleed. Splenectomy was performed at age of thirty months and this procedure resulted in an immediate rise of platelets and a disappearance of all symptoms for six months. Then thrombocytopenia reappeared and transfusions again became necessary. There were several features of this case which distinguished it from typical idiopathic thrombocytopenic purpura. There was bleeding at platelet levels up to 280,000 (normal—500,000). Severe hemorrhages are seldom seen in I.T.P. until the platelet count reaches 100,000. The prothrombin consumption test, which is a test showing the speed and degree with which prothrombin disappears from the serum and is presumably converted to thrombin during coagulation, revealed a definite impairment of prothrombin consumption (conversion). The conversion of prothrombin is dependent upon both the number and functional efficiency of the platelets as well as upon the amount of prothrombin. Since the prothrombin of this case was quantitatively normal, the impaired prothrombin utilization, which was slower and more diminished than in other types of thrombocytopenia having similar platelet levels, was considered to indicate a functional inadequacy of the platelets. The platelets were extraordinarily large and differed from the platelets in I.T.P. by their lack of granules and their weak staining qualities. In I.T.P. the majority of stained megakaryocytes are normally granular. In this case, these cells were almost totally devoid of granules and the cytoplasm stained weakly giving them a hyaline appearance identical with the platelets. A microphotograph of the megakaryocytes in this disorder is reproduced in Fig. 4. A normal megakaryocyte is shown in Fig. 5 for comparison. The fundamental abnormality of the megakaryocytes should be considered a feature which distinguishes this case from typical I.T.P.

Idiopathic Erythroid Hyperplasia (Acute Erythremic Myelosis—Di Guglielmo's Disease).—In 1923 Di Guglielmo[13] published a case that he considered to be the first example of true erythremic myelosis. By 1936 he had recognized only twenty-one cases in the Italian literature. The most recent English printed reports refer to only seven cases.[3,18,24,34]

The clinical features described by Di Guglielmo were a rapidly developing and progressive anemia, remittent fever, hepatosplenomegaly, hemorrhagic manifestations of variable severity and a rapid fatal course. The peripheral blood contained numerous nucleated red cells with atypical basophilic normoblasts predominating. Occasional myelocytes were observed. The leukocytes and platelets were usualy decreased. Reticulocytes were not increased. The bone marrow was described as hyperplastic for nucleated red cells with a maturation arrest at the normoblastic level. There was usually a hypoplasia of both nucleated white cells and megakaryocytes. Autopsy sections showed an infiltration of nucleated red cells into the spleen and liver and sometimes into other organs. While the acute form of the disease is the most common and typical, subacute and chronic varieties are recognized. The chronic form runs a progressively fatal course and is characterized

by much the same clinical and hematological features as the acute disease except that the nucleated red cells in the circulation are usually more mature, the normoblasts containing a higher complement of hemoglobin. However, they may be entirely absent from the blood in some cases. Hemorrhagic manifestations and thrombopenia are more frequent and more pronounced in the acute form.

Because immature plasma cells may be confused with basophilic erythroblasts and early basophilic normoblasts by the hematologist as well as by the experienced technician, the writer would caution that extra-osseous plasma cell myeloma may be mistaken for erythremic myelosis. This error would be most likely to occur in cases having moderate numbers of immature myeloma cells in the circulation together with orthochromatic normoblasts which escape into the circulation because of the plasma cell proliferation in the marrow. A recent report emphasizes the differentiation of erythremic myelosis from acute myeloid leukemia and acute hemolytic anemia.[3] On occasion, it may need to be differentiated from Cooley's anemia, thrombotic thrombocytopenia (discussed below), secondary hypersplenism and pernicious anemia.

Deficiency Diseases and Nutritional Disorders.— Erythrocyte maturation factor (P.A.), the vitamin B complex and certain amino acids are essential to optimum hematopoiesis. Food idiosyncrasies and gastrointestinal abnormalities associated with disturbed digestion and absorption of these substances may be associated with thrombocytopenic purpura. Panmarrow hypoplasia, rather than selective megakaryocyte envolvement, should be suspected as the mechanism for this type of purpura.

Thrombocytopenia is common in pernicious anemia and it may be so severe that clinical bleeding may occur. The writer has seen a case with a red count of 800,000 and a severe thrombopenia which bled for several days from both the urinary tract and gums. There is usually a marked megakaryocyte deficiency in the bone marrow and there can hardly be any doubt that the thrombocytopenia and the bleeding are explained on this basis. Megakaryocyte regeneration can be anticipated to follow quickly after the institution of specific therapy. A rise of peripheral platelets is often the first response to treatment.

Disorders of the Spleen

Hypersplenism, in itself, is not a histopathologic entity. It is a functional disturbance in which one or more of the circulating blood cells be-

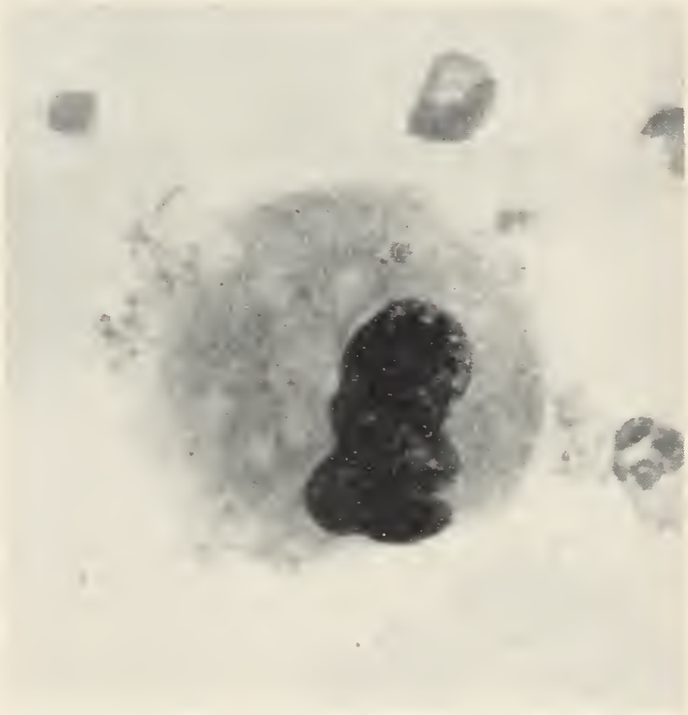


Fig. 5. Normal mature megakaryocyte (x 900). Note platelet proliferation at 7:00 and 10:00 o'clock.

comes deficient (cytopenia). It appears to be common to a wide variety of diseases. Because splenectomy is usually followed by a restoration of normal blood values in these cases, the mechanism for this hematologic disorder has been ascribed to abnormal physiology of the spleen. Concepts of the pathogenesis of the hypersplenic mechanism are still theoretical and they are not in agreement despite the detailed studies of many careful investigators. The two principle theories are those of Doan[14] and Dameshek.[12]

Hypersplenism may be either primary or secondary. In the primary variety there is no associated disseminated constitutional disease and only one cell strain is predominately involved. While only one cell is primarily affected in primary hypersplenism, the following quotation from Doan[14] emphasizes the fact that one or both of the other peripheral cells may be involved to a lesser degree: "It is seldom that we encounter a 'pure' hemolytic or unadulterated thrombocytopenic or neutropenic syndrome. The predominant clinical picture may be anemia, with or without jaundice, or purpura, or Ludwig's angina and infection, but any one of these symptom complexes

TABLE II. PRIMARY HYPERSPLENISM

1. Congenital hemolytic anemia (erythrocytopenia)
2. Primary splenic neutropenia (neutropenia) (40)
3. Idiopathic thrombocytopenic purpura (thrombopenia)
4. Primary congenital splenic panhematopenia (pancytopenia) (16)

will be found, more often than not, to have a subclinical if not a clinical cytopenia involving one or more of the other elements of marrow origin. At different stages in the clinical course of the same patient, differing degrees of pan-hematocytopenia may be observed."

While Table II enumerates all of the instances of primary hypersplenism, only primary hypersplenic thrombocytopenia (idiopathic thrombocytopenic purpura) will be discussed in this paper.

Idiopathic Thrombocytopenic Purpura
(Primary Hypersplenic Thrombocytopenia)

When clinical bleeding into the skin and/or from the mucous membranes and/or into the central nervous system is found associated with a "critical" thrombopenia and the bone marrow studies fail to reveal any evidence of hypoplasia or aplasia, foreign cell invasion, or any morphological abnormality of the megakaryocytes, and these cells are found to be present in normal or increased numbers in all stages of maturity, primary splenic thrombocytopenia (Werlhof's disease) may be suspected. If the spleen is not enlarged, this is the most likely diagnosis. This disease occurs in both acute and chronic forms. In the acute variety both sexes are affected and there is no family history. It is important to remember that acute I.T.P. commonly occurs 10 to 14 days after an acute infection. Since both bacterial infections and the virus diseases may injure the megakaryocytes and thereby produce thrombocytopenic purpura several weeks after their onset, these toxic cases must be clearly differentiated from I.T.P. if an ill-advised and possibly fatal splenectomy is to be avoided. Children with acute I.T.P. usually recovery spontaneously.

The chronic form is much more common in the female. Often there is a long history of relapses and remissions. In both the acute and chronic forms, the clinical manifestations may be relatively benign and present only as a few scattered petechiae and/or ecchymoses. In other cases, they may develop suddenly in the form of devastating multiple hemorrhages from the mucous membranes or into the central nervous system. A palpable spleen is very unusual. If it is enlarged, the diagnosis of I.T.P. should be seriously questioned. When the blood platelets are critically reduced in this disease they are often morphologically abnormal. However, abnormal platelets should always arouse suspicion that the case may not be I.T.P., but rather, that it may be one of the following: (1) foreign cell invasion, (2) toxic damage to the megakaryocytes, (3) thrombopathic thrombocytopenia, or (4) thrombocytopenia with platelet agglutinins (see below). In I.T.P. the bleeding time and clot retraction will be prolonged, the prothrombin consumption decreased, and the capillary fragility usually increased. The megakaryocytes are morphologically normal and they will either be normal or increased in numbers and both the young and degenerated forms will be increased. Platelet proliferation will be sharply reduced or totally absent. The writer has yet to see a case in which platelet production is increased.

Just as in cases of toxic megakaryocyte damage, concentrated marrow tissue must be present on the smears to be examined. Sufficient megakaryocytes to permit an accurate appraisal of the number of these cells, their morphologic condition, and the degree of platelet proliferation, are usually not found outside of these foci. To make certain that the megakaryocytes are not abnormal, the oil-immersion examination of 50 to 100 cells is essential.

Wiseman, Doan and Wilson[41] have listed certain diagnostic criteria for idiopathic thrombocytopenic purpura which should always be given serious consideration before the diagnosis is made. They are as follows:

1. There must be spontaneous purpura and/or free bleeding from mucous membranes.
2. The blood platelets must be substantially reduced in number (less than 100,000 per cubic m.m.).
3. The clotting time and prothrombin time must be within normal limits.
4. The anemia and leukocyte count must not be out of proportion to the amount of bleeding.
5. There must be no pathologic cells in either the blood or the bone marrow.
6. There must be no recent history of the ingestion of drugs or occurrence of those diseases known occasionally to produce thrombocytopenia.
7. There must be no appreciable enlargement of the spleen or lymph nodes.

Secondary Hypersplenism
(Secondary Hypersplenic Thrombocytopenia)

Secondary hypersplenism may be defined as a hyperinstability of the spleen arising from the involvement of that organ by some disseminated constitutional disease in a patient who has no family history of the hypersplenic trait. The recognition of the hypersplenic state, when it coexists with the signs and symptoms of the underlying disease, may challenge the diagnostic acumen of the clinician. If the physician will keep in mind that hypersplenism may be the cause of cytopenia in any disease which involves the spleen, he will more frequently recognize this disturbance.

In contrast to I.T.P. there is a detectable enlargement of the spleen. The peripheral blood will reveal a cytopenia for one, any two, or all three cell strains. The bone marrow will usually show a compensatory increase in the precursors of the cells that are deficient in the circulation. In other words, when there is thrombocytopenia, the marrow will usually reveal an increase in megakaryocytes in all stages of maturity. Proliferation of platelets from these cells will be greatly diminished or absent. The writer has yet to see an instance in which proliferation was increased.

Table III enumerates those disorders which have been reported by various observers to be associated with cytopenia corrected by splenectomy. While only those starred with an asterisk have been observed to be associated with thrombopenia and clinical bleeding, all diseases involving the spleen should be regarded as potential hypersplenic thrombocytopenic disorders.

TABLE III. SECONDARY HYPERSPLENISM

*Tuberculosis
*Syphilis
Moniliasis
Sarcoidosis
Malaria
Kala-azar
*Hodgkin's disease
*Gaucher's disease
Xanthomatoses
Disseminated lupus erythematosus
*Lymphatic leukemia
*Monocytic leukemia
*Myeloid leukemia
*Infectious mononucleosis
Banti's syndrome:
Hepatic cirrhosis
Portal vein thrombosis
Splenic vein thrombosis
Pancreatic carcinoma
A-V fistula (splenic artery to splenic vein)
*Cardiac decompensation
Felty's syndrome
Acquired hemolytic anemia
Giant follicular lymphoma
Reticulum cell sarcoma
Hemangioma
Multiple myeloma

From Doan,[14] Dameshek[12] and Others

Case Report

The following case is an example of secondary hypersplenism recently studied by the writer. It will be reported elsewhere in detail.

The patient was a man, aged thirty-seven, who had received a serious traumatic blow to the abdomen ten years previously. Thereafter he was unable to work for four months. Subsequently, he had suffered with fatigue, was treated many times for anemia and had received a number of blood transfusions. The spleen was slightly enlarged and there was a definite pancytopenia of the peripheral blood. The differential was normal but there was obvious hypochromia of the red cells. Because there was no evidence of hemolysis and no indication of maturation arrest of erythropoiesis in the marrow, the anemia was thought to be due to hemorrhage rather than to hypersplenism. This impression was corroborated when the patient had a massive upper gastrointestinal hemorrhage just before hospital admission. Several varices were visualized at esophagoscopic examination. At laporotomy an aneurysmal mass the size of a lemon involving the splenic artery and vein was found near the hilum of the spleen. This was found to contain an arteriovenous fistula. The mass and the spleen were removed.

Before surgery, the bone marrow revealed a severe thrombocytopenia and a moderate hyperplasia of normal megakaryocytes. Platelet proliferation was almost nonexistent. One week after operation the blood platelet count was over 3,000,000. Ten days postoperative the bone marrow revealed the most intense thrombocytosis that the writer has ever seen. Platelet proliferation from the megakaryocytes was greatly increased over normal. The patient has been working seven days a week and the blood continues to be normal eleven months after operation. This is believed to be a case of the Banti's syndrome with hypersplenism for leukocytes and platelets due to a congestive splenomegaly secondary to a communication between the splenic artery and splenic vein.

Once the spleen has been found guilty of any hypersplenic mischief, it should never be trusted again. Sooner or later, a sudden acute hemoclastic crisis may occur. Chronic invalidism and actual fatalities due to a pathologic spleen are more common than generally realized. Undoubtedly these facts have prompted Doan[15] to comment as follows: "Prophylactic splenectomy should be advised and undertaken whenever a hypersplenic syndrome has been observed, either as a chronic or as an acute episode, even though one or more remis-

*Associated with thrombopenia and clinical bleeding.

sions have intervened." Certainly the accumulating reports on the doubtful value of ACTH and cortisone in idiopathic and secondary hypersplenic thrombocytopenia give us no reason to reject this point of view. However, since these hormones may produce a temporary rise of platelets and since Greene et al[19] have reported that their cases of I.T.P. presented no operative difficulties nor any retardation of wound healing when preoperatively prepared with these hormones, such use of the hormones should not yet be discouraged.

Contraindications to Splenectomy

1. All cases of thrombocytopenia in which repeated marrow aspirations reveal few or no megakaryocytes.
2. Selective megakaryocyte damage.
3. Hypoplastic or aplastic anemia.
4. Foreign cell invasion of the bone marrow.
5. Food and drug allergy.
6. Myelofibrosis and myelosclerosis.
7. Acute idiopathic thrombocytopenic purpura in children.
8. Thrombocytopenia following acute infections.

Thrombocytopenia Due to Circulating Platelet Agglutinins

(Immuno-thrombocytopenia)

Stefanini, Dameshek et al[36] have reported finding a high titer for a circulating platelet agglutinin in a comprehensively studied case which they believe to be an example of I.T.P. They postulated that the thrombocytopenia was probably due to a direct injury to both the circulating platelets and the bone marrow megakaryocytes by the agglutinin. They feel that this injury is responsible for the peripheral destruction of platelets as well as for the decreased production and release of platelets from the megakaryocytes. Some of their experimental results in anmials suggest the possibility that the "sensitized" platelets are removed from the circulation by the intact spleen. Harrington et al[21] have reported finding a circulating platelet agglutinin in the plasma of 21 of 31 patients with thrombocytopenia which they believe to be I.T.P. When the whole blood or plasma of these cases was transfused into normal recipients, a precipitous drop in the platelet count occurred in sixteen of the twenty-six recipients. In some instances, the induced thrombopenia was associated with purpura and clinical bleeding. The bone marrow of the recipients revealed a definite decrease in platelet proliferation from megakaryocytes. Moreover, the megakaryocytes showed morphological changes. These investigators suggest that the spleen probably serves two functions in the pathogenesis of this variety of thrombocytopenia: (1) the removal of the "sensitized" platelets, and (2) production of some of the agglutinin. Six out of eighteen cases failed to respond to splenectomy.

It seems to the writer that these observations present convincing evidence for a "new" mechanism for thrombocytopenia. The facts offer meager support for hypersplenic mechansim. It should be pointed out that one-third of 18 cases failed to respond to splenectomy. Moreover, the remaining two-thirds of the splenectomized patients have not been observed for a sufficient period to make certain that they are really cured by operation. It is the writer's belief that, until a larger group of cases is studied and convincing evidence is presented to show that the spleen actually produces the agglutinin and that the patients are cured by splenectomy, these cases should be classified as examples of "immuno-thrombocytopenia" rather than as instances of hypersplenism (idiopathic thrombocytopenic purpura). Whenever it can be shown that a given case of thrombocytopenia is not due to hypoplasia or foreign cell invasion of the bone marrow and no history of allergy, infection or contact with any possible marrow toxic substance can be elicited, then immuno-thrombocytopenia becomes a distinct possibility. If the megakaryocytes are numerically adequate but they reveal morphological abnormalities, this is even more likely. Tests for circulating platelet agglutinins should be performed on all cases of thrombocytopenia thought to be examples of idiopathic thrombocytopenic purpura. The technique for their detection may be found in the bibliography.[21,36]

Allergic Thrombocytopenia

Food Allergy.—This disorder is included not only as a cause of thrombocytopenia capable of producing clinical purpura, but it is also presented to emphasize that it may cause considerable difficulty in differential diagnosis. Within a half hour after the ingestion of some food to which a patient is allergic, the platelet count may drop precipitously, even to purpuric levels. Figure 6 illustrates the promptness and the degree of thrombopenia fol-

lowing the ingestion of wheat in a patient observed by the writer. Simultaneously the white count may drop to leukopenic levels. When this occurs in women with hypochromic anemia associated with menstruation, the physician may be led to believe he is dealing with some serious hematologic disorder. Blood counts should not be done on a known allergic individual immediately after eating. When thrombocytopenia and/or leukopenia are found in such a patient, the counts should be repeated, several times, if necessary.

Drug Allergy.—In view of some recent observations, it seems evident that not all thrombopenic states associated with drug therapy are due to panmarrow hypoplasia or specific megakaryocyte injury. Ackroyd[1] has reported extensive studies on patients with thrombocytopenic purpura due to sedormid sensitivity and he demonstrated an *in vitro* lysis of the platelets of these patients in the presence of this drug. Because quinidine is not uncommonly used in clinical medicine, particularly by the cardiologists, it is thought advisable to call attention to a recent report by Larson[27] who has studied the mechanism of thrombocytopenia following the administration of this drug. A rapid fall of circulating platelets occurred in a patient after a test dose of quinidine. It was felt that this fall was too rapid to be accounted for by inhibition of the megakaryocytes. Inhibition of clot retraction could be produced in the patient's blood by the addition of minute quantities of quinidine in vitro. This was assumed to demonstrate a specific peripheral action of quinidine on the platelets. Complete inhibition of clot retraction could be produced in the blood of a normal individual by the addition of serum from the patient together with quinidine. No such inhibition occurred if one, or the other, was added alone. This was assumed to demonstrate that quinidine did not affect the platelets directly, but rather that it did so by an antigen-antibody reaction. No significant fall in platelets occurred in the normals after the addition of quinidine *in vitro*. This was interpreted as evidence against a lysis of platelets. The authors feel that the platelets were injured and were removed by the reticulo-endothelial system.

Thrombocytopenia of Undetermined Pathogenesis

Thrombotic Thrombocytopenic Purpura.—This syndrome presents itself with a triad of clinical manifestations which do not occur together in any other condition: (1) hemolytic anemia, (2) thrombocytopenic purpura and (3) focal neurologic changes and mental aberrations. In all reported cases, widely disseminated occlusions of small arterioles have been found.

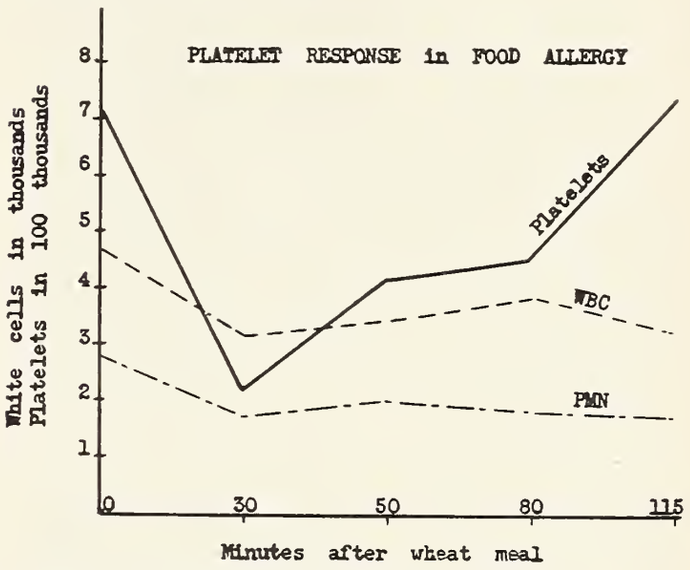


Fig. 6. Platelet response to food allergen.

The onset is usually abrupt and is often preceded by an upper respiratory infection. Except in one instance, the clinical course of all cases has been short, stormy, and fatal. The initial complaints are often vague and include malaise, headache, vertigo, nausea, vomiting, arthralgia and myalgia. Low grade fever and pallor appear early. Hepatosplenomegaly is usually found some time during the illness.

The anemia is always hemolytic and it is often associated with frank icterus. The usual evidence of hemolysis can be found: hyperbilirubinemia, reticulocytosis, nucleated red cells in the circulation, increased urobilinogen in the urine and stool and a normoblastic hyperplasia in the bone marrow. Circulating agglutinins and hemolysins and absorbed globulin immune bodies (positive Coomb's test) have not been demonstrated.[20 29] The mechanisms for this hemolytic process has not yet been identified.

The thrombocytopenia is often manifested by petechiae, ecchymosis and epistaxis. As in all cases of critical thrombopenia, the bleeding time and clot retraction are prolonged and the capillary fragility is usually increased. Meacham et al[29] have reported that the bone marrow of their cases revealed the findings which could be considered diagnostic of idiopathic thrombocytopenic purpura. Green[20] reports the same findings. The total num-

ber of megakaryocytes was increased, young forms were present and platelet proliferation was not observed. In spite of these interesting observations, the other known mechanisms for thrombo-

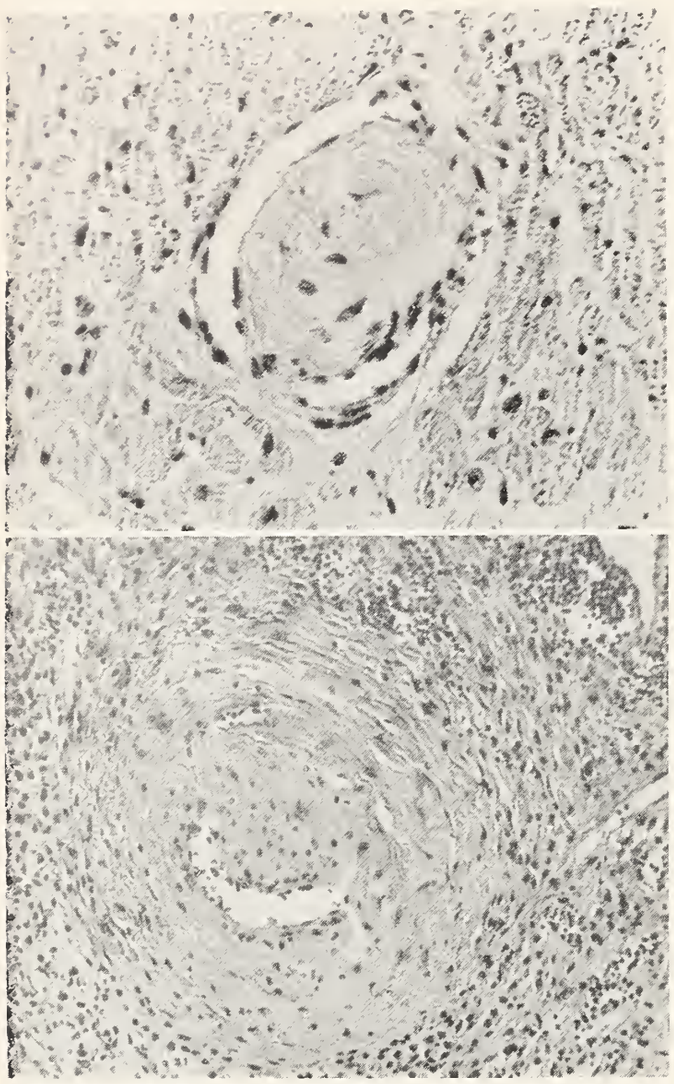


Fig. 7. Section of a relatively recent occlusion of a myocardial arteriole. Note that occlusive material is continous with vessel wall and is covered by endothelium. (x 255) By courtesy of the author, Dr. G. C. Meacham, and the publisher, Grune and Stratton.

Fig. 8. Section of a healed occlusion in a splenic arteriole. Note extensive alteration in the vessel walls. (x 255) By courtesy of the author, Dr. G. C. Meacham, and the publisher, Grune and Stratton.

penia have not been investigated in a sufficient number of cases to permit conclusions regarding the pathogenesis of the platelet deficiency.

The mental and neurological aspects of this syndrone may be either transient or constant and they develop as the disease progresses. There may be signs of focal involvement such as hemiplegia, aphasia or cranial nerve paralysis. Generalized cerebral envolvement may appear as the condition becomes more fulminant. Convulsions, delirium, stupor and even coma may occur. These manifestations are thought to be due to vascular occlusions in the brain.

It is worthy of comment that there is disagreement concerning the histopathologic nature of the vascular lesions. Until recently, most observers have thought that the vessel occlusions were made up exclusively of platelets and platelet debris. Meacham et al[29] believe that the histologic changes observed by them can be explained only by degenerative changes in the vessel walls. They feel that platelet thrombi, alone, cannot be expected to produce such histologic lesions. The bone marrow findings in these cases lend support to their impression that the thrombi are not of platelet origin. If platelets are not being produced, it is very doubtful that the thrombi contain any significant amount of platelet debris, if at all. They suggest a relationship to the collagen diseases. Singer et al[35] and Beigelman[5] have also suggested this relationship. Meacham et al[29] have made the following statement: "amorphous material present in these vessels was almost always covered by endothelium, suggesting that it was degenerated and swollen material encroaching upon the lumen from the vessel walls, and not an intraluminal thrombus." To support this contention they present the microphotograph reproduced in Figure 7. The degenerative changes in the vessel walls observed by them are reproduced in Figure 8.

It is the writer's impression that all observers have probably described the same clinical syndrome. Granting this, it remains his suspicion that this disorder is a syndrome which may be produced by more than one etiologic factor. Moreover, it is difficult to accept the view that all the different clinical manifestations are produced by a single pathogenic mechanism in any given case.

The triad of hemolytic anemia, thrombopenia, and transient or constant neurologic abnormalities, should at once suggest the diagnosis of thrombotic thrombocytopenic purpura. Characteristic histologic lesions have been found in the lymph nodes, skin and vertebral bone marrow. Surgical biopsies of the nodes, skin, sternum, rib or iliac crest are indicated when this syndrome must be considered.

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There appears to be an endless amount of knowledge which can be accumulated about cancer.

* * *

The National Cancer Institute has tested more than 3,000 chemicals for their tumor-damaging ability, none of which has yet been found safe for clinical use in human cancer patients.

Advances in basic science research come slowly and seldom make headlines, but they are vital to the search for better methods in diagnosis, control, and therapy.

* * *

Modern cancer research goes back about fifty years, but only since the end of World War II have significant sums of money been available for this purpose.

Cardiac Arrest and Its Management in Rural Area Hospitals

By Harry E. Merritt, M.D.
and Harold F. Osterhagen, M.D.
Traverse City, Michigan

THE THREAT of cardiac arrest's occurring in the smaller hospitals of the country, and in clinics and offices of less imposing areas than large cities and medical teaching centers, may be as real a problem for the comparatively isolated practitioner as it is for his more metropolitan colleagues. It seems timely, therefor, to call attention of other small-town physicians to this phase of the much-discussed subject of cardiac arrest, and to the attempted solution of that problem by the staff of one of the nation's smaller (204-bed) hospitals. That hospital is located in a town of about 17,000 permanent population, in the secluded northwestern corner of the Lower Peninsula of Michigan.

Fortunately, it is highly probable that no individual (outside an active thoracic-surgery center) will ever attain extensive personal experience in the treatment of the catastrophe under discussion. But, as Tennyson says in his "Ulysses":

> "All experience is an arch, wherethrough
> Gleams that untravell'd world, whose margin fades
> Forever, and forever. . . ."

We take this to indicate that each one of us is justified, even obligated, to learn and apply therapeutic principles based upon vicarious as well as personal experience, and to make available to others the results of those two kinds of experience.

Since June, 1947, one of us in the role of anesthesiologist (H.F.O.) has witnessed four cases of cardiac arrest occurring over a period of seven years and during the administration of some 35,000 general anesthetics; and one of us (H.E.M.) in the role of emergency operator treated two of those cases and attempted treatment in a fifth case, that of a drowned nurse. None of these patients recovered.

Because of (1) our failures, (2) the writers' obviously limited personal experience—which still exceeded that of our local colleagues—in the treatment of cardiac arrest, (3) the literature's being replete with well-documented and thoughtfully-written papers[1] on the subject, and (4) each local staff-member's cognizance of the potential danger to his patients, the staff assigned us the job of distilling the two types of experience referred to above, into a pragmatic regimen that all of us have learned and implemented. It is the object of this note to make known the work done, not because we are proud of our failures but in the hope that better care may redound to all cardiac-arrest victims in rural areas.

Briefly, cardiac arrest may be defined as the unexpected, abrupt, apparent cessation of the heart-beat. Its importance as a problem worthy of our consideration lies in the fact that it seems to arise about once per 7,000 anesthetized patients, and it may occur during induction of any type of anesthesia, in the course of surgical operations or deliveries, or during administration of drugs or contrast media. Moreover, failure to recognize and treat the condition within three to five minutes may result in damage to the central nervous system; and a delay of 8 minutes or longer may cause idiocy or death of the patient.

Despite informed opinion to the contrary,[4] it seems to be the consensus that the principal cause of cardiac arrest is hypoxia or anoxia.[3,6] Other causes are said to be anesthetic agents, vagal stimulation[5] (as during thyroid operations), manipulation and displacement of the heart (e. g., in chest-surgery procedures), and unexpected drug reactions; in addition, the heart may stop for no apparent reason.[6]

For purposes of this discussion, two kinds of cardiac arrest occur, and it is vitally important to differentiate the two: (1) cardiac standstill, or asystole, is complete cessation of all recognizable activity of the heart, and is treated[6] by rhythmic manual compression of that organ: (2) ventricular fibrillation, apparent individual-but-uncoordinated activity of the muscle-fibers of the ventricles, is treated with an electric shock or shocks applied directly to the heart.[6,8] These principles of treatment will be reiterated, in greater detail, below.

As with the diagnosis of any disease, there are pitfalls in recognizing cardiac arrest. But, usually, one should not hesitate to suspect it and, rightly or mistakenly, institute prompt treatment for it if there is absence of the peripheral and central

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pulse, together with disappearance of the blood pressure. As Ruzicka[10] has said, false alarms will inevitably occur but must be tolerated. During an operation, examination of a mechanical-trauma victim, or accouchement, the sudden cessation of bleeding may be the first clue that disaster is at hand. The patient may or may not be cyanotic, livid or pale. Breathing may seem to persist after the heart-beat ceases: true respiration may be present, if only briefly. Or, under the stress of the situation, the surgeon may not notice that the anesthetist is breathing, with the rubber bag, for the patient. The continuous electrocardiogram, so commonly used in elective thoracic surgery, is pathognomonic when it indicates stoppage of the heart (of either of the types mentioned above); but its use is virtually unknown in rural hospitals. Therefore, for our purposes, it is of no diagnostic value. The one important, essential diagnostic maneuver is left anterior thoracotomy and pericardotomy, followed by visualization and palpation of the heart.

To re-emphasize the cardinal principles that now must be borne in mind: a totally quiet heart is indication for rhythmic manual compression of the ventricles, while a visibly- or palpably-fibrillating heart demands use of the electric ventricular defibrillator. Of course, an adequately-beating heart, should one's diagnosis of arrest be incorrect, is to be left alone and the integrity of its coverings restored by suture.

In our local institutions, treatment of cardiac arrest consists of one or more of the following techniques, in the order given. (In outline form, these procedures are posted on all hospital bulletin boards, above scrub sinks near all operating- and delivery-rooms, on the walls of those rooms and of the Out-Patient and Roentgenology Departments, and at all nursing stations; in addition, each staff-member has a copy of the outline.)

First is the principle underlying the art and science of anesthesiology: the maintenance of an open airway. The person giving the anesthetic, or an assistant in cases of those patients not under general or spinal anesthesia, must establish and maintain an unimpeded respiratory tract, and administer oxygen by manual compression of the usual rubber bag. If circumstances require, one must resort to mouth-to-mouth breathing.

Second only to the importance of getting oxygen into, and carbon dioxide out of, the patient is the overt behaviour of the responsible physician, be he general practitioner, internist, obstetrician, roentgenologist, surgeon or fledgling house-officer. He must, of course, desist from trying to complete the operation or other activity in which he has been engaged. As his first, simplest and most rapid attempt to start the heart, he should strike the patient forcibly over the precordium. (Aside from the technique's documentation in the literature,[9] we can report a somewhat-illuminating local incident. An intern pronounced an elderly heart-disease patient dead, rapped him rather briskly over the left chest as the diagnosis was announced to the nurses, and turned to leave the room. The patient sat erect and said, "Don't strike me, Doctor—I'm a sick old man!" Discussion of the intern's reaction need form no part of this report.)

Should the maneuver described above fail to start the heart, the physician must, as with all surgical procedures, try to know what to do, be decisive, and go ahead and do it. (We cannot agree with a recent report in the lay press[11] which implies that vigorous treatment is to be denied the victim of cardiac arrest.) Without regard to aseptic technique, the left anterior chest wall is exposed and rapidly opened through a 6-inch-long or 8-inch-long intercostal incision. (A word of caution at this point: the operator must take into account the habitus and state of nutrition of the patient when performing this apparently radical, but really conservative, operation. One of us (H.E.M.), while "acting decisively" in doing this operation for a colleague and not having seen the patient before, did not notice that the elderly victim of cardiac arrest was markedly emaciated. With one stroke of the scalpel, all chest-wall layers, the pericardial sac, and a bit of visceral pericardium were laid open. Had the blade gone a millimeter or two deeper, of course the coronary vessels and myocardium would have been injured. Such haste in opening the road to the heart is unseemly, dangerous and unnecessary, and is to be condemned.) The intercostal incision may be made in the left fourth interspace,[6] but the writers prefer the fifth because the higher location of the surgical wound necessitates a severely uncomfortable, rapidly fatiguing and inefficient flexion of the operator's wrist and hand. To prevent a painful tourniquet effect on his wrist by the fifth and sixth, or other paired, ribs, one should hook the fingers of each hand firmly

in the wound and forcibly fracture the local ribs and/or costal cartilages with strong traction cephalad and caudad, simultaneously. Cutting of the ribs or cartilages at this stage has been recommended,[6] but the method used here obviates a frantic search for a rib-cutter when time is so important; similarly, a rib-spreader has not been found necessary.

The pericardial sac is then widely incised, to permit visualization and palpation of the ventricles beneath their intact visceral pericardium. Now, the presence of asystole (cardiac standstill) or ventricular fibrillation is easily recognizable. Should the former situation obtain, rhythmic manual compression of the ventricles is instituted, at a rate simulating that of the natural heart beat. It is helpful at this time, if a plainly visible clock does not face the operator, to have someone announce the time at half-minute or minute intervals; this aids materially in the maintenance of an effectual, steady rhythm and keeps the operator posted as to his working-time. We have found, too, that palpation of the carotid, temporal or brachial pulse by the anesthetist serves as an excellent index to the efficacy of the ventricular massaging being done by the surgeon: proper massage not only makes one or more peripheral pulses palpable but, in the presence of adequate oxygenation by the anesthetist, the patient's color improves noticeably. If the heart should resume its spontaneous beat, its coverings are sutured. If no function returns, at least one hour of cardiac massage is indicated before diagnosing death.

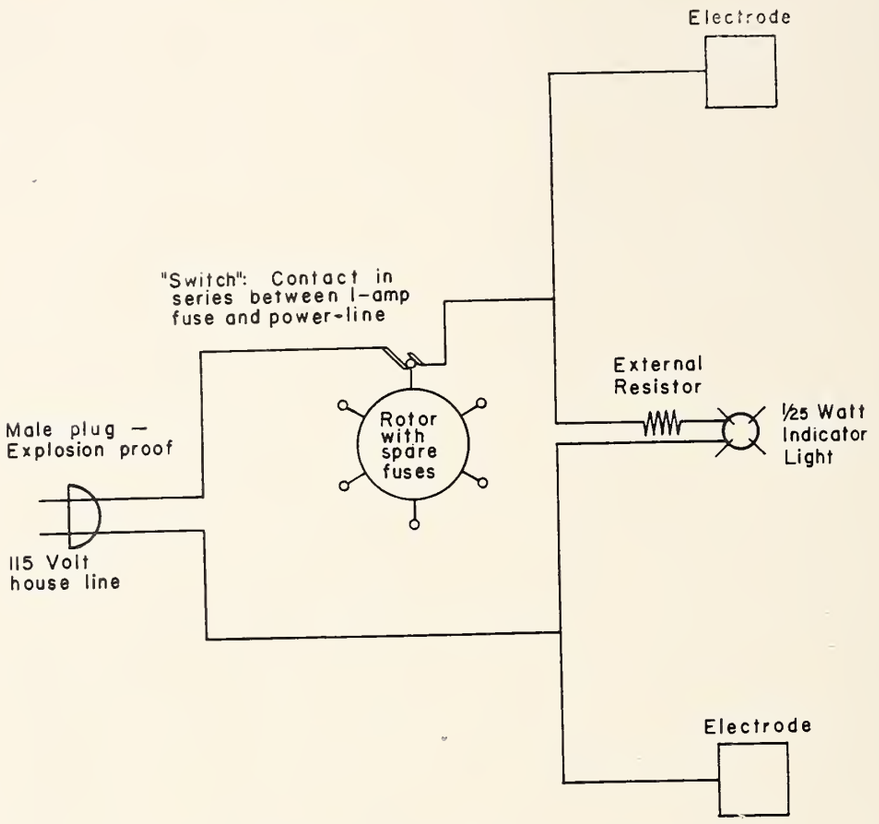


Fig. 1. Ventricular Defibrillator, electrical circuit.

(Far-fetched as it may seem, we suggest that physicians not experienced in cardiac massage "get the feel" of the maneuver upon necropsy subjects.)

In the presence of ventricular fibrillation, the procedures above are carried out while an assistant readies the electric defibrillator. Its electrodes are applied to front and rear of the ventricles by the operator, and a nurse or other attendant inserts the explosion-proof male plug of the device into the wall socket. The assistant then operates the switch of the defibrillator for the surgeon and under his direction: one or more shocks are applied at two-second or three-second intervals, till fibrillation ceases. Further manual massage may be needed, if the fibrillation has been converted into asystole, until spontaneous cardiac rhythm is resumed.

Details of pharmacologic adjuncts (adrenaline, procaine, procaine amide, calcium chloride) and their use with the program outlined are authoritatively written and available in the literature. We have had little personal experience with them but, by keeping them stored in the defibrillator

box together with appropriate 10 cc. syringes and needles, we are prepared to use them when the inevitable need shall arise in the future.

Based upon Mackay's[8] recent work, we have built the electric defibrillator illustrated (Figs. 1 and 2) at a cost of about $15 for the first one; replicas were cheaper to make, of course, and are strategically located about the critical hospital areas. Again, we have familiarized ourselves with this instrument, and are prepared to use it when necessary.

The wiring circuit (Fig. 1) is simple, and any competent small-town electrician or gadget-minded physician can easily build the defibrillator suggested by Mackay. The one shown here was made to incorporate 6 interchangeable 1-ampere "Littelfuse" fuses as cheap, dependable timers: if necessary, they can be quickly thrown successively into the circuit, should more than one surge of the proper amount of electrical energy be needed to stop fibrillation. This increase in the number of readily-available fuses, together with the inclusion of a 1/25-watt signal light in the circuit, has been the only change we have made in following Mackay's suggestions. Obviously, other modifications are possible. In any case, that writer has shown how to obtain a ventricular defibrillator without its involving the prohibitive cost of $150 to $1,000 for the timer element.

It seems desirable that all small-town medical groups follow any suggestion that may lead to more effective protection for the victim of cardiac arrest.

Summary

Cardiac arrest is a threat in all medical facilities. Its management in one isolated Michigan community has been discussed, with emphasis placed upon the desirability of all physicians' being prepared to treat the catastrophe in a decisive, competent manner and with universally-available adjuncts. The first of all the Hippocratic aphorisms[7] sums up the matter best:

"Life is short, and the Art long; the occasion fleeting, experience fallacious, and judgment difficult. The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants and the externals co-operate."

Addendum

On November 6, 1954, the first local case of cardiac arrest (since preparation of this paper some five months earlier) occurred: about twenty minutes after starting a hysterectomy, the surgeon diagnosed the complication, rapidly exposed the heart and found cardiac standstill to obtain. After four or five minutes of rhythmic manual compression of the ventricles, together with the injection of 10 cc. of 10-per cent calcium chloride into the right

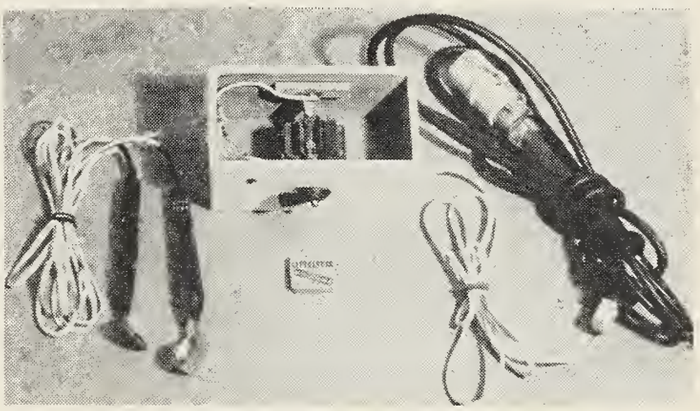


Fig. 2. Electric Ventricular Defibrillator.

ventricle, ventricular fibrillation developed. Following the outline of treatment posted on the wall of the operating room (and mentioned in the body of this report, above), the electrodes of the defibrillator were applied to the ventricles by the operator, 10 cc. of 1-per cent procaine was injected into the right ventricle by an assistant, and one of the writers (H.F.O.) operated the defibrillator-switch for the surgeon. After the second of two electrical shocks, fibrillation ceased and normal cardiac rhythm returned. The patient's condition became adequately stable to permit rapid closure of the chest wound, and equally-rapid completion of the hysterectomy.

Unfortunately, the patient did not regain consciousness, and was pronounced dead about twenty-five hours after the onset of cardiac arrest. Necropsy revealed no gross lesion as a cause of death, which was attributed to cerebral anoxia. We do not feel that the death of this patient detracts from the value of our planned-and-implemented regimen for treating cardiac arrest, and, admittedly on the basis of only one case, we are sure that the defibrillator described above works.

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Surgical Treatment of Thyroid Diseases

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AS MANY of you know, the Lahey Clinic has been interested in the treatment of thyroid disease for many years. At the present time we have operated on approximately 31,000 patients with various types of thyroid pathology. I mention this figure not to imply that we feel we now know all the answers to the problems associated with the thyroid gland but simply to give you the experience upon which our present treatment is based. It is of interest that despite all we have learned concerning thyroid pathology, despite iodine, the antithyroid drugs and radioactive iodine, surgery is still concerned with the treatment of almost every form of thyroid enlargement.

Colloid Goiter

There are two exceptions to this statement. The more important exception is the type of thyroid enlargement known as colloid or adolescent goiter. These young patients (usually girls of 16 or 17 years) are often brought to the physician by their parents because they are nervous, irritable and underweight, all for no apparent reason. Then someone, often the school nurse, discovers that they have a goiter. On careful examination, these patients have none of the signs and symptoms of hyperthyroidism, their basal metabolic rate is normal, and they are not helped by subtotal thyroidectomy. The second exception, so far as the surgical treatment of goiter is concerned, is acute thyroiditis. This is a very uncommon condition which usually responds to x-ray therapy, thiouracil or at the present time to antibiotic therapy. It rarely leads to suppuration, and surgical intervention is seldom indicated.

Chronic Thyroiditis

Despite the fact that patients with chronic thyroiditis have no functioning thyroid tissue to spare and may already show signs of a deficient production of thyroid hormone, surgical intervention is necessary in almost every instance to rule out cancer. In typical Hashimoto's struma the gland tends to retain its original shape and a tentative diagnosis can usually be made, but the hard consistency of the enlargement in all types of chronic thyroiditis usually makes it impossible to exclude carcinoma except by a biopsy. An additional reason for surgical intervention is the fact that in the later stages of thyroiditis the trachea often is markedly constricted at the point at which it is surrounded by the thyroid gland. Our practice in diffuse thyroiditis is to remove the isthmus. This will provide material for histologic confirmation of the diagnosis and also will liberate the trachea. By suturing the medial border of the sternothyroid muscle on each side over the cut end of each lobe, regeneration of the gland across the trachea can be prevented.

Multiple Colloid Adenomatous Goiter

Multiple colloid adenomatous goiter presents an indication for surgery for one or more of three fundamental reasons. The first of these is *size*. Except for the cases in which the multiple nodular gland is soft and small, the adenomatous mass usually produces sufficient deviation and compression of the trachea to make thyroidectomy advisable. It is important to remember that as these goiters enlarge they also descend in the neck. If they pass behind the sternum and clavicle, their outward growth is checked but their downward growth is accelerated. For this reason, a patient who has had a goiter for many years may state that in recent months his goiter had become smaller, while a roentgenogram of his trachea may show a very large intrathoracic extension. In any case in which the lower border of the gland cannot definitely be palpated, an anteroposterior and a lateral film of the trachea should be taken. Intratracheal anesthesia should be used for operation on all patients with intrathoracic goiters. Any surgeon who has attempted to deliver a large goiter from within the thorax, only to have it wedge tightly in the superior thoracic strait, can appreciate the vital necessity of having a semirigid tube in that patient's trachea before the operation is begun. If such a tube is not in place complete occlusion of the trachea may occur at this stage of the operative procedure and death or permanent brain damage may take place within a few minutes. In our experience, all of these

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intrathoracic goiters, regardless of size, can be removed through the usual cervical approach. As Dr. Lahey pointed out many years ago, as these adenomatous masses enlarge, degeneration and liquefaction occur in the central portion. If the goiter is too large to be brought through the superior thoracic strait, an incision is made into the adenomatous mass and the semiliquid, central contents are aspirated with suction. Bleeding is not a problem since these goiters carry their main blood supply with them in their descent into the thorax, and the superior and inferior thyroid arteries and the middle thyroid veins are ligated before delivery of the goiter is attempted.

The second reason that an adenomatous goiter may become of surgical importance is that toxicity or secondary hyperthyroidism frequently develops. In fact, if these patients live long enough and their goiters are not removed, hyperthyroidism will develop in almost all of them. Because they are in the older age group, they present special problems to the operating surgeon. The patient with apathetic hyperthyroidism, with auricular fibrillation, or with cardiac decompensation usually has an adenomatous goiter and secondary hyperthyroidism. It is in this group of patients that a fatality may occur after subtotal thyroidectomy. and they require special care during their preoperative preparation and at the time of operation.

The third reason that surgical intervention must be considered in a patient with an adenomatous goiter is the presence of malignant disease. Although the incidence of carcinoma in multiple nodular goiters is low as compared with its incidence in thyroid glands with a single nodule, the presence of multiple nodularity of the gland does not exclude malignant disease. In my last 3 cases of cancer of the thyroid, the carcinoma had developed in a multiple nodular goiter.

Discrete or Solitary Adenoma

The discrete or solitary adenoma presents the same three indications for surgical intervention. A single nodule may reach tremendous size either within the neck or within the thorax. Secondary hyperthyroidism may be associated with a solitary adenoma. When we come to the third reason, the possible presence of malignancy, a much more ominous situation exists than that associated with a multiple nodular goiter. Whereas the incidence of carcinoma in multiple nodular goiter is probably less than 2 per cent, the incidence in thyroid glands containing a single nodule is from 12 to 25 or even 30 per cent. The difficulty in establishing the true incidence of carcinoma in single nodules is related to the difficulty in determining preoperatively whether the nodule really is single or the enlargement, which feels like a single nodule, actually is part of a multiple colloid adenomatous goiter. In any event our experience has led us to advise the removal of any nodule that appears to be a single adenoma of the thyroid regardless of the patient's age and regardless of the size of the nodule. We have seen carcinoma in a patient nine years of age and in a nodule less than 1 cm. in size.

Carcinoma of the Thyroid

It is difficult to state with certainty that the incidence of carcinoma of the thyroid is increasing. Certainly it is true that in many clinics, including our own, an increasing number of patients with malignancy of the thyroid is being seen. To review our recent experiences with carcinoma of the thyroid, Dr. Richard B. Cattell and I analyzed the clinical records of every patient with carcinoma of the thyroid who was seen during 1951 and 1952. One out of every ten patients who were operated upon during this two-year period for nodular goiter had carcinoma of the thyroid. Despite the fact that we have long been interested in thyroid disease and are aware of the frequent occurrence of thyroid malignancy, a clinical diagnosis was made in less than half of these patients. One out of every three patients who had what proved to be a true solitady adenoma had carcinoma. We believe that the increased use of radical neck dissection plus high voltage x-ray therapy has improved our end results in cases of thyroid malignancy. Thyroid cancer is a serious problem. Although there were no operative deaths in these seventy-eight patients, nine were dead of malignant disease less than two years after operation.

Hyperthyroidism

There are at the present time three accepted methods of treating patients with hyperthyroidism. Radioactive iodine represents another method of doing a subtotal thyroidectomy. Because of the difficulty in estimating the size of the gland by palpation of the neck it has been difficult to determine the correct dosage of radioactive iodine, and the incidence of myxedema has been high. The longer these patients have been followed the

lower has been the percentage of completely satisfactory results. It is too early to be sure whether or not radioactive iodine is carcinogenic. There is some reason to be concerned regarding mutation changes in the ovaries of young female patients with primary hyperthyroidism treated with radioactive iodine. For these reasons we do not regard it as the procedure of choice in the treatment of patients with hyperthyroidism except for patients with recurrent hyperthyroidism who have small thyroid remnants. Nevertheless, in properly selected centers where adequate facilities are present and where adequate precautions can be taken regarding its use, radioactive iodine represents an effective method of treating patients with thyroid toxicity.

The Antithyroid Drugs Alone — Although thiouracil and its derivatives may produce a permanent remission in a patient with a small gland and mild toxicity, the overall percentage of remissions has been so low as to make it an unsatisfactory definitive treatment of patients with thyroid toxicity. However, when radioactive iodine is not available and when thyroid surgery is contraindicated or is not available, patients with hyperthyroidism may be kept in a euthyroid state by the continuous administration of the drug and a few patients may obtain permanent remission.

The Antithyroid Drugs plus Subtotal Thyroidectomy.—We believe that the third method of treating patients with hyperthyroidism, namely, the preparation of these patients with the antithyroid drugs followed by subtotal thyroidectomy is the treatment of choice for all patients who are a good or at least a reasonable operative risk. In this connection it should be pointed out that many patients whose initial condition would seem to contraindicate surgical intervention can, by careful preparation, be converted into reasonable operative risks.

Following the introduction of thiouracil by Astwood some eight or nine years ago many derivatives of this drug have been used in the treatment of patients with hyperthyroidism. All of them are effective and all have associated undesirable side effects, the most important of which is the production of agranulocytosis or agranulocytic angina. Fatalities have been reported with all of these drugs. In our experience, propylthiouracil continues to be the drug of choice. If given in sufficient dosage over a sufficient period of time it will bring the metabolic rate to normal in practically all patients with hyperthyroidism. Its incidence of complications and of agranulocytosis is in our experience the lowest of all of the drugs that have been developed. Since these patients are prepared at home under the care of their local physician it is important that they be carefully instructed regarding the possible complications that can arise and to report to their physician promptly. It is also of value to know approximately the time they will be ready for thyroidectomy. In cases of primary hyperthyroidism, a drop in the basal metabolic rate of approximately 1 per cent per day can be expected. Patients with adenomatous goiter and secondary hyperthyroidism require a much longer period of preparation; their basal metabolic rate decreases approximately 0.5 per cent per day. Thus, a patient with primary hyperthyroidism and an initial metabolic rate of plus 60 will be ready for surgery in approximately two months, whereas a patient with adenomatous goiter and secondary hyperthyroidism whose basal metabolic rate is plus 60 would require approximately four months.

Iodine still retains a place in the treatment of patients with hyperthyroidism. In an occasional patient with severe signs of toxicity it may be desirable to bring the disease under partial control as soon as possible. This can be done much more quickly with the use of iodine than with thiouracil. All patients are given iodine the last two weeks of their preparation to produce involution of the gland and to make the technical removal of the goiter an easier procedure than it would be otherwise. Because there is a certain degree of antagonism between the thiouracil drugs and iodine, they are not given together throughout the preparation of these patients. We believe it is also important not to continue giving the antithyroid drug to the point at which myxedema is produced. Myxedematous infiltration of the larynx, plus preoperative narcotics, plus the edema associated with thyroidectomy may lead to serious degrees of laryngeal obstruction during the early postoperative period.

Anesthesia

In all these cases, nitrous oxide or intravenous pentothal is used for induction of anesthesia. We no longer use cyclopropane even for induction in patients with hyperthyroidism because of the danger of producing cardiac irregularities. The

most recent development so far as anesthesia is concerned in the surgical treatment of thyroid patients is the use of the curare-like drugs such as syncurine or anectine to facilitate the introduction of the endotracheal tube. We believe that all operations upon the neck are more safely carried out with endotracheal anesthesia. Until the last few years, a much deeper plane of anesthesia frequently was required to introduce the tracheal tube than to carry out the operative procedure. At the present time the muscular relaxation necessary for the introduction of the endotracheal tube, particularly in patients with a markedly deviated trachea, is obtained with anectine given with the pentothal for induction, and then anesthesia is maintained with ether. With this plan it is often possible to carry out the entire subtotal thyroidectomy using 1 to 1½ ounces of ether.

Operation

With regard to the technical aspects of thyroidectomy as carried out at the Lahey Clinic, the most important factor is adequate exposure. The prethyroid muscles are divided routinely on each side. This permits easy access to the superior thyroid artery and vein regardless of the height of the superior pole. After division of the middle thyroid veins, the thyroid gland can be rolled medially, the recurrent laryngeal nerve identified in each instance and the inferior thyroid artery ligated as it passes medialward beneath the carotid. The parathyroid glands may be identified and preserved and a radical subtotal thyroidectomy carried out. We believe that adequate exposure will inevitably be associated with a lower morbidity and a lower mortality.

Mortality

With this type of management of patients with hyperthyroidism there have been five deaths in the last 2400 cases, a mortality of 0.2 per cent. All of these patients were thyrocardiacs. One died of coronary occlusion, one died from a cardiac arrest and one died from acute myocarditis. Three of the five had the additional burden of some degree of postoperative respiratory obstruction. In any patient who is a serious operative risk and who has an advanced thyrocardiac condition, a prophylactic tracheotomy at the conclusion of the surgical procedure should be seriously considered. These patients tolerate poorly even mild degrees of anoxemia. Since we have instituted this policy no deaths have followed subtotal thyroidectomy.

Complications

Respiratory Obstruction.—The most urgent and in some respects the most serious complication that may follow surgical procedures on the thyroid gland is the sudden onset of respiratory obstruction caused by severe bleeding, usually from the superior thyroid artery. If the superior thyroid artery is doubly ligated at the time of operation this complication will occur infrequently. When it does occur, however, it requires prompt action. The first physician to reach that patient's bedside, whether he be internist surgeon or obstetrician, must be prepared to open that patient's neck with his fingers, and release the pressure on the patient's trachea. If the trachea is occluded for longer than three minutes, death or serious brain damage may occur. The bleeding can be temporarily controlled by pressure over a gauze pack; the patient then is returned to the operating room and the bleeding vessel ligated. Respiratory obstruction may occur from laryngeal edema. Although it is much less dramatic in its onset, its very insidiousness may make it an even greater hazard. The treatment, of course, is tracheotomy. We have learned from experience that any patient who has even mild degrees of laryngeal stridor must be watched very carefully. If it increases, a tracheotomy should be done promptly. Dr. Lahey used to say that the time to do a tracheotomy in a patient with laryngeal obstruction is when one first begins to wonder whether or not a tracheotomy is indicated.

Myxedema.—In our experience, myxedema occurs in approximately 7 per cent of all patients who undergo subtotal thyroidectomy for hyperthyroidism. It is permanent in approximately 5 per cent and transient in 2 per cent. Many of these patients were operated upon for recurrent hyperthyroidism and a very radical resection of the thyroid remnants was deliberately performed. In a few cases the myxedema was attributable to the surgical procedure plus x-ray therapy postoperatively given because of the presence of malignant disease in the resected gland. All of these patients are well at the present time and are being maintained on less than 2 grains of thyroid extract daily.

Tetany.—Tetany occurs in 2.5 per cent of patients, transient in approximately 1.8 per cent and

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St. Luke's Hospital Clinico-Pathologic Conference

Edited by
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Clinical Record

The patient was a white man, sixty years old, who complained of loss of weight, and pain in the chest and right shoulder of six weeks' duration. The patient had considered himself well, except for chronic cough which he attributed to smoking, until six weeks previously. At that time, he experienced a sharp "tearing" pain in the upper right chest and right shoulder during an episode of coughing. He then stopped smoking. The sharp chest pain subsided and a slight dull pain in the same region became constant. The pain in the right shoulder completely subsided but recurred approximately every two weeks and lasted two to three days. At these times, the pain was severe, constant, and radiated down the right arm over the distribution of the ulnar nerve. This pain was not associated with exertion. The cough had never been "brassy," and the shoulder and chest pain had never been of throbbing type. During the past two months, there had been a 10-pound loss of weight although the appetite had not changed. There had been no dyspnea, dysphagia, increased ease of fatigue, edema of the ankles, hoarseness, ataxia, or visual disturbances.

Past history revealed that a penile lesion, diagnosed by a physician as a chancre, had been treated by excision approximately 20 years before. He was also treated at that time with one course of arsphenamine injections, believed to be 10 in number. Thereafter, serologic examination of blood and spinal fluid for syphilis were consistently negative. The patient had previously been a chronic alcoholic but he had not indulged excessively in this habit during recent years. There was no past history of migratory arthritis or rheumatic disease.

Physical examination revealed a well nourished and well developed man in no acute distress. The temperature was 98.6 degrees (F.), pulse 74, and respirations 18. The blood pressure in both arms was 150/80 mm. Hg. The pupils were round and equal and the reactions to light and accommodation were prompt and normal. The neck was symmetrical. Tracheal deviation and pulsation of the suprasternal notch were not detected. The chest was large and symmetrical. A heaving pulsation synchronous with systole was present over the upper portion of the right chest in the region of sternal attachment of the second, third, and fourth ribs. Percussion disclosed dullness in this region and the chest was elsewhere resonant. Auscultation revealed breath sounds to be obscured by a harsh to-and-fro systolic and diastolic murmur that was loud over the entire precordium. Transmission to neck or axilla was not detected. The aortic and pulmonic second sounds were not audible. The apex beat was palpated in the fifth intercostal space at the anterior axillary line. The rhythm was regular. The back was not remarkable except for slight atrophy of the right infraspinatous muscle. The abdomen was flat and no organs were palpated. The external genitalia were normal. The extremities were symmetrical and the radial pulses were equal. A Corrigan pulse was not detected over the femoral arteries. The tendon reflexes were active and equal. Proprioception was intact and no pathologic reflexes were elicited.

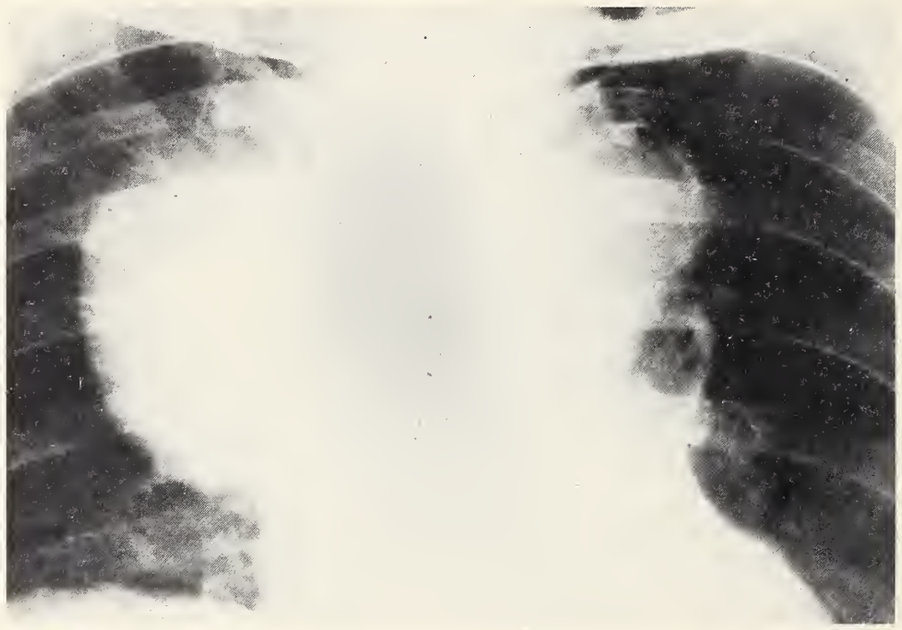


Fig. 1. The chest x-ray showing mediastinal mass extending into the right thorax.

The urine was clear, pale yellow, acid, and of specific gravity 1.016. Hematologic examination revealed 15.2 grams of hemaglobin per 100 cc. The Kahn serologic test for syphilis was negative. Radiographic examination of the chest revealed a large, oval, and smooth mass within the upper mediastinum on the right. Fluoroscopic examination revealed transmitted pulsations. Intrinsic pulsations were not identified. The aorta and trachea

were displaced slightly to the left. The esophagus was not deviated. The inferior margin of the mass was adjacent to the upper border of the right heart, and separation from the shadow of the aorta could not be demonstrated. Erosion of the vertebrae, sternum, or ribs was not detected. Focal calcification was identified in the arch of the aorta. The cardiac configuration was consistent with left ventricular hypertrophy. The lung fields were clear and there was paralysis of the right leaf of the diaphragm.

The patient was not seen again and death occurred two months later.

Discussion

Dr. B. M. Bullington: There are several points to be emphasized in this clinical record. The patient was a white male, sixty years old, who complained of a sharp tearing pain in the right upper chest that radiated down the right arm. There was dullness and a heaving pulsation over the anterior right upper chest. The heart was enlarged, and harsh systolic and diastolic murmurs were heard over the precordium. The blood and urine were normal. There was a history of primary syphilis 20 years before the present illness. The patient died after an illness of about four months duration. Before proceeding further, I would like to incorporate with these main clinical features the interpretation of the x-rays.

Dr. H. T. Caumartin: The chest x-rays reveal a smooth, nearly round mass in the anterior mediastinum that projects anteriorly and to the right. (Fig. 1) The margin displays no lobulation or calcification. The posterior surface lies over the base of the heart. Origin from aorta cannot be made out. Fluoroscopic studies revealed pulsations that appeared to be transmitted rather than intrinsic. There was no erosion of ribs or sternum. The right diaphragm was flaccid and this was assumed to represent paralysis of the phrenic nerve.

Dr. B. M. Bullington: We now have in essence the full clinical picture. In evaluation of such a case, it is well to consider the common lesions first, and then proceed to the less common and finally to the rare. The last warrant detailed consideration when the common lesions appear unlikely or can be excluded. In this case the clinical record and radiographic report are consistent with mediastinal tumor or saccular aneurysm of the ascending aorta.

Mediastinal tumor may be present for a long period without producing symptoms. Later, cough and dyspnea arise from pressure on bronchus or trachea. The esophagus is often displaced and the superior vena cava is occasionally obstructed. Pulsations may be transmitted from the adjacent aorta and paralysis of the phrenic nerve is not uncommon. However, the margin of the tumor as seen in the x-rays is often lobulated, and enlarged lymph nodes are frequently present in the neck. Pain occurs late in the course, and when present, is usually substernal and without radiation. Pressure of tumor against aorta may cause a systolic murmur, but a diastolic murmur under these circumstances is exceedingly rare. Lastly, sudden death is unusual except with erosion into aorta or superior vena cava. For these reasons I am not inclined to select mediastinal tumor as the diagnosis in this case.

I would like now to distinguish the clinical consequences of aneurysm of the ascending aorta as compared with aneurysm of the arch. Aneurysms of the ascending portion have space to expand and may be clinically silent for long periods. Enlargement takes place in an anterior and superior direction so that the chest wall may first oppose the expanding sac. However, cartilage resists this pressure and erosion of ribs or sternum is not to be expected in the region of the costo-sternal junctions. The first outward sign may be pulsation of the soft intercostal tissue. The heart may be displaced downward and to the left. Pressure on trachea, bronchus or lung may be reflected in dyspnea, cough, or signs of atelectasis. The condition may be culminated by anterior rupture through the skin with exsanguinating hemorrhage, or posterior rupture into the pericardial sac with cardiac tamponade. Syphilitic aneurysms of the ascending aorta are frequently associated with deforming disease of the aortic valve with insufficiency.



Fig. 2. Syphilitic saccular aneurysm of ascending aorta.

In comparison, aneurysm of the aortic arch is accompanied by a greater variety of symptoms, and more apparent signs because of proximity to important structures. Thus, the weight of the thrombosed or blood-filled aneurysm beating against the underlying main bronchus may give rise to tracheal tug. Pressure on the recurrent laryngeal nerve causes a flat, "brassy" cough that may progress to aphonia. The trachea, bronchus, or portion of lung may be compressed with resulting dyspnea or stridor. Dysphagia signifies displacement of the esophagus. Pressure on the subclavian or innominate artery is apparent by inequality of blood pressure in the arms. Unilateral sweating of the face and unequal pupils indicate pressure on the cervical sympathetic ganglia. Aneurysms of the arch are less frequently accompanied by aortic valvulitis with insufficiency than by aneurysms of the ascending portion.

Now from the x-rays it is apparent that this lesion affects the ascending aorta, but dysphagia, Horner's syndrome, unequal blood pressure in the arms, tracheal tug, and brassy cough, were not part of the clinical picture. The illness was characterized by pain, anterior pulsating mass, and slight cough associated with cardiac

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Clinical Record

The patient was a white man, a manual laborer fifty-nine years old, who was in good health until the day before admission to the hospital. At that time, he experienced an episode of indigestion accompanied by watery diarrhea and diffuse cramping pain in the abdomen. No unusual type or amount of food had been eaten on that day. The abdominal pain persisted. The patient then retired and was awakened from sleep in the early morning hours of the next day by a severe pain in the lower thoracic and upper lumbar region that shortly thereafter extended into the interscapular area. This pain was followed within a short time by a sensation of severe constriction within the chest that was accompanied by profuse perspiration and nausea without vomiting. There was also pain in both lower extremities that subsided and was followed by the sensations of numbness and tingling. The patient could not use his legs and had to be carried to the ambulance. Shortly after admission to the hospital, all abnormal sensation left both legs and normal function returned.

Past history revealed that the patient had high blood pressure for the previous six years. Two months prior to admission, a partial transurethral prostatectomy had been performed. The specimen revealed glandular and stromal hyperplasia. There had been occasional orthopnea and palpitation. There had been no dyspnea, hemoptysis, chest pain, edema, anorexia, loss of weight, diarrhea, constipation, or melena.

Physical examination revealed a large man of florid complexion under the influence of narcotics who complained of pain of the chest and abdomen. The temperature was 98.8 degrees (F.), pulse 60, respiration 20, and blood pressure 240/140 mm. hg. in both arms. The head was not remarkable except for pupillary constriction. The trachea was displaced slightly to the right. There was no distension or pulsation of the neck veins. The lungs were clear to auscultation and percussion. The diaphragm was high and the heart was displaced in a cephalad direction. The left border of cardiac dullness was at the anterior axillary line and the apical impulse was in the third intercostal space in midclavicular line. The rhythm was regular and there was a systolic murmur over the base just below the medial aspect of the left clavicle that was transmitted to the interscapular region. The abdomen was resistant to palpation and tenderness was not elicited. The spleen and liver were not palpable. Normal bowel sounds were audible by auscultation of the abdomen. Rectal examination was not remarkable. The femoral, popliteal, and dorsalis pedis pulses were full and equal to palpation.

The urine was pale yellow, clear, acid, and of specific gravity 1.010. There was one plus proteinuria, no reducing or acetone substances, and the sediment disclosed 5 to 8 erythrocytes per high power field. Hematologic examination revealed 13.6 grams of hemoglobin per 100 cc. There were 4.1 million erythrocytes and 15,200 leukocytes per cu. mm. Differential count of 100 cells revealed 85 segmented granulocytes and 15 lymphocytes. The Kahn serologic test for syphilis was negative. The *serum* calcium was 3.1 mEq. per liter (normal, 4.7 to 5.5). On the day after admission, the *serum* amylase was 64 units, and two days later was 16 units. (normal 0-32) The fasting blood sugar was 90 mg. per 100 cc. On the sixth hospital day, the icteric index was 25 units. X-ray examination of the chest and abdomen revealed clear lung fields, cardiac size at upper normal limit with configuration of left ventricular hypertrophy, slight widening of the aortic shadow, and equivocal splenic enlargement. An electrocardiogram on the day of admission was normal. On the following day, the electrocardiogram revealed auricular fibrillation with rapid, irregular ventricular response. There was also evidence of left ventricular hypertrophy. No changes suggestive of infarction of the myocardium were seen.

Pain in the abdomen and chest, and a sensation of pressure in the chest persisted. On the third hospital day, the blood pressure was 180/100 mm. Hg. and the murmur over the base of the heart had disappeared. On the 4th day in the hospital, hematologic examination revealed 13.7 grams of hemoglobin per 100 cc. There were 4.4 million erythrocytes and 17,400 leukocytes per cu. mm. Differential count revealed slight increase in the segmented granulocytes. The abdominal pain became severe and constant. A soft, brown stool was passed on the sixth day. The hospital course was characterized by pronounced restlessness and marked apprehension. The temperature did not exceed 100.6 degrees (F.). After nine days in the hospital, a state of shock developed and the patient died.

Discussion

Dr. R. F. Powers: The historical data and physical signs as well as the information from the Laboratory indicate that the lesion is of serious nature and wide distribution. I may say at the outset that this whole clinical record is characteristic of dissecting aneurysm of the aorta and I want to comment on that first. This patient was fifty-nine years old and he has had pronounced hypertension for six years. We know that hypertension is seen frequently in cases of dissecting aneurysm and that this condition usually occurs in the twenty-year period after the age of forty years. The onset was sudden and occurred at bed rest with severe pain beginning in the lower thoracic and upper lumbar region that soon extended into the interscapular area above and to the legs below. This pain arises from the shearing-off or the dissection into the aortic tributaries, and the sudden onset with extension in both directions is characteristic. It is also typical that the severe pain persists, and we note that the patient continued to complain of pain even after the injection of narcotics. With this basic lesion in mind, it is not difficult to account for a variety of signs and symptoms. Proximal extension may reach the aortic outlet so that the valve cusps are distorted and a murmur arises. Separation of the aortic layers in the ascending portion may widen the aorta and displace the trachea. Tearing of the intercostal arteries may give rise to the sensations of pain and pressure in the chest. Extra-lumenal compression of the superior mesenteric artery impedes the func-

tion of the intestine, and this patient complained of abdominal pain and diarrhea followed by absence of bowel movements for several days. Dissection into the celiac axis may extend to the pancreas with back pain, and to the hepatic artery with discomfort in the right upper quadrant. Similar compression of the renal arteries may result in hematuria, anuria, and uremia. When the intercostal and lumbar vessels are both torn away from the aorta, the spinal cord may be deprived of oxygenated blood and neurologic complaints, often manifest in the legs, may become evident. As dissection proceeds distalward, compression of the iliac or femoral arteries often leads to decreased or absent pulsations in the distal portions of the lower extremities. The total aspect of this illness is so characteristic of dissecting aneurysm that I am not deterred from making the diagnosis even though the arterial pulsations in the feet were normal. This may be interpreted to mean that the dissection in the groin was not sufficient to significantly compress those large vessels, and the full thrust was delivered with each systolic beat.

Toward the end of the hospital course the serum revealed an icterus index of 25 units. This may result from hemorrhage about the porta hepatis with compression of the biliary channels, but is more likely due to absorption of the blood pigment from the many sites of hemorrhage.

After an illness of ten days' duration, during which there was persistent pain accompanied by restlessness and apprehension, the patient developed a state of shock and died. Death in dissecting aortic aneurysm is frequently the result of rupture into one of the serous cavities with massive hemorrhage. The quiet nature of the terminal episode leads me to believe that this may have occurred. We have no evidence of sudden hemopericardium with small quiet heart and reduced pulse pressure, so that the pleural space or the peritoneum are more likely sites.

Convinced as I am that this is a case of dissecting aortic aneurysm, it is still prudent to consider other diagnoses. These include coronary thrombosis, mesenteric artery thrombosis, perforated gastric ulcer, and acute pancreatitis. With thrombosis of a main coronary artery, the onset frequently occurs during or shortly after exertion, or after the ingestion of a heavy meal. Ordinarily, a state of profound shock, accompanied by cyanosis quickly ensues. Furthermore, the distribution of pain is often characteristic and is usually of much more limited distribution. Lastly, the normal electrocardiogram on two occasions is substantial evidence against this diagnosis. Mesenteric artery thrombosis is also accompanied by shock and a more localized pain. Of more importance, however, is the cessation of peristaltic activity. This patient passed a stool of normal appearance after 6 days in the hospital. With perforation of a gastric ulcer, there is diffuse peritonitis with extreme tenderness and rigidity of the entire abdomen. In this case these were not seen. Acute pancreatitis often begins with pain in the midepigastrium that extends throughout the abdomen as the enzymes corrode the peritoneum. The slight and temporary elevation of the serum amylase in this case lends no support to the diagnosis. I thus discard these possibilities as unlikely, and rest with the clinical diagnosis of dissecting aneurysm of the aorta, probably extending from the upper thoracic portion to the iliac bifurcation, and terminating in massive hemorrhage into pleura or peritoneum.

Visitor: Was there radiographic evidence of calcification of the aorta indicating advanced arteriosclerosis?

Dr. H. T. Caumartin: Calcification of the aorta was not seen.

Doctor Power's Diagnosis

Dissecting aneurysm of aorta with terminal hemorrhage into pleura or peritoneum.

Anatomic Diagnoses

Dissecting aneurysm of aorta with thoracic intimal perforation and dissection into the hepatic, pancreatic, superior mesenteric, right renal, and right and left common iliac arteries.

Recent intraperitoneal hemorrhage (1,220 cc.).

Dr. J. C. Smith: The aorta revealed a dissecting aneurysm beginning with a short transverse intimal laceration in the region of the isthmus that extended to the proximal portions of both common iliac arteries. There was extensive hemorrhage about the porta hepatis and within the retroperitoneal tissues. The immediate cause of death was recent massive hemorrhage into the peritoneum.

It is to be emphasized that dissecting aneurysm is the result of a cystic necrosis of the outer media into which the intimal tear permits the forceful projection of blood with extending separation of the aortic layers. For this reason, dissecting aneurysm is rare in cases of advanced arteriosclerosis or in syphilitic meso-aortitis, for in both of these conditions, the fibrous connective tissue seals the layers of the aortic wall tightly together.

CLINICO-PATHOLOGIC CONFERENCE

(Continued from Page 80)

enlargement and the murmurs of aortic insufficiency. From this brief review, it is apparent that these clinical features are characteristic of aneurysm of the ascending aorta. The position of the aneurysm, its saccular shape, and the evidence of aortic valve disease strongly suggest that syphilis is the cause. The negative serology is not a strong deterrant, as a significant portion, varying in reports from 10 to 30 per cent of patients with tertiary cardiovascular syphilis, are known to have negative Wassermann and Kahn tests. Therefore, I make the diagnosis of syphilitic saccular aneurysm of the ascending aorta.

Doctor Bullington's Diagnosis

Syphilitic saccular aneurysm of the ascending aorta.

Anatomic Diagnoses

Syphilitic saccular aneurysm of ascending aorta with rupture into lung and right pleural space.
Hemothorax, right.
Syphilitic aortic valvulitis with insufficiency.
Hypertrophy and dilatation of heart (490 grams).
Syphilitic mesoaortitis.

Dr. J. C. Smith: Autopsy examination revealed a large saccular aneurysm extending from the right anterolateral portion of the ascending aorta into the right mediastinum and upper thorax (Fig. 2). Hemothorax and extensive recent hemorrhage within the lung were the result of recent rupture. Impingement of the aneurysm onto the dome of the right pleural space with pressure on the brachial plexus is assumed to be the cause of the arm pain of ulnar distribution and the atrophy of infraspinatous muscle. The aortic ring was dilated and the aortic cusps revealed thickening, retraction, outward rolling of the free borders, and separation of the commissures. These changes, characteristic of syphilitic aortic valvulitis with insufficiency, were reflected anatomically by hypertrophy of the myocardium, and clinically by harsh systolic and diastolic murmurs. The portions of aorta not affected by aneurysm revealed slight arteriosclerosis and fine longitudinal and stellate wrinkling of the intima. Sections of aorta treated with the Verhoeff stain revealed disruption of elastic fibers, increased vascularity, and chronic inflammation of the media and adventitia. The diagnoses of syphilitic mesoaortitis with aortic valvulitis and insufficiency, and saccular syphilitic aneurysm with recent rupture were thus established.

Editorial

THE JOB IS STRICTLY OURS

AT ITS 1954 session, the MSMS House of Delegates endorsed a continuing Periodic Health Appraisal Program and urged that each delegate by personal leadership enthusiastically forward the program among his patients, his colleagues, and himself. This program emphasizes total disease detection by the family physician rather than the piece-meal approach for individual diseases.

The current attention to periodic health appraisals is a rekindling of interest in a subject which has previously received consideration by MSMS. Interest was renewed in 1951 when the Michigan Heart Association proposed implementation of such a program in order to avoid spotlighting various disease entities, but to focus on total disease detection. A committee of MSMS has worked with the Michigan Health Council and with many of the health agencies trying to implement the program and focus attention upon it.

In recent years, various voluntary health agencies have been bombarding the public with advice to be checked for the particular disease whose banner they carry. This has been helpful in case-finding of certain diseases but leaves much to be desired because of the unwarranted assurance generated by incomplete examinations. Doctors know that only a complete personally recounted history and a careful physical examination, supplemented by necessary laboratory tests, constitute an adequate health check-up—periodic health appraisal. It is our conviction that these health appraisals are best done by the individual physician in his office; that this is superior to multiphasic screening examinations with their battery of tests but their lack of complete physical examination; superior also to the self-answered history forms which eliminate the all-important personal contact between patient and doctor and make the appraisal a production line procedure.

It is incumbent upon each of us to be prepared to give our patients this personal health appraisal and to explain clearly the findings and their meaning. The day is past when the patient could be dismissed by telling him that there was nothing wrong and please not to waste the doctor's time. Ill or well, he deserves a thorough study both in the interests of treatment and prevention. And that job is strictly ours.

FEDERAL LEGISLATION

Reinsurance

THE PRESIDENT and his Secretary of Health, Education and Welfare have repeatedly announced their intention of asking Congress to pass several bills during the coming session. The most important one, especially to the Medical Profession, might be the "reinsurance" measure. In his "State of the Union" message last January, and many times since, he has stated the purpose of the "reinsurance" bill is to allow experimentation and study of new and quicker methods to provide health insurance for many more people who cannot now cheaply purchase insurance.

"Reinsurance" is proposed to allow a company, association or plan to attempt coverage where there was no actuarial knowledge for the rate structure. The Government might act as a "reinsurance agent" and spread the costs. *We* believe the President has been sold a term which he does not understand. Actual "reinsurance" spreads the risk so thin that no one is hurt. But the scheme proposed last year was not such a program.

Another scheme was to make health and hospital insurance available to "millions, who could not now acquire insurance." Our objection is that if these millions are not able to buy insurance now, under our liberal terms, they would not be able to afford insurance at any time without a subsidy. The medical profession is firmly and completely opposed to a "subsidy." Did not the Supreme Court issue an opinion that whatever the government subsidizes, it may control? If the government ever subsidizes one of our nonprofit health insurance plans, the way is opened for Government to move in and dominate the practice of medicine by regulations. Our government is now and for a long time has been govern-

"What's New, Doctor, That You Can Use!"

President's Message



One of the prime purposes of the organization of our State Medical Society, is "to maintain a program of scientific education for the members of the Society, keyed to the constantly developing discoveries in the field of medicine." By-Laws Article 1, Sec. 4.

The Michigan Clinical Institute which meets in March, in Detroit, brings to you a great opportunity.

Here will be presented New Ideas for You and New Techniques, too.

Don't miss this opportunity, at your door step, to keep abreast of the new and practical advances in scientific medicine. Just one idea which you can take home to help you in some problem case makes the effort worth while. Try it and be convinced.

You will get New Thoughts that Pay. Your patients will spare you the time away from home and be proud of their Doctor who is keeping abreast of medical advancement.

At this meeting, your State Society will extend its congratulations to those who have attained national recognition by their election to office in their National Societies. We all can bask in their reflected glory.

And finally, you renew old friendships, and gain new friends, who throughout life give that spice to living that we all cherish.

To the young men of our profession, and the experienced men too, don't think you can't afford to go. You can't afford to stay away! Keep abreast of what's new. At the MCI you will surely find ideas and techniques that you can use.

Robert H. Baker

President, Michigan State Medical Society

ing by regulation. Many departmental regulations have the full effect of law.

Our non-profit voluntary plans are working satisfactorily, carrying their own reinsurance when needed, expanding rapidly, and do not need the proposed scheme.

Until we see the new bill and find some changes from what was offered to the 83rd Congress, we must oppose that measure. The primary reason for opposition is: the measure is not needed. The insurance companies and our non-profit voluntary plans are able to carry their own reinsurance when they need it. Reinsurance in the field of health and welfare is not new. It has been successfully operating for over two decades. We mean real "reinsurance," not what Chairman Wolverton dreamed up and offered to us. True "reinsurance" would not make uninsurable risks insurable. A subsidy *could* reduce the costs of insurance, or stimulate the unwilling buyer to insure.

We believe the suggested legislation completely missed the very objective made by the President. He wished to make our health service plans available to the unemployed, indigent, or medically indigent who cannot now buy insurance. In other words he wished to insure the improvident. He stated he did not believe in "socialized medicine" and hoped to find a way to care for vast numbers of people who are not now insured. He felt those who wished to buy and are able are not a problem for the Federal or State government.

We have suggested many times (and do so again) that the Government—if in earnest, might —by legislative action revoke the "subsidy clause," and make these dependents of local government the possible beneficiaries of such a scheme as now in operation for the Veterans Bureau. A prepaid or postpaid program could be worked out by the responsible agencies and voluntary health plans similar to what was done ten years ago for the veterans. The Federal and state governments make appropriations for food, clothing, shelter, and medical care of the indigent or dependent wards of the state. *These care programs run into great sums of money and the medical care provided is quite insufficient, and very poorly paid for.* The veterans' care is adequate and adequately paid for. The same could be done for the Government's dependent people. All it needs is VISION and co-operation.

FEDERAL LEGISLATION

Health Insurance for Government Employes

DURING the 83rd Congress, a bill was introduced providing health insurance for the Civil Service employes. The measure met with unqualified endorsement and might have passed if introduced sooner. Another such bill will without doubt be introduced early in 1955. The plan presented would obligate the government to match funds built by payroll deductions for the individual's insurance up to $26 per year for each employe. The insured would also be allowed to insure his dependents without government help.

The administration is so sure this measure will be adopted that a committee has been studying plans and policies to be recommended. Conferences have been held with insurance companies, with Blue Cross and Blue Shield, and with "group prepayment organizations." Proposals have been considered to make the plans over-all, state-wide or local. Insurance companies, by their nature, are able to do either. Blue Cross and Blue Shield can easily make plans for the areas of their independent coverage. These plans are handicapped by a complete lack of uniformity. They have been working to that end for several years, but central leadership has been inadequate. We believe however they are in the best situation to render the service the government wishes for its 2,200,000 employes.

"Group prepayment organizations" have not been identified. They could be groups like "Ross-Loose," "Permanente," or any salaried doctor employe organization. These are corporations practicing medicine, illegal in Michigan. One of the amendments to the Hill-Burton bills just passed allows the Government to loan money for construction of "clinics," convalescent homes, or nursing homes, if 40 per cent of the service rendered in the clinics is prepaid. Some organization might seize the opportunity and contract to care for large groups of Civil Service employes in concentrated areas. They could borrow from the Government money to build their structures, hire doctors, and be in the complete unhindered perfectly legal practice of "socialized medicine"! While we favor the proposed service to government employes, we feel the scheme should be limited to outright insurance and the private practice of medicine for the best interests of the patient.

PRIVATE PENSIONS—REID-KEOUGH-JENKINS

WE FEARED the old age and survival insurance program would prevent the medical and other professions from securing legislation like the Reid-Keough-Jenkins bills. Industry may build retirement plans for its salaried personnel charging to costs of business and making the amount tax-free until it becomes an annuity. Why not give the professions the same rights?

Vast sums are also being set aside tax-free by most industries in a method of providing retirement pay in later years, and being reported as business expense in order to escape the high income taxes which the employe would have to pay if his employer paid him more salary and expected him to plan his own endowment. With taxes now in force, a man would have to pay through his employer and himself, approximately 80 per cent or more to the Government and would have nothing left to build his own annuity. The professions are in just that predicament. They simply ask that they be allowed to invest in their own endowment insurance before taxes, the same as industry.

We have been talking this proposed legislation for over ten years. WE BELIEVE IT IS JUST, and will ultimately come. We have been told the Treasury Department is now studying such a plan. Let us hope and pray—and work for this needed legislation (while we're praying) by writing our U. S. Senators and Congressmen.

VETERANS' AFFAIRS

ONE of the most pronounced attributes of the average American is his proclivity of "joining" almost any group which has an active organizer and an appeal to his sensitivities. Medical men seem to be conformists. There are innumerable medical organizations, each one claiming overlapping membership. We have all specialties and all areas represented in formal societies or associations.

The Military is another large group that has formed various local, state and national veterans' organizations, quite representative of the groups. Never have all eligible persons joined.

The old Grand Army of the Republic is now a memory only, but in its time claimed a tremendous membership. The United Spanish War Veterans were next. Then came the first World War and its veterans' organizations: the American Legion, the Disabled American Veterans, the Veterans of Foreign Wars. The last started after or during the Spanish War but extended rapidly after the first World War.

Following the second World War, the American Legion accepted the new veterans and grew enormously, also the Veterans of Foreign Wars, the Amvets and the DAV. These constitute most of the veteran's organizations. All wish members, and all attempt to lobby for their members in matters of mutual interest. All strive for benefits which they consider are their due.

Many years ago, the Editor urged our medical society members to join these veterans' societies and attend enough meetings to become known to the membership. We dreamed that many health and medical welfare problems would arise, and our counsel would be required, were we known and respected as fellow members. This advice still holds and a much larger percentage of our members are veterans. We do not know the figure, but believe it to be almost 70 per cent.

Veterans' affairs and veterans' ambitions are becoming of increasing vital import to the Nation. Congress is always alert to the veteran and has been for at least seventy-five years. At the present time, it is even more veteran-conscious, there being about 22,000,000 veterans. Congress necessarily must listen. Veterans and their dependents comprise almost 50 per cent of our present registered voters.

We owe the veteran a much closer contact, which could be well discharged by becoming members of the veterans' organizations. The veterans are probably the largest and most interested "health-conscious" group. Guided legislation should be most advantageous to both the users and the dispensers of all health services. Co-operation, mutual understanding, and respectful joint planning could solve many problems.

YOUR OFFICERS

A NEW YEAR is starting, new projects are being considered, and old business is being concluded or continued. When this time of year comes, we always reminisce. During the year—during the many years—we have marveled at the devotion and unstinted time and effort given to every problem of the medical profession by its elected officers.

The members of the society rarely stop their many and varied interests to ponder why they have such privileges and opportunities. There are now, and have been for years, groups which are certainly not friendly to our profession. Some have tried to regiment us, others have sought to discredit our honesty and integrity. These and other problems have been the constant consideration of your officers in their many conferences involving long distances of travel, long hours of deliberation, and carefully considered decisions.

We refer to members of the House of Delegates, a group representing every county and district of the state, who meet for two and sometimes three days just before our Annual Session. They have three sessions a day with the reference committees far into the night. Members of the society are always invited and welcome to attend. Such attendance could be useful to our members who would see and appreciate the responsibility and efforts necessary for a smooth-running medical profession.

The Council has three stated-meetings a year, which every member attends. Three to four days are spent in meetings held in January, July, and September—all day and far into the night. Every committee report, every officer report, every resolution or problem before the profession is studied in detail, carefully considered and action taken which states the official position of the Michigan State Medical Society.

The Executive Committee of The Council, with certain other officers, meets the other nine months of the year. It convenes at 10:00 or 11:00 o'clock in the morning and is in continuous session, with time out for meals, frequently until 11:00 o'clock at night. These meetings usually involve a group of fifteen members and officers, plus certain guests who must consult and report: The State Health Commission, the Delegates and Alternates to the AMA, the chairmen and executive officers of various special or standing committees. In addition, each Councilor has his local contacts and frequent duties in other parts of the state.

The officers — President, President-Elect and Secretary—have untold extra duties and contacts involving much travel, many speeches and uncounted days away from their own work.

We owe our officers our thanks and gratitude for freely given devotion.

DEANS' PANEL

BY RESOLUTION, the Michigan State Medical Society House of Delegates asked for a panel discussion by the Deans of the two Michigan Medical Schools. It will be held Monday, September 26, 1955, at our Annual Session in Grand Rapids, so that members of the society may become better informed about the program, ambitions and prospects of our medical education facilities.

We anticipate the value to our membership may not only be very revealing but very challenging. So far as we can find, no such program has been projected before. It could be of much advantage to our membership and to our medical schools.

Medical education is most expensive, far-reaching, and involves co-operation and aid from many sources. It is estimated that about $10,000,000 a year is now needed in addition to the funds in sight. For several years, our doctors have been making contributions, but not enough. At the AMA meeting in Miami, it was estimated that if every doctor would give $30 a year, the financing of medical education would be assured.

The Dean's panel is not for financial or soliciting purposes. We merely mention that item to help the ever-present effort to maintain medical education as a non-bureaucrat-dominated field.

We know this panel will be replete with good results. Every member is invited to attend.

BLUE CROSS

MICHIGAN Hospital Service announces an increase in premium rates to take effect in February, 1955, of about 16.5 per cent. The income from premiums has not kept pace with the increased costs of hospital care. Much has been said and much has been written to account for the condition. The doctors have been blamed for keeping their patients in the hospital too long or for ordering too many to go to the hospital for unnecessary services. The subscriber has not been given too much blame, but must be charged with undue pressure to be hospitalized when it is more convenient, regardless of the costs. He acts as if he were getting something free. The hospital administrations have not been guiltless; they have wanted their services used to the maximum capacity.

There is another item accounting for increased

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What the Heart Association Does for the Practicing Physician

By Howard B. Sprague, M.D.

Past President, American Heart Association
Brookline, Massachusetts

"YOUNG Man of the Year," a title carrying and commanding community respect, was recently bestowed on an enterprising doctor in Savannah, Georgia, by the Junior Chamber of Commerce. The activity that won him this distinction and the praise of his fellow citizens was his energetic work as a leader in the local heart association.

This honor is typical of the heightened public gratitude being earned by many physicians in all parts of the country who are finding, through their community heart associations, a new way of "ministering" to the needs of the people. The profession as a whole is thereby gaining new stature. In the words of one public-spirited physician, this surge of enlightened activity provides a strong bulwark against the advocates of state control of private medical practice.

Pursuing a traditionally American and democratic course of dealing with challenging social problems, more and more physicians in all parts of the nation are finding that the voluntary health association in general, and the local heart association in particular, can offer a positive, constructive answer to many of the threats facing the medical profession today. Forward-looking physicians are winning and holding new and valuable friends through practical deeds executed as part of the community team and in the spirit of partnership with the lay public that is the essence of heart association work.

In an explanation of how the voluntary health association fits into the pattern of American democracy, some significant comments have been made by Dr. W. P. Shepard, vice president in the Health and Welfare Division of the Metropolitan Life Insurance Company, San Francisco, and clinical professor of Public Health and Preventive Medicine, Stanford University School of Medicine. Dr. Shepard asserts:

> "Service to and education of the public through voluntary health agencies are, in fact, our best answer to any demand for free medical care administered by the government. They are a bulwark against the mounting clamor for free medical care at government expense. When supported and led by physicians, they are a manifest of our sincere concern with the health of the public —proof positive of our success in giving the public the world's finest health care. Moreover, they keep us in touch with public opinion."

As voluntary health agencies, the American Heart Association, its fifty-five state and regional affiliates, and the present 253 chapters, under their jurisdiction, are following a well-established pattern of co-operation with the medical profession. By participating in his community heart association, the doctor is extending the role of counselor and guide, for which the individual patient in office or clinic has come to respect him. The local heart association offers the physician a medium for truly displaying his leadership and active concern for bettering the health of the community.

A major heart association goal is, through teamwork and community organization, to increase the effectiveness of the physician-patient relationship and so reduce death and disability from cardiovascular diseases. This is a clear demonstration of private initiative, acting on an organized community basis to deal with the most pressing physical health problem facing the nation today.

Incorporation in 1924 as a purely scientific body of physicians, the American Heart Association was converted into a voluntary health agency in 1948 because its farsighted medical members were convinced the time had come for taking a broad community approach to the cardiovascular diseases. Only by opening the door to lay participa-

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tion and the development of a vigorous national service program could it be possible to deal effectively with heart and blood vessel disorders on the vast scale dictated by the death and disability figures. These physicians realized that the new approach meant simply the broadening of the doctor-patient relationship to one involving the service team, which includes the doctor as the captain, in relation to the community as a whole.

The growth and development of local affiliated heart associations, in the last few years, likewise came about in response to the mounting awareness of the medical profession, as well as the general public, of the seriousness of the cardiovascular diseases. It was recognized that heart disease cannot be dealt with in one dimension alone, or by the physician singlehanded. Organized voluntary action is required to provide and coordinate the many, varied, and costly resources needed for a three-fold attack on the problem.

The program requires, above all, scientific research to uncover new knowledge, the relaying of information to the public as well as to physicians and other professional groups through educational programs, and the development of community services for the heart patient.

With such voluntary organization well under way, it is now possible to provide more adequate finances to stimulate a great expansion in the total national program of research which is clearly indicated by the mortality figures. The research program of the American Heart Association is its foremost consideration, since this area of activity can provide the practicing physician with the most valuable type of assistance—new methods of diagnosis, control and treatment, and possible keys to cure and prevention. In addition to the national research program of the Association, the affiliated heart associations throughout the country support local studies where facilities are available. Thanks also to the development of local heart associations, it is now possible to provide the machinery for supplementing the efforts of physicians in applying present knowledge for better management of heart patients through the effective utilization of all community resources.

General Practitioner as the Key

In almost every case it has been the physician who has initiated action, or around whom the community forces have rallied, in setting up local groups for the development of a health program to deal with cardiovascular disease. Where the initiative has arisen from a group of alerted citizens, whether professional or lay people, it has been thoroughly understood that "the general practitioner is the key individual in the total program for cardiovascular disease." Acknowledgment of that fact is prominently inscribed in the Proceedings of the First National Conference on Cardiovascular Diseases, held in Washington in 1950 under the joint auspices of the American Heart Association and the National Heart Institute of the Public Health Service. Among the conclusions written into the record were the following "basic considerations," described as common to all aspects of a program for cardiovascular disease:

> "In considering the treatment and management of the patient with cardiovascular disease, it must be recognized that such disease is frequently long in duration, and is accompanied by emotional and social problems of the patient and his family. To meet these total needs of the patient, the co-ordinated effort of the general physician, cardiologist, psychiatrist, pediatrician, other specialists, nurse, social worker, nutritionist, occupational therapist, rehabilitation worker, and other health workers is essential."

In these words were reflected the realization that cardiovascular disorders, numbering a score or more, account for a substantial proportion of the cases which come before the general practitioner. The immensity and scope of the problems involved, the chronic nature of the disease pattern, the far-reaching economic, family, social, and psychologic effects, make it difficult for any physician, no matter how skilled in diagnosis and treatment, to undertake singlehanded the total program of management and control that is required for many patients, especially those with rheumatic heart disease starting in childhood.

After the patient leaves the doctor's office, armed with prescriptions and advice, a number of "complications" can set in, to which the physician's medical knowledge does not apply. For example, the doctor may bring a man safely through a heart attack, but it would be difficult for him to see that his patient is returned to useful and appropriate work instead of becoming a public charge and a burden on the taxpayer. The physician who specializes in physical ailments is not necessarily equipped to deal with the emotional adjustments the patient may have to make to a changed way of life required by his heart limitations. Socially, in

his circle of friends or as a citizen of the community, restricted activity may, in some cases, require drastic changes in the patient's mode of living.

All of these factors, and many more, are not only beyond the normal call of duty for the physician, but they are beyond the limits of his time and energy, even if he wished to handle them. Through the development of local heart association, however, the aim is to help the physician avail himself of the varied community services that specialize in all of these aspects of total patient care.

The Program Guide

To assist local heart associations in the development of the most useful activities and services, the American Heart Association has developed a Program Guide. To a greater or lesser degree, depending upon the extent of their organization and the needs of a particular community, affiliates are moving rapidly ahead along the indicated lines. The very first step in the development of a community program by a newly-established heart association is usually a fact-finding survey to determine the available resources and services in the community.

After determining the existence and extent of these services and facilities, the heart association applies itself to the task of assisting in their coordination for maximum effectiveness to patient and doctor. The primary aim is to avoid overlapping and duplication of such services, to help strengthen the agencies involved, and to stimulate and help plan the creation of necessary new services where they do not exist at present.

The growing awareness of the value of the Work Classification Unit is a part of a larger developing program activity aimed at overcoming existing restrictions and prejudices to enable cardiac workers to find employment, and to retain or find more suitable jobs for workers who develop cardiovascular disease while employed.

The value of this program is evident when the physician considers how frequently he is compelled to advise the patient in indefinite terms to change his type of work for the sake of his cardiac condition. To remove some of the helpless generality that must of necessity accompany this advice, and to give the doctor practical and specific aids, is the purpose of the rehabilitation and "Cardiac in Industry" programs being organized by many heart associations.

Value of Health Education

The health educational program of the heart association aims at supplying the community with accurate information to eliminate misconceptions and baseless fears, and to increase awareness of the need for regular and prompt medical attention. Health education of this constructive, confidence-provoking nature, has beeen found to produce a more co-operative and understanding patient. The enlightened patient is more appreciative of what the doctor and research scientist are trying to do for him, of the complex of knowledge from which the physician has to draw, and of the role the patient can play in helping the physician. In short, the patient is more willing to accept and to carry out the doctor's orders.

Many heart associations are assisting the doctor in the management of cardiac housewives through the development of the "Heart of the Home" Program. Classes, consultation services, and model kitchens are being utilized to help women with heart disease save time and energy in their housework. Physicians are also actively participating in the educational program of their local heart association. In fact, the success of the entire heart disease control program depends in the final analysis on the active leadership of the physician. The strengthening of the community heart program and services will increase their effectiveness for the doctor as well as the public.

Need for Professional Education

Professional education is also an important heart association objective. So tremendous are the demands on time and energy, that it is extremely difficult for the average physician to keep up with the steady flow of new knowledge in the cardiovascular area, as well as in the entire field of medication. Co-operating with medical associations in the community, the heart associations are developing a planned program of keeping general practitioners and specialists informed of the latest advances in diagnosis and treatment through postgraduate courses, lectures, symposia, conferences, demonstrations, films, slides, pamphlets and other instructive aids. The American Heart Association's two professional publications, *Circulation* and *Modern Concepts of Cardiovascular Diseases,* carry monthly summaries of cardiovascular developments of practical interest to the physician.

Local heart associations affiliated with the Amer-

ican Heart Association offer voting membership to practicing physicians, inviting their interested participation in helping to build the kind of program best adapted to the needs of their particular community. By taking his place as captain of the community team to combat heart disease, the physician is in a strategic position to assure that the development of the heart program will proceed along correct medical and scientific lines.

Because of the public confidence and the natural leadership he enjoys, the physician can exert immeasurable influence in winning support for the heart association's program of scientific research. In addition to his personal support of research progress, which is of direct benefit to the successful management of his patients, the physician can convince his patients, as well as influential leaders in the community, of the necessity for continuing and expanding basic and specialized research.

Where there is no local heart association, the most valuable service the physician can perform is to lend his experience, wisdom, knowledge to other interested groups and individuals in the community to assist in its formation.

It is the expressed policy of the American Heart Association, in guiding the establishment of local associations, to propose that the founding group first of all approach the medical profession to enlist its interest and support, before broadening the base of the organization. To assure sound medical direction, a judicious balance should be maintained between medical and lay members on the association's board of directors. Both groups contribute their special talents to the building of a sound organization with a well-conceived and carefully executed program. So long as the physician fulfills his responsibility for supporting and guiding such voluntary efforts, so long as he is sufficiently aware of the health needs of the public to work cooperatively and constructively within voluntary agencies, he is building a sound foundation for himself and for his profession.

Through his efforts and guidance, the public will better understand and more willingly receive the full benefits of modern medicine, and physicians and their co-workers will be in the best position to assure these benefits.

You are cordially invited to become a member of the **Michigan Heart Association.** Just clip the following coupon and return with your check indicating the type of membership-subscription which you desire:

MICHIGAN HEART ASSOCIATION
4421 Woodward Avenue
Detroit 1, Michigan
Application for Annual (Voting) Membership
1955

Annual (Voting) Membership
Includes one-year subscription to the American Heart QUARTERLY. January-December, 1955 $2.50 ———

Annual (Voting) Membership Subscription. Includes one-year subscription to the American Heart QUARTERLY and "Modern Concepts of Cardiovascular Disease." January-December 1955 $5.00 ———

Membership in the Michigan Heart Association includes membership in the American Heart Association and entitles admission to the scientific sessions of both organizations.

Name

Address

City Zone

(Please make check payable to the Michigan Heart Association.)

HARVARD UNIVERSITY PUBLIC HEALTH SCHOLARSHIPS

(Continued from Page 10)

4. *Social Workers* with a master's degree from an approved school of social work and acceptable experience in the field of medical or psychiatric social work

5. *Health Educators* with the following background: college degree, training either in health education or in the natural and social sciences; experience in general education or community health work

6. *College Graduates* who have concentrated in one of the *Natural Sciences* or in *Engineering* (environmental aspects).

A Catalogue of the School, Admission and Scholarship applications, and further information may be obtained by writing the Secretary, Harvard School of Public Health, 55 Shattuck Street, Boston 15, Massachusetts.

Scholarship applicants must return completed admission and scholarship applications to the Harvard School of Public Health by *March 1, 1955.* Scholarship awards will be announced May 1, 1955.

Albert D. Ruedemann, M.D.

Research — A Family Tradition

Returning to Michigan in 1947 after an absence of twenty-three years, Albert D. Ruedemann, M.D., became professor of ophthalmology at Wayne University College of Medicine and established and became director of the Kresge Eye Institute.

Dr. Ruedemann comes from a distinguished family of scientists. His father, Rudolph Ruedemann, holds a Ph.D. degree in geology and paleontology from the University of Jena. Soon after completing postgraduate work at Strasbourg he came to the United States, settling in the foothills of the Adirondacks. After his appointment as paleontologist for the State of New York and curator of Paleontology at the New York Museum, the family moved to Albany. Dr. Rudolph Ruedemann has to his credit many publications on the geology of northern New York state.



Dr. Rudolph Ruedemann had six sons and one daughter. Paul, a geologist, is employed by Standard Oil Company. On September 18, 1948, he was arrested by the Hungarian Reds and held prisoner in a dungeon until confessed to sabotage, which gave the Communists an excuse to confiscate the company's properties. Rudolph Ruedemann, Jr., M.D., is associate professor of dermatology and syphilology at Albany Medical College. Ehrhardt Ruedemann, M.D., is a practicing otolaryngologist in Pittsburg. Two other sons, not in scientific fields, are Ernest and Werner. His daughter, Francis, is Mrs. Daniel Hausman.

To distinguish Albert from his brothers, his friends in the Medical School of the University of Michigan began to call him "Ots," a nickname he has kept through the years. His Detroit contemporaries more frequently call him "Ruede." Graduating in medicine in 1921, he was appointed to the Department of Ophthalmology, University Hospital, Ann Arbor, where he remained for three years under Walter Parker, M.D., chief of the department. It was during his residency at the University Hospital that he met Nancy Lindstrom, supervisor of nurses in the Pediatrics Department. They were married in 1923.

Dr. and Mrs. Ruedemann have three children: Albert Ruedemann, Jr., M.D., who is associated in the practice of ophthalmology with his father; Nancy Lee (Mrs. Michael Furbush), and Paul. The youngest member of the Ruedemann clan is Albert D., III, his grandfather's newest interest.

Upon the completion of his residency, Dr. Ruedemann went to Cleveland to organize and become the chief of the Department of Ophthalmology at the Cleveland Clinic. Believing that he should give young men in his department broad training in ophthalmology, he organized and later became Chairman of Bunt's Institute for Graduate Instruction, which later expanded its program to include other fields of specialization.

Newspaper accounts of the Cleveland Clinic fire on May 15, 1929, tell of the horrors of the fire and explosion in which many lives were lost. They describe how Dr. Ruedemann, trapped in the Eye Clinic on the third floor, tenaciously clung to the window ledge until firemen helped him to escape. His strong muscles and courageous spirit helped him to escape from the holocaust.

In 1938, Dr. Ruedemann became secretary for instruction in Ophthalmology of the American Academy of Ophthalmology and Otolaryngology. He has served continuously in that capacity since that time and has collaborated with Dean M. Lierle, M.D., the secretary for instruction in Oto-

laryngology and Maxillofacial Surgery, in the development of the instruction courses into the most comprehensive extracurricular educational project of any of the medical specialty societies. At the time of the annual meeting in October, Dr. Ruedemann enjoys going from room to room to collect the tickets for the postgraduate courses of instruction for this gives him an added opportunity to greet his many friends. To him a medical convention is an ideal vacation, for it frees him from the demands of patients and yet allows him to be with people, and he is of a gregarious nature. It also gives him an opportunity to talk about his favorite vocation and avocation, medicine.

Dr. Ruedemann's interest in instruction and education is intense, and he takes delight in interesting others in medical research. Soon after arriving in Detroit he was given funds by the Kresge Foundation to begin the organization of the Kresge Eye Institute. By the summer of 1950 sufficient trained and experienced research men had become members of the staff to warrant the leasing of a building on the grounds of Detroit Memorial Hospital adjacent to the Wayne University College of Medicine and Detroit Receiving Hospital, where much of the research work of a clinical nature would be done. Here, with the permanent research staff and the aid of the practicing ophthalmologists who have become associated with the Institute, a farsighted program for investigation and teaching has been firmly established. Visiting ophthalmologists who have come to Detroit from all parts of the world to collaborate with staff members attest to the fact that the Kresge Eye Institute is already outstanding in its field.

As chairman of the Department of Ophthalmology of Wayne University College of Medicine, Dr. Ruedemann is chief of that department at Detroit Receiving Hospital. His department supplies eye residents to hospitals affiliated with the College of Medicine including Harper, Children's, and the U. S. Veterans Administration Hospital in Dearborn. Eye residents are also made available to Northville State Hospital, Mt. Sinai Hospital and North End Clinic as well as the municipally operated hospitals, Herman Kiefer and Maybury Sanitarium. Dr. Ruedemann is Chief of the Department of Ophthalmology, Otology, Rhinolaryngology, Bronchoscopy, Esophagoscopy, and Maxillofacial Surgery at Harper Hospital.

Dr. Ruedemann is a very popular speaker in his specialty and is widely sought by local, district and national society meetings. When lecturing his enthusiasm is contagious and he drives home his points with a rich vocabulary, pungent with adjectives and wit and masterful satire. He has contributed regularly to the eye literature by his frequent publications.

Dr. Ruedemann has been a trail blazer in the field of plastic eye implants, having conceived the idea for the first movable implant. His innovation was to fasten the ocular muscles to the implant, thus avoiding the fixed stare dreaded by patients who have had an eye enucleated. In 1946 he was awarded a gold medal by the American Medical Association for his exhibit on the "Full Eye Plastic Implant." This exhibit also won him a certfiicate of merit from the American Academy of Ophthalmology and Otolaryngology. In 1947 he was awarded a certificate of merit by the American Medical Association and a blue ribbon by the American Academy of Ophthalmology and Otolaryngology for his exhibit on "The Use of Radium in Ophthalmology." He was awarded a blue ribbon by the American Academy of Ophthalmology and Otolaryngology for his exhibit on "Lesions in the Region of the Optic Chiasm."

Throughout the years he has been active in working for the improvement of safety measures in industry, serving as chairman of the Joint Committee on Industrial Ophthalmology since 1947. He is chairman of the Professional Advisory Committee of the Michigan Committee of the National Society for the Prevention of Blindness.

Dr. Ruedemann is president of the American Society of Ophthalmologic and Otolaryngologic Allergy. He is a member of many professional and specialty organizations, including the American College of Surgeons, Detroit Surgical Association, American Academy of Ophthalmology and Otolaryngology, American Ophthalmological Society, The Association for Research in Ophthalmology, the Pan-American Association of Ophthalmology, and the Mexican Society of Ophthalmology. He is also a director of the Michigan Chapter of the National Multiple Sclerosis Society, and a Trustee for the Hansel Foundation—Education and Research in Allergy. He is a member of the Phi Chi medical fraternity, Sigma Xi, and Alpha Omega Alpha. His Detroit club affiliations are the Economics Club, Detroit Athletic Club, Detroit Boat Club and the Grosse Pointe Hunt Club.

WINDSOR S. DAVIES, M.D.

A Second Look at Medical Color Television

When the Michigan Clinical Institute convenes in Detroit for its 1955 meeting, attending members will view one of the most outstanding aids for medical teaching to be developed in recent years. This teaching aid is medical color television, a medium that promises to exercise a considerable influence on the methods of modern medical education.

Like most worthwhile developments, medical color television was the product both of an adventurous imagination and of an urgent need. It has achieved its present state of maturity, characterized by program production of near-professional stature, only by surviving an infancy of continuous experiment and innovation. Here again, the imagination and the need were instrumental in its growth.

The imagination was supplied by Smith, Kline & French Laboratories, a pharmaceutical firm that saw in color television an instrument of great potentialities for medical teaching. Acting on this conviction, SKF decided to bring the medium out of the television research laboratories and into medical use as soon as possible. The subsequent contract with the Columbia Broadcasting System was signed late in 1948. In June, 1949, at the annual meeting of the American Medical Association in Atlantic City, SKF produced and sponsored the first program of color television ever witnessed by the public. The program was an overwhelming success with 30,000 visits being paid to the telecasts during the five-day meeting.

An honest appraisal of this response would recognize the drawing power of color television's sheer novelty. But it would also be obliged to recognize that the majority of tele-viewing physicians envisioned the color medium as an answer to a long-standing problem of medical education, the problem of providing medical students with close-up views of operative procedures and clinical demonstrations without sacrificing accuracy or realism.

The distinctive difference between color television and all other methods of teaching lies in the uses of the color camera. Three such cameras are employed by the SKF Unit. Two are studio cameras, highly mobile and capable of great ease of movement through a widely diversified series of items. The third camera is like none in existence. Built for SKF in 1949 by the Research and Development Division of the Columbia Broadcasting System, it was not only the first color television camera, but the only mobile camera ever designed for the specific purpose of televising surgery. A movable camera head is mounted on one end of a 7-foot boom which, in turn, is balanced on top of a steel bar 6 feet in height, giving the camera the appearance of a huge letter "T".

Looking through the door of the TV operating room at the Detroit Receiving Hospital, a visiting physician would see the surgical camera suspended 3 to 4 feet over the operating table and immediately over the heads of the operating team. The team is in no way inconvenienced by the camera; in fact, it is aided in a small way by the extra lamps brought in to provide the light necessary for a television picture of high quality. The vantage point gained by the surgical camera in this position over the operating table affords every physician in the audience a view of the operation equalled only by that of the operating surgeon. If the incision is small or the surgery extremely delicate, even this distance is further diminished by use of a more powerful lens.

In the Grand Ballroom of the Sheraton-Cadillac, receiving point for the colorcasts, the view seen by the camera will be greatly magnified on a giant video screen measuring 4.5 by 6 feet. This screen was specially built for the SKF Television Unit by CBS and enables more than 500 people to watch the colorcasts with ease and comfort. Because of the magnification brought to the televised picture by this receiver, a procedure actually contained in an operative area of less than one square foot appears to the audience in a field as large as 16 or 18 square feet. Should a heart operation be televised at the Clinical meeting, the heart as viewed on the screen would be more than three feet high and four feet wide. The challenging possibilities for medical instruction implicit in this picture are obvious.

Clinical demonstrations present a challenge of a different sort—one to which participants have responded with some imagination. It is no easy chore to take subject matter ordinarily conveyed

(Continued on Page 121)

1955 MCI Technical Exhibits

Abbott Laboratories **Booth No. 61**
North Chicago, Illinois

ERYTHROCIN® Filmtab (Erythromycin, Abbott) will be displayed by Abbott Laboratories. ERYTHROCIN is Abbott's wide range antibiotic which is effective orally against a variety of organisms, especially against Gram-positive ones. Indicated for treatment of infections such as pharyngitis, tonsillitis, scarlet fever, erysipelas, pneumococcic pneumonia and others produced by susceptible organisms. The Abbott product is a small tablet specially coated to mask the bitter taste of the drug and effect higher blood concentrations. ERYTHROCIN is effective against some strains of pathogenic organisms not responsive to penicillin or to other antibiotics.

A. S. Aloe Company **Booth No. 62**
St. Louis, Mo.

Visit booth No. 62 where the Aloe representative will show you a cross section of the complete line of physicians' equipment and supplies carried by the A. S. Aloe Company. Highlighted will be New Model Steeline—tomorrow's treatment room furniture today—featuring the body contour table top, magnetic door catches, and advanced design all in new decorators' colors.

Ames Company, Inc. **Booth No. 33**
Elkhart, Indiana

CLINITEST, for urine-sugar analysis, is standardized. This assures uniformly reliable results whenever and wherever a test is performed—office, ward, clinic, or patient's home. Standardization not only curtails error, but saves personnel's time by elimination of preparing and mixing of reagents.

ACETEST for acetonuria, BUMINTEST for albuminuria, HEMATEST for occult blood, and ICTOTEST for bilirubin will also be on display.

Ayerst Laboratories **Booth Nos. 7, 8**
New York, N. Y.

Ayerst Laboratories will feature "Thiosulfil" together with its complete line of "Premarin" products. Physicians attending the Michigan Clinical Institute are very cordially invited to visit the Ayerst booth where literature and information will be available on these and many other Ayerst specialties.

Baker Laboratories, Inc. **Booth No. 23**
Cleveland, Ohio

You are invited to visit our booth where Baker's Modified Milk and Varamel, two successful products for infant feeding, are on display.

Baker representatives will be glad to discuss the practical application of Grade A milk, adjusted fat composition, zero curn tension, synthetic vitamins and other important factors which help to eliminate many of the problems in modern infant feeding.

Bilhuber-Knoll Corporation **Booth No. 54**
Orange, New Jersey

Oral METRAZOL can be of advantage to you for the aged patient where fatigue and mental confusion are present. Beneficial changes in behavior, alertness, appetite and sleep pattern have been reported. Information on METRAZOL, as well as on DILAUDID, a most potent and smooth cough sedative, TENSODIN and other prescription specialties will be available and your discussion is invited.

The Borden Company **Booth No. 50**
New York, N. Y.

There's no better place to talk over the latest information on infant feeding than the Borden Prescription Products booth. On display is the complete line of Borden's infant formula products for every feeding purpose or preference. You can feed almost any baby BREMIL, MULL-SOY, DRYCO, or BIOLAC.

Carroll Dunham Smith Pharmacal Company
New Brunswick, N. J. **Booth No. 45**

Our exhibit will feature Lipotriad (Smith), a new unusually potent lipotropic and oxytropic product, in both liquid and capsule form for the treatment of many conditions associated with faulty fat metabolism. Our representatives will welcome the opportunity of discussing this product in senile macular degeneration, diabetic retinopathy and other ophthalmic conditions, as well as other new prescription specialties, including Hemo-Vitol liquid, Quadra-Sed liquid and Calferbee Lactate tablets.

Central Pharmacal Company **Booth No. 56**
Seymour, Indiana

The Central exhibit will feature the Neocylate Family of potentiated salicylate combinations. This group includes Neocylate for the treatment of rheumatoid arthritis, rheumatic fever, etc., Neocylate w/Colchicine for specific use in gout and gouty arthritis. Neocyten for abolishing the pain-spasm cycle in neuromuscular disorders. Neocylate w/Codeine for intensified analgesic effect in pain and insomnia due to pain, and now —NEOCYLATE w/CORTISONE permitting full-scale antirheumatic action with lower cortisone dosage. Descriptive literature on these specialties will be available to members and guests of the Michigan Clinical Institute.

Chicago Reference Book Company **Booth No. 58**
Chicago, Illinois

Featured will be "Webster's New International Dictionary Section Edition, with Reference History."

Ciba Pharmaceutical Products, Inc. **Booth No. 41**
Summit, N. J.

Coca-Cola Company **Booth Nos. 65, 66**
Atlanta, Georgia

Ice-cold Coca-Cola served through the courtesy and co-operation of Detroit Coca-Cola Bottling Company and The Coca-Cola Company.

Cottrell-Clarke, Inc. **Booth No. 14**
Detroit, Michigan

Davis & Geck, Inc. **Booth No. 63**
Danbury, Conn.

Davis & Geck, Inc. will display their comprehensive line of sutures featuring Atraumatic® needles, Surgaloy® stainless steel sutures and Surgaloy® stainless steel mesh, Melmac® resin plaster of Paris Bandage for stronger, thinner, lighter casts that are water and urine resistant, and Aureomycin* Chlortetracycline

Hydrochloride Dressing and Packing and Aureosurgic® Surgical Powder Soluble for local antibiotic therapy.
*Trade-mark

Desitin Chemical Company **Booth No. 28**
Providence, R. I.
This exhibition features Desitin ointment, external cod liver oil therapy, and its adjuvant Desitin powder. The ointment combines crude high potency Norwegian cod liver oil, zinc oxide and talcum in a modified lanolin petrolatum base. It is indicated in post-operative dressings, slow healing wounds, burns of all degrees, etc.

Doho Chemical Corporation **Booth No. 10**
New York, N. Y.
Doho Chemical Corporation exhibits AURALGAN, the time honored decongestant and pain reliever in Otitis Media, also for removal of Cerumen; RHINALGAN, the equally safe nasal decongestant for infants and the aged; NEW OTOSMOSAN, the fungicidal and bactericidal ear medication. Mallon Chemical Corporation, a subsidiary, features RECTALGAN, the liquid topical anesthesia for relief of pain and discomfiture in hemorrhoids, pruritus and perineal suturing.

Paul B. Elder Company **Booth No. 51**
Bryan, Ohio
We cordially invite physicians attending the Michigan Clinical Institute to visit our booth. We are pleased to present our new drug OXSORALEN® for treatment of idiopathic vitiligo. OXSORALEN® which has just been released for sale after five years of research represents a new advance in the treatment of pigmentary diseases.

Encyclopedia Americana **Booth No. 38**
Grand Rapids, Michigan

Geigy Pharmaceuticals **Booth No. 59**
New York, N. Y.
Geigy will feature Council-accepted BUTAZOLIDIN, oral nonhormonal antiarthritic, and TROMEXAN, oral anticoagulent of rapid action, little cumulation and diminished risk of sustained or severe hemorrhage. Also on display will be EURAX Cream and Lotion, antipruritic and scabicide, and STEROSAN Cream and Ointment, bacteriostatic and fungistatic for treatment of pyogenic and mycotic skin disorders.

Gerber Products Company **Booth No. 30**
Fremont, Michigan
When milk is contraindicated as the basic food for infants, Gerber's "Meat Base Formula" can provide a nutritionally adequate replacement. It is well accepted and tolerated by infants of all ages. Your Gerber detailman invites you to evaluate "Meat Base Formula" and the complete line of supplementary baby foods.

Hack Shoe Company **Booth No. 3**
Detroit, Michigan
The sensational new RIPPLE SOLE shoes will be on display as well as the more conventional supportive shoes for men, women and children which, combined with careful fitting, have made the Hack Shoe Co. a medical office byword. Also on display, the more specialized types of orthopaedic footwear fitted on PRESCRIPTION ONLY.

J. F. Hartz Company **Booth Nos. 42, 43**
Ferndale, Michigan
Cardiovascular, thoracic, eye, and general surgery stainless steel instruments; the latest in diagnostic and treatment equipment; as well as a line of professional pharmaceuticals, will be on display in the booth of The J. F. Hartz Company at the Michigan Clinical Institute exhibit of 1955.

Holland-Rantos, Inc. **Booth No. 39**
New York, N. Y.
Physicians interested in Medical Contraception are cordially invited to discuss with Holland-Rantos convention representatives latest information on laboratory and clinical data concerning the efficacy of KOROMEX products. Featured also will be NYLMERATE JELLY and NYLMERATE ANTISEPTIC SOLUTION CONCENTRATE which—being trichomonacidal, fungicidal and bactericidal—afford an effective therapy in vaginal trichomoniasis, moniliasis and mixed infections.

G. A. Ingram Company **Booth Nos. 67, 68**
Detroit, Michigan
On display will be the newer Diagnostic Instruments, including new office procedure Laboratory Equipment and, in addition, there will be a fully accredited FCC-accepted Ultrasonic Unit, and a display of surgical instruments.

Instant Sanka Coffee **Booth No. 5**
White Plains, N. Y.
General foods is pleased to be back with you, again presenting Instant Sanka—100-0/0 pure coffee, with 97-0/0 of the caffein removed. Do stop by for your morning cup—and come back for "seconds" any time. We shall look forward to seeing you—one and all. Be sure to register for a professional sample and product booklet.

A. Kuhlman & Company **Booth No. 73**
Detroit, Michigan
The A. Kuhlman & Co. invites you to see their display of the completely new line of Hamilton Medical Furniture. We will also be showing the latest in diagnostic and surgical instruments.

Lea & Febiger **Booth No. 70**
Philadelphia, Pa.
Be sure to see these new books and new editions: Twiss and Oppenheim—Practical Management of Disorders of the Liver, Pancreas and Biliary Tract; Bailey—Surgery of the Heart; Merritt—A Textbook of Neurology; Ormsby and Montgomery—Diseases of the Skin; Pullen—Pulmonary Diseases; Ziskind—Psychophysiologic Medicine; Herbut—Pathology; Jonas—Babcock's Principles and Practice of Surgery; Lewin—The Back and Its Disk Syndromes; Fishberg—Hypertension; Gray's Anatomy; and many others.

Lederle Laboratories **Booth No. 26**
Pearl River, N. Y.
You are cordially invited to visit our exhibit in booth No. 26 where you will find our representatives prepared to give you the latest information on LEDERLE products.

Liebel-Flarsheim Company **Booth No. 46**
Cincinnati, Ohio
The Liebel-Flarsheim Company cordially invites you to visit Booth 46, in which their latest electromedical and electrosurgical apparatus will be available for examination and demonstration. Capable representatives will be on hand at all times and we sincerely hope you will stop by so that we may become acquainted.

Eli Lilly & Company **Booth Nos. 21, 22**
Indianapolis, Indiana

You are cordially invited to visit the Lilly exhibit located in spaces 21 and 22. The display will contain information on recent therapeutic developments. Lilly sales people will be in attendance. They welcome your questions about Lilly products.

P. Lorillard Company, Inc. **Booth No. 4**
New York, N. Y.

P. Lorillard Company, manufacturers of OLD GOLD Cigarettes as well as BRIGGS Pipe Mixture and other famous tobacco products will exhibit and demonstrate their KENT Cigarettes with the exclusive Micronite Filter.

M & R Laboratories, Inc. **Booth No. 53**
Columbus, Ohio

Your SIMILAC representatives are happy to take part in this meeting. They are pleased to have the opportunity to discuss with you the role of SIMILAC in infant feeding. They have for you the latest Pediatric Research Conference Reports. Also available are current reprints of pediatric nutritional interest.

McNamara Medical Equipment Company **Booth No. 32**
Detroit, Michigan

McNamara Medical Equipment Company will exhibit several pieces of Physical Medicine Equipment including Paust Stimulators, Hydrocollator, Restorator. This company carries a complete line of Physical Medicine and Rehabilitation equipment and specialize in this field. You are cordially invited to visit their exhibit and discuss your Physical Medicine problems.

Maico Detroit Company **Booth No. 69**
Detroit, Michigan

Ninety per cent of all the precision hearing test instruments used by hospitals, schools and physicians in the United States are Maico. The new Maico Transistor hearing aid weighs only one ounce complete and is designed to be worn in a lady's hair. It is no longer necessary to have cords or wires on the neck or body.

Mead Johnson & Company **Booth Nos. 71, 72**
Evansville, Indiana

Liquid Lactum and Powdered Lactum, infant formula products with balanced caloric distribution, will be featured in the Mead booth. Also on exhibit will be Poly-Vi-Sol and Tri-Vi-Sol, with their new "Safti-Dropper"; Mulcin, the good tasting multi-vitamin liquid; and Sustagen, the complete food for tube or oral feeding.

Medco Products Company **Booth No. 19**
Tulsa, Oklahoma

The MEDCOLATOR Stimulator, for the stimulation of innervated muscle or muscle groups ancillary to treatment by massage is a low volt generator that will generate plenty of your interest. Electrical muscle stimulation is a valuable form of rehabilitation therapy. Be sure to visit our booth for a personal demonstration.

Medical Aids, Incorporated **Booth No. 27**
Chicago, Illinois

Medical Aids, Incorporated will feature a complete line of pressure bandages, including the well-known Dalzoflex and Primer Combination, recommended in the treatment of Varicose Ulcers, Phlebitis, etc. The Nulast elastic crepe bandage, constructed of Viscolax Rubber Threads, Dalmas Elastic Strapping, which is Waterproof, oil and grease resistant and Dalmaplast Plastic Adhesive Strapping.

Medical Protective Company **Booth No. 34**
Fort Wayne, Indiana

Exclusive application to Professional Liability Insurance—distinctive of The Medical Protective Company —assures superior defense and proven protection for the doctor under which policyholders suffer no involuntary loss from their own pockets in the payment of damages. 99.94 per cent of all our policyholders have been completely covered under $2500.

Meyer Chemical Company, Inc. **Booth No. 47**
St. Clair Shores, Michigan

Biochemical history is marking another milestone in the discovery of RET-100, a stimulant of gamma globulin formation, bacteriophages and virus destroying phages in the human bloodstream. RET-100 offers the doctor an agent to combat virus pneumonia, infectious hepatitis, influenza and other virus diseases.

Michigan Bell Telephone Company **Booth No. 40**
Detroit, Michigan

This exhibit will feature several of the new and popular services including the Automatic Answering Machine, the Toll Credit Card Plan as the major theme. Also our new line of colored telephones and some miscellaneous services.

Miles Reproducer Company, Inc. **Booth No. 1**
New York, N. Y.

CASE HISTORIES, lectures and dictation may now be recorded at a 60-foot radius with WALKIE-RECORDALL—an 8-pound, self-powered battery recorder—transcriber. It operates in or out of the closed brief case, indoors or outdoors, while stationary, walking, riding or flying. The Voice-Activated "Self-start-Stop" feature automatically starts and stops the recording from microphone or telephone, thus eliminating supervision and the recording of silent periods. While facilities for transcribing are available, transcription may be eliminated due to ease of handling indentifiable, compact, indexed recordings without the delay of rewinding. Up to 8 hours of permanent recordings may be accumulated at intervals on an endless belt costing 25 cents.

Miller Surgical Company **Booth No. 57**
Chicago, Illinois

MILLER SURGICAL COMPANY will show the Miller Electro-scalpel. This unit cuts, desiccates, fulgurates, coagulates and is used for most delicate work up to light major surgery. Accessories such as Snares, Smoke Ejectros, etc. also available. A complete line of Diagnostic Equipment consisting of Illuminated Otoscopes, Ophthalmoscopes, Eyespud with Magnet, Transillumination Lamps, Headlights, Vaginal Speculum with Smoke Ejector and Gorsch Operating Scopes and Stainless Steel Proctoscopes all sizes with magnification. Also Suction Tubes and Grasping Forceps.

National Drug Company **Booth No. 55**
Philadelphia 44, Pa.

You are cordially invited to visit the booth of The National Drug Company. The featured product will be PARENZYME INTRAMUSCULAR Trypsin. PARENZYME INTRAMUSCULAR Trypsin is a new, effective weapon against acute local inflammation. It restores local circulation with dramatic benefits in Phlebitis (thrombophlebitis and phlebothrombosis); Ocular Inflammation (iritis, iridocyclitis and chorioretinitis); Traumatic Wounds and Varicose and Diabetic Leg Ulcers. PARENZYME INTRAMUSCULAR Trypsin is based on an entirely new concept of *biological continuity* . . . in terms of clinical enzymology. In very small doses, it initiates physiologic mechanisms —and dramatically restores circulation, expedites repair of tissue and prevents tissue necrosis.

Wm. R. Niedelson Company **Booth No. 64**
Detroit, Michigan

We are introducing the PROFEXRAY ROCKET No. 100—the newest advance in office radiography. The JONES AIR-BASAL—the metabolism tester that eliminates oxygen tanks will be demonstrated, as will the CARDIOTRON, a completely new model direct writing cardiograph with rectilinear response. Your visit will be welcome.

Ortho Pharmaceutical Corporation **Booth No. 9**
Raritan, N. J.

ORTHO cordially invites you to booth 9 where the well-known line of obstetrical and gynecological pharmaceuticals will be on display. Particular emphasis will be placed on Ortho preparations for conception control. Ortho representatives will be on hand to offer pertinent information on their products.

Parke, Davis & Company **Booth No. 11**
Detroit, Michigan

Medical service members of our staff will be in attendance at our exhibit for consultation and discussion of various products. Important specialties, such as Penicillin S-R, Benadryl, Ambodryl, Dilantin Suspension, Vitamins, Oxycel, Milontin, Amphedase, Thrombin Topical, etc., will be featured. You are cordially invited to visit our exhibit.

Pet Milk Company **Booth No. 36**
St. Louis, Mo.

We will be pleased to have you stop and discuss the variety of time-saving material available to busy physicians. Our representatives will be on hand to discuss the merits of "Pet" Evaporated Milk for infant feeding and INSTANT "Pet" Nonfat Dry Milk for special diets. A miniature "Pet" Evaporated Milk can will be given to all visitors.

Pfizer Laboratories **Booth No. 24**
Brooklyn, N. Y.

You are invited to visit the Pfizer booth. TERRAMYCIN INTRAMUSCULAR, CORTRIL, BONAMINE and TYZINE will be the highlights this year of a star-studded cast including the complete line of TESTED AND PROVED Terramycin dosage forms and the Steraject line of injectable Penicillin and Combiotic preparations.

Randolph Surgical Supply Company **Booth Nos. 12, 13**
Detroit, Michigan

Randolph Surgical will display many new items in surgical instruments—developed with the assistance of our own Michigan surgeons. Also, the latest in new equipment. Experienced personnel to serve our many friends.

R. J. Reynolds Tobacco Company **Booth No. 31**
Winston-Salem, North Carolina

Welcome to the R. J. Reynolds Tobacco Company Exhibit! You are cordially invited to receive a cigarette case (monogrammed with your initials) containing your choice of CAMEL, CAVALIER King Size, or WINSTON, the distinctive new king size, filter cigarette.

A. H. Robins Company, Inc. **Booth No. 60**
Richmond, Virginia

Physicians attending the meeting of the Michigan Clinical Institute are extended a cordial invitation to visit the exhibit of the products of the A. H. Robins Company. Experienced medical representatives will be in attendance to welcome you and answer inquiries relative to any of Robins prescription specialties.

Sanborn Company **Booth No. 35**
Cambridge, Mass.

Featured at the Sanborn Company, Booth No. 35 will be a continuous demonstration of the new Sanborn Viso-Scope, a 5-inch cathode ray oscilloscope, specially designed for monitoring or visualizing ECG's and other biophysical phenomena which may be recorded via Sanborn recording systems.

Also on display will be the Viso-Cardiette and Metabulator, together with full data on Sanborn 1, 2, and 4-channel direct-writing recording systems; the Twin-Beam, photographic recorder for simultaneous phonocardiography; the Electromanometer, for physiologic pressure measurements; and other Sanborn equipment for cardiovascular diagnosis and research.

Sandoz Pharmaceuticals **Booth No. 29**
Hanover, N. J.

W. B. Saunders Company **Booth No. 2**
Philadelphia, Pa.

Among the newest of the new on display you'll see: Allen, Barker and Hines, "Peripheral Vascular Diseases"; "Current Therapy 1955"; Alexander, "Drug Therapy Reactions"; Nelson, "Textbook of Pediatrics"; and Flint, "Emergencies," besides the complete Clinical line of Saunders titles.

Schering Corporation **Booth No. 20**
Bloomfield, N. J.

Members of the Michigan Clinical Institute and their guests are cordially invited to visit the Schering exhibit where new therapeutic developments will be featured. Schering representatives will be present to welcome you and to discuss with you these products of our manufacture.

G. D. Searle & Company **Booth No. 74**
Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be Vallestril, the new synthetic estrogen with extremely low incidence of side reactions; Banthine, and Pro-Banthine, the standards in anticholinergie therapy; and Dramamine, for the prevention and treatment of motion sickness and other nauseas.

Sharp & Dohme, Inc. **Booth No. 6**
Philadelphia, Pa.

Smith, Kline & French Laboratories **Booth No. 17**
Philadelphia, Pa.

The S.K.F. booth will feature the latest clinical information about the remarkable new drug—THORAZINE*— and its many and varied uses. These uses include potent anti-emetic action, potentiation of other drugs, and its unique and dramatic applications in the field of mental and emotional problems.

*'THORAZINE'—Trademark, S.K.F.

E. R. Squibb & Sons **Booth No. 44**
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The Stuart Company **Booth No. 48**
Pasadena, Calif.

Swift & Company **Booth No. 16**
Chicago, Illinois

THE ORIGINAL all-meat baby foods, Swift's Meats for Babies and Juniors will be featured at the Swift exhibit. You are cordially invited to discuss the use of these high protein, body-building foods in the infant diet with the Swift representatives. Literature and information on clinical research available. Also available is information about *new* Swift's Egg Yolks for Babies. This product offers a convenient and economical way for mothers to give their babies all the nutrients supplied by egg yolks.

Testagar & Company, Inc. **Booth No. 15**
Detroit, Michigan

The professional service representatives of Testagar & Co., Inc. will welcome all physicians to discuss the newest skeletal muscle relaxant, MYOMEPHETANE. Other new product developments will be on display. Samples and literature will be available.

The Upjohn Company **Booth No. 37**
Kalamazoo, Michigan

Members of the medical profession are invited to visit the Upjohn booth where members of The Upjohn Company professional detail staff are prepared to discuss subjects of mutual interest.

U. S. Vitamin Corporation **Booth No. 49**
New York, N. Y.

Exhibit features PANTHODERM CREAM, the new and strikingly effective anti-pruritic, healing ointment. Dermatoses, long-resistant skin lesions, topical ulcers and slow healing wounds show rapid clinical improvement; pain, itching and irritation abate rapidly. Professional samples and literature will also be distributed by our sales representatives on our complete line of nutritional specialties.

Varick Pharmacal Company **Booth No. 18**
New York, N. Y.

E. FOUGERA & CO., INC. AND DIVISION, VARICK PHARMACAL CO. cordially invite physicians to discuss with Professional Service Representatives new preparations of importance to their every day practice. Descriptive literature and samples of all products will be available.

Winthrop-Stearns, Inc. **Booth No. 25**
New York, N. Y.

WINTHROP-STEARNS INC., New York, extends a cordial invitation to visit booth No. 25. Featured will be: THEOMINAL R.S. (Theominal with Rauwolfia serpentina), an alliance of the classic and contemporary in antihypertensive compounds. Theominal R.S. combines the vasodilator and myocardial stimulant actions of theobromine and Luminal with moderate central hypotensive effect of Rauwolfia serpentina. Gentle sedation calms the patient and a feeling of "relaxed well being" is established. Headache and vertigo disappear as the blood pressure and pulse rate are reduced gradually.

Woodward Medical Personnel Bureau **Booth No. 52**
Chicago, Illinois

In Booth 52, Ann Woodward offers the facilities of the Woodward Medical Personnel Bureau, an organization now in its 58th year, serving as counselors in medical personnel problems to medical schools, group clinics, physicians in private practice, pharmaceutical, insurance and industrial companies, hospitals and institutions and public health and welfare organizations. Recommendations can be made of Diplomates of the American Boards, physicians trained in the specialties, others seeking assistantships and further training, general practitioners and industrial physicians, administrators, public health specialists, executive, supervising and industrial nurses, medical and x-ray technologists, therapists, scientists, medical librarians, social workers and other professional and ancilliary personnel. Professional personnel—professionally selected. A service international in scope.

SURGICAL TREATMENT OF THYROID DISEASES

(Continued from Page 79)

permanent in 0.7 per cent. Again, the incidence is highest in the recurrent cases. A third of the patients with tetany had had previous thyroid operations. In many instances the tetany is so fleeting that it will pass undetected unless we question all postoperative thyroid patients as to whether or not they have numbness or tingling in their hands or feet. The treatment is calcium gluconate given intravenosuly followed by large doses of calcium lactate and vitamin D by mouth.

Recurrence.—Of the last 1800 patients whose course has been followed for a sufficient length of time, 33 developed a recurrence of their hyperthyroidism following subtotal thyroidectomy. This is an incidence of less than 2 per cent. All of these patients had primary hyperthyroidism. Adenomatous goiter with secondary hyperthyroidism does not recur following adequate subtotal thyroidectomy. Of these thirty-three patients, twelve, or 36 per cent, were operated on again and eighteen are being managed satisfactorily on Lugol's solution. One has been treated with x-rays, one with radioactive iodine and one by the antithyroid agents. All of these patients are well at the present time.

Conclusion

In summary, then, until more experience is gained with the use of radioactive iodine, we believe that a combination of the antithyroid agents and subtotal thyroidectomy is the treatment of choice for patients with hyperthyroidism. It is associated with a low mortality rate, a low morbidity rate, and a cure rate of 98 per cent.

In the treatment of malignancies in childhood, irradiation is the treatment of choice in blood dyscrasias and lymphoblastomas.

* * *

Radiation therapy has a firm scientific foundation with indications and contraindications. It must be administered by qualified specialists so as to achieve maximum improvement without effecting changes, local or general, detrimental to the patient.

* * *

The problem of the potential seriousness of minute malignant lesions can be solved only by aggressive treatment. More attention must be paid to seemingly insignificant pimples and bumps.

Dramamine's® Effect in Vertigo

Dramamine has become accepted in the control of a variety of clinical conditions characterized by vertigo and is recognized as a standard for the management of motion sickness.

Vertigo, according to Swartout, is primarily due* to a disturbance of those organs of the body that are responsible for body balance. When the posture of the head is changed, the gelatinous substance in the semi-circular canals begins to flow. This flow initiates neural impulses which are transmitted to the vestibular nuclei. From this point impulses are sent to different parts of the body to cause the symptom complex of vertigo.

Some impulses reach the eye muscles and cause nystagmus; some reach the cerebellum and skeletal muscles and righting of the head results; others activate the emetic center to result in nausea, while still others reach the cerebrum making the person aware of his disturbed equilibrium. *Vertigo may be caused by a disease or abnormal stimuli of any of these tissues involved in the transmission of the vertigo impulse, including the cerebellum and the end organs.*

A possible explanation of Dramamine's action is that it depresses the overstimulated labyrinthine structure of the inner ear. Depression, therefore, takes place at the point at which these impulses, causing vertigo, nausea and similar disturbances, originate. Some investigators have suggested that Dramamine may have an additional sedative effect on the central nervous system.

Repeated clinical studies have established Dramamine as valuable in the control of the symptoms of Ménière's syndrome, the nausea and vomiting of pregnancy, radiation sickness, hypertension vertigo, the vertigo of fenestration procedures, labyrinthitis and vestibular dysfunction associated with antibiotic therapy, as well as in motion sickness.

Any of these conditions in which Dramamine is effective may be classed as "disease or abnormal stimuli"* of the tissues including the end organs (gastrointestinal tract, eyes) and their nerve pathways to the labyrinth.

Dramamine (brand of dimenhydrinate) is supplied in tablets of 50 mg. and liquid (12.5 mg. in each 4 cc.). It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.



The site of Dramamine's action is probably in the labyrinthine structure.

*Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

Say you saw it in the Journal of the Michigan State Medical Society

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

MULTIPLE SCREENING ACTIVITY IN MICHIGAN

Chronic disease is considered to be one of the major problems affecting our adult population today. Several procedures have been suggested to study this problem. One of these procedures which has received the most attention is that known as multiple screening or multiphasic screening.

Essentially, multiple screening is the administration of several standard tests at one time for the detection of chronic ailments in their incipient stages. Persons with abnormal results are referred to the family physician for examination, diagnosis and treatment, if necessary.

In brief, persons examined in a multiple screening project are checked for abnormalities of the lung, cardiac silhouette, blood pressure and weight. In addition, they are examined for abnormalities of the blood sugar reflecting possible diabetes, for possible anemia and for positive or negative reaction to the serologic test for syphilis.

Persons participating in a multiple screening study submit the name of their private physician to whom results are sent. All screenees are informed that the screening procedure does not constitute a complete physical examination; that negative results do not mean "a clean bill of health"; and that they should contact their private physician for evaluation and possible diagnosis.

When the study of multiple screening as a testing device in the field of chronic disease was undertaken by the Michigan Department of Health, it was proposed to examine approximately 10,000 persons. It was also anticipated that information would be gained as to the incidence of certain chronic diseases. Information would also be gained as to whether this device succeeded in getting patients in to see their family doctor in the early stage of disease.

Multiple screening studies have been conducted in Munising, Otsego and Alpena. To date, 2,377 persons have been examined. Follow-up information has been received on approximately 963. Of the group examined, there were about 51 per cent with one or more abnormal findings. In the group with abnormal findings, 360 or 73 per cent have reported to their physician for evaluation of their abnormal findings. In the two studies, follow-up information collected to date shows that 65 persons (18 per cent) have been placed under treatment as a direct result of diagnosis made by the physician following a multiple screening clinic. Follow-up information supplied by practicing physicians has indicated confirming diagnoses as given below:

Anemia—type not specified	13
Cardiac disease—type not specified	3
Diabetes mellitus	4
Hypertension and obesity	35
Kidney disease—type not specified	5
Pulmonary tuberculosis	1
Syphilis	3

A fourth multiple screening project is now being planned with employes of the Michigan Department of Health in Lansing. The County Medical Society has approved the proposed plan and is co-operating in its execution.

At this stage in our proposed study on multiple screening, several observations can be made. First, multiple screening clinics have resulted in a positive diagnosis confirming reported abnormalities in approximately 18 per cent of the total number of persons screened. Second, follow-up information indicates that seven different conditions are being detected by the testing device. Third, information gained as a result of these procedures can be measured in direct proportion to the interest of the group being screened and the co-operation of the physicians treating the individual. Additional multiple screening projects are now being planned.

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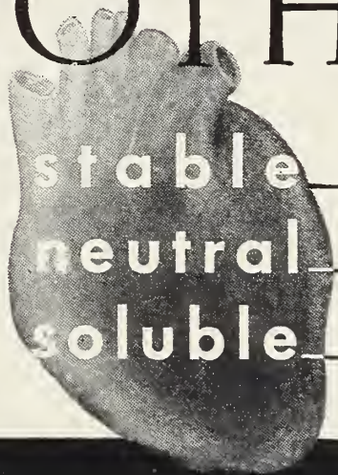
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of Theophylline
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NEOTHYLLINE

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stable — no precipitation observed when 5% solution submitted to action of gastric juices.

neutral — solutions of Neothylline in distilled water are strictly neutral.

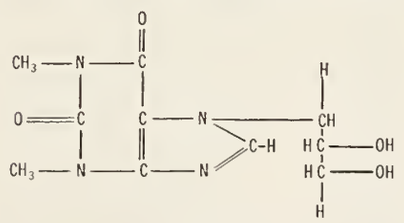
soluble — 16.5 grams in 100 c.c. water at 21° C.

in cardiovascular dilation, Neothylline is effective as a diuretic and myocardial stimulant in the management of edema secondary to congestive heart failure. Most noted is elimination of pain and normal oxygenation of the cardiac muscle.

Neothylline is also indicated in the treatment of bronchial asthma, paroxysmal cardiac dyspnea and Cheyne Stokes respiration.

Neothylline is better tolerated orally in larger doses than most theophylline derivatives (such as aminophylline) which produce gastric irritation. In contrast to the latter it can be given orally in sufficiently large doses to produce the characteristic bronchodilator and respiratory actions of theophylline compounds, as well as the well-known vasodilator (diuretic) and myocardial stimulant effect of smaller doses.

CHEMICAL COMPOSITION:
Dihydroxypropyl Theophylline



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Tablets 0.2 Gm. (3 grains)
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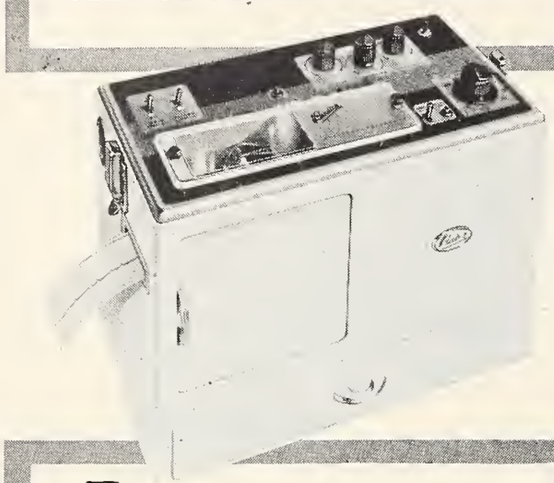
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Communications

J. Earl McIntyre, M.D.
State Board of Registration in Medicine
Lansing, Michigan

Dear Dr. McIntyre:

Subsequent to my letter of August 23, 1954, you have asked me to clarify what was meant by "degree from a state university or a legally chartered school of medicine." In your letter of inquiry of August 17 you asked whether "the osteopath in this instance has the right to use the 'M.D.' after his name if he has never been awarded that degree from an accredited medical school."

By a state university or a legally chartered school of medicine I meant a school which is accredited by your board. So, my conclusion is that an osteopath would not have the right to use the letters "M.D." after his name if he has not been awarded that degree from a medical school accredited and approved by your board.

Yours very truly,
FRANK G. MILLARD
Attorney General
By
ARTHUR T. IVERSON
Deputy Attorney General

Lansing, Michigan
September 21, 1954

To the President, Secretary, and Editor,
Component County Medical Societies of Michigan

Dear Doctor:

Within recent months a public health experiment has been introduced in Michigan, known as the multi-phasic screening program. Trials have been held at industrial plants in several cities, and the program has been described in THE JOURNAL of MSMS November, 1953 (page 1234); January, 1954 (page 94); April, 1954 (page 440).

The State Health Commissioner also has kept The Council and its Executive Committee advised of the project.

The program is now considered to be at the end of the trial stage and MSMS has reached certain conclusions with regard to multi-phasic screening. Briefly, The Council of MSMS is very doubtful of the program because it has a number of undesirable features similar to those inherent in any plan which places a government agency between the physician and his patient, or takes the practice of medicine out of the doctor's private office.

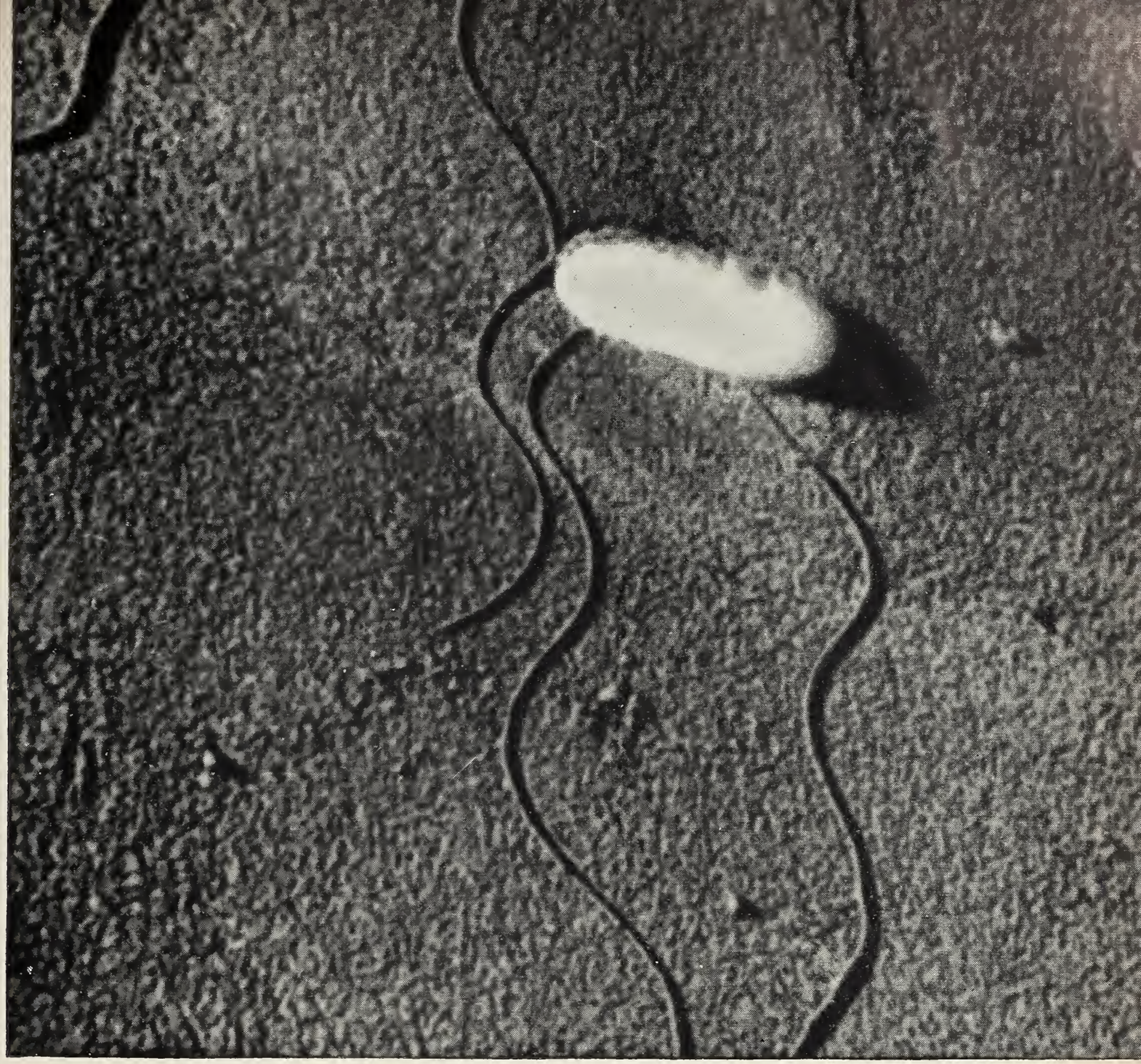
This doubt is based upon the belief that the multi-phasic screening program could very possibly affect the future health of the people of Michigan adversely by:

(1) Establishing the questionable concept that the discovery and diagnosis of all disease is a public health responsibility, placing the family physician in the role of a therapist who merely treats patients upon recommendation of a public agency.

(2) Discouraging the regular, thorough physical examination in the doctor's office by promoting a false idea that a hasty screening program at infrequent intervals is a proper substitute.

As you know, MSMS has always placed emphasis on the importance of the periodic health appraisal in the doctor's office for every member of the family. Such a private, voluntary program, given impetus by the medical profession itself, is much more in keeping with American principles of medical practice.

(Continued on Page 106)



ELECTRON PHOTOMICROGRAPH

Salmonella paratyphi B 32,000 X

Salmonella paratyphi B (Salmonella schottmuelleri) is a

Gram-negative organism which causes

food poisoning • chronic enteritis • septicemia.

It is another of the more than 30 organisms susceptible to

PANMYCIN*

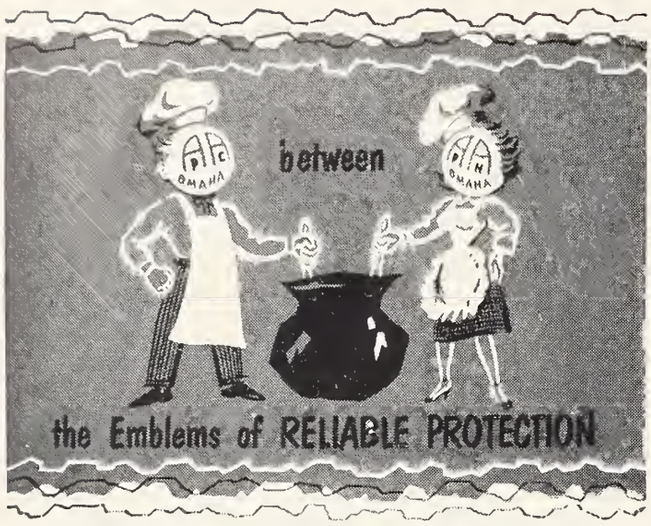
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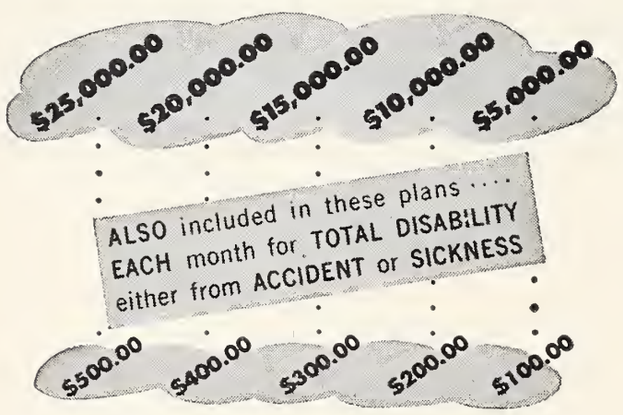
*TRADEMARK, REG. U. S. PAT. OFF.

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SPECIFIC BENEFITS ALSO FOR LOSS OF SIGHT, LIMB OR LIMBS FROM ACCIDENTAL INJURY

HOSPITAL INSURANCE ALSO FOR OUR MEMBERS AND THEIR FAMILIES

$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

(Continued from Page 104)

The foregoing doubts should be kept in mind if a county medical society, or a group of its individual members, is approached to sponsor or endorse the multiphasic screening program in the local community. The decision is left to the county society and its members but the present evaluation of the program by MSMS that widespread use of multi-phasic screening could be detrimental to the private practice of medicine and to the future health of Michigan is invited to your attention.

The Executive Committee of The Council has instructed that this letter be sent to each component County Medical Society in Michigan.

Sincerely yours,
L. Fernald Foster, M.D.
Secretary

Lansing, Michigan
November 22, 1954

Wilfrid Haughey, M.D., Editor
Journal MSMS
Battle Creek, Michigan

Dear Doctor Haughey:

Once again we are grateful to you and your associates for the publicity given to the Association of American Physicians and Surgeons' Essay Contest for high school students, appearing in the Journal of the Michigan State Medical Society for October, 1954.

As your item indicated, the new title of the Essay Contest is "The Advantages of Private Medical Care." The 1955 Contest which will end in April, 1955, is the ninth annual event sponsored by the Association. I know that you and your colleagues will rejoice with us over the fact that the contest has grown each year with more medical societies, auxiliaries and students participating.

With very best wishes, I am

Sincerely,
Mal Rumph, M.D., *Chairman*
AAPS Annual Essay Contest Committee

Chicago, Illinois
November 22, 1954

In Memoriam

HAROLD J. BRISBOIS, M.D., Medical Director of the Ternstedt Plant in Flint, died July 2, 1954. He was fifty-eight years old.

A native of Detroit, Dr. Brisbois was engaged in private practice in Plymouth for twenty-seven years before joining Ternstedt Division of General Motors in 1951 as medical director of the Livonia Plant. In 1953 he transferred to Flint.

During his residence in Plymouth, Dr. Brisbois was active in civic affairs. He served many years on the Plymouth Board of Education and was a past president of the Plymouth Kiwanis Club. Dr. Brisbois was a veteran of World War I.

He received his M.D. degree from the University of Michigan in 1924 and interned at Providence Hospital, Detroit. He was a member of the Wayne County Medical Society for some 25 years until 1953 when he transferred to the Genesee County Medical Society.

Surviving Dr. Brisbois are his widow, Louise; a son, Harold, Jr., of Flint; three brothers, five sisters and his mother.

Say you saw it in the Journal of the Michigan State Medical Society

NOT ARTHRITIS BUT ARTHRALGIA...

If the patient complaining of aching joints is a woman between 37 and 54 years of age, it is highly possible that she is suffering from arthralgia rather than arthritis.[1] It has been estimated that arthralgia occurs in about 40 per cent of women with estrogen deficiency, and is exceeded in frequency only by symptoms of emotional or vasomotor origin.[2] In fact, arthralgia may be as indicative of declining ovarian function as the classic menopausal hot flushes.

Arthralgia, however, is just one of a vast number of distressing but ill-defined symptoms that may be precipitated by the loss of estrogen as a "metabolic regulator." Other good examples are insomnia, headache, easy fatigability, and tachypnea.

Because these symptoms sometimes occur years before or even long after cessation of menstruation, they are not always readily associated with estrogen deficiency, and the tendency may be to treat them with medications other than estrogen. Obviously, sedatives and other palliatives cannot be expected to produce a satisfactory response if an estrogen deficiency exists. Only estrogen replacement therapy will correct the basic cause of the disorder.

"Premarin" is an excellent preparation for the replacement of body estrogen. In "Premarin" all components of the complete equine estrogen-complex are meticulously preserved in their natural form. "Premarin" produces not only prompt symptomatic relief but a distinctive "sense of well-being" which is most gratifying to the patient.

1. Greenblatt, R. B., and Kupperman, H. S.: M. Clin. North America *30*:576 (May) 1946. 2. McGavack, T. H., in Goldzieher, M. A., and Goldzieher, J. W.: Endocrine Treatment in General Practice, New York, Springer Publishing Company, Inc., 1953, p. 225.

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NEWS MEDICAL

MICHIGAN AUTHORS

Sidney Friedlaender, M.D., and **Alex S. Friedlaender, M.D.,** Detroit, are the authors of an article entitled "Topical Use of Hydrocortisone and Hydrocortisone-Neomycin Ointments in Allergic Dermatoses" presented at the Tenth Annual Meeting of the American Academy of Allergy, Houston, Texas, February 1-3, 1954, and published in *The Journal of Allergy,* September, 1954.

Emil Lorch, F.A.I.A., Ann Arbor, is the author of an article entitled "The Beaumont House, Its Background and Setting," reprinted from THE JOURNAL of the Michigan State Medical Society, February, 1953, and published in its entirety along with illustrations in the December, 1954, monthly *Bulletin of the Michigan Society of Architects.*

John E. Summers, M.D., Arthur L. Stanley, M.D., Christopher J. Stringer, M.D., Lansing, are the authors of an article entitled "Coarctation of the Aorta, Constrictive Pericarditis and Pleuritis, and Primary Carcinoma of the Liver Occurring in One Person", published in *The Journal of the Indiana State Medical Society,* November, 1954.

C. J. Wickwire, Director of Publications, Wayne University College of Medicine, is the author of an article entitled "Wayne University College of Medicine" published in *The Journal of the Student American Medical Association,* November, 1954.

Leo H. Bartemeier, M.D., Detroit, is the author of an article entitled "The Contribution of Psychiatry to the Practice of Medicine", presented at the annual meeting of the Illinois State Medical Society, Chicago, May, 1954, and published in the *Illinois Medical Journal,* November, 1954.

Nancy T. Caputo, M.D., Detroit, is the author of an article entitled "Near-Fatal Penicillin Reaction: Case Report", published in the *Harper Hospital Bulletin,* September-October, 1954.

B. Hjalmar Larsson, M.D., Detroit, is the author of an article entitled "Impressions of the Nobel Festival in Stockholm, 1953." published in *Harper Hospital Bulletin,* September-October, 1954.

William H. Havener, M.D., and **C. A. Siebert, Ph.D.,** Ann Arbor, are the authors of an article entitled "Sterilization of Sharp Instruments By Boiling, with Utilization of Cathodic Protection to Prevent Corrosion," published in *Transactions of the American Academy of Ophthalmology and Otolaryngology,* September-October, 1954.

James H. Maxwell, M.D., Ann Arbor, is the author of an article entitled "Repair of the Facial Nerve After Facial Lacerations", published in *Transactions of the American Academy of Ophthalmology and Otolaryngology,* September-October, 1954.

Edgar E. Poos, M.D., F.A.C.S., F.I.C.S., Detroit, is the author of an article entitled "Mechanism of Sudden Weakness, Dizziness and Syncope," published in *The Journal of Aviation Medicine,* June, 1954.

Leo H. Bartemeier, M.D., Detroit, is the author of an article entitled "Emotional Reactions to Marriage", published in *American Practitioner and Digest of Treatment,* November, 1954.

Harold F. Schuknecht, M.D., Detroit, and **Samuel Sutton,** Chicago, Illinois, are the authors of an article entitled "Regional Hearing Losses From Induced Cochlear Injuries in Experimental Animals", published in *Annals of Otology, Rhinology, and Laryngology,* October, 1954.

Frederick A. Coller, M.D., and **William J. Regan, M.D.,** Ann Arbor, are the authors of an article entitled "Difficulties of Diagnosis of Some Lesions of Colon," published in AMA *Archives of Surgery,* October, 1954.

Earl G. M. Krieg, M.D., Detroit, is the author of an article entitled "Inguinal Herniorrhaphy" published in *Industrial Medicine and Surgery,* November, 1954.

C. L. Swarts, M.D., and **E. F. Kercher, M.D.,** Ann Arbor, are the authors of an article entitled "A Fatal Case of Poliomyelitis in a Newborn Infant Delivered by Cesarean Section Following Maternal Death Due to Poliomyelitis", published in *Pediatrics,* September, 1954.

Don Marshall, M.D., Kalamazoo, is the author of an article entitled "Retrolental Fibroplasia" digested from THE JOURNAL of the Michigan State Medical Society for September, 1954, and published in *Digest of Ophthalmology and Otolaryngology,* October, 1954.

A. Hazen Price, M.D., Detroit, is the author of an article entitled "Problems of the Aging Population", published in *Harper Hospital Bulletin,* September-October, 1954.

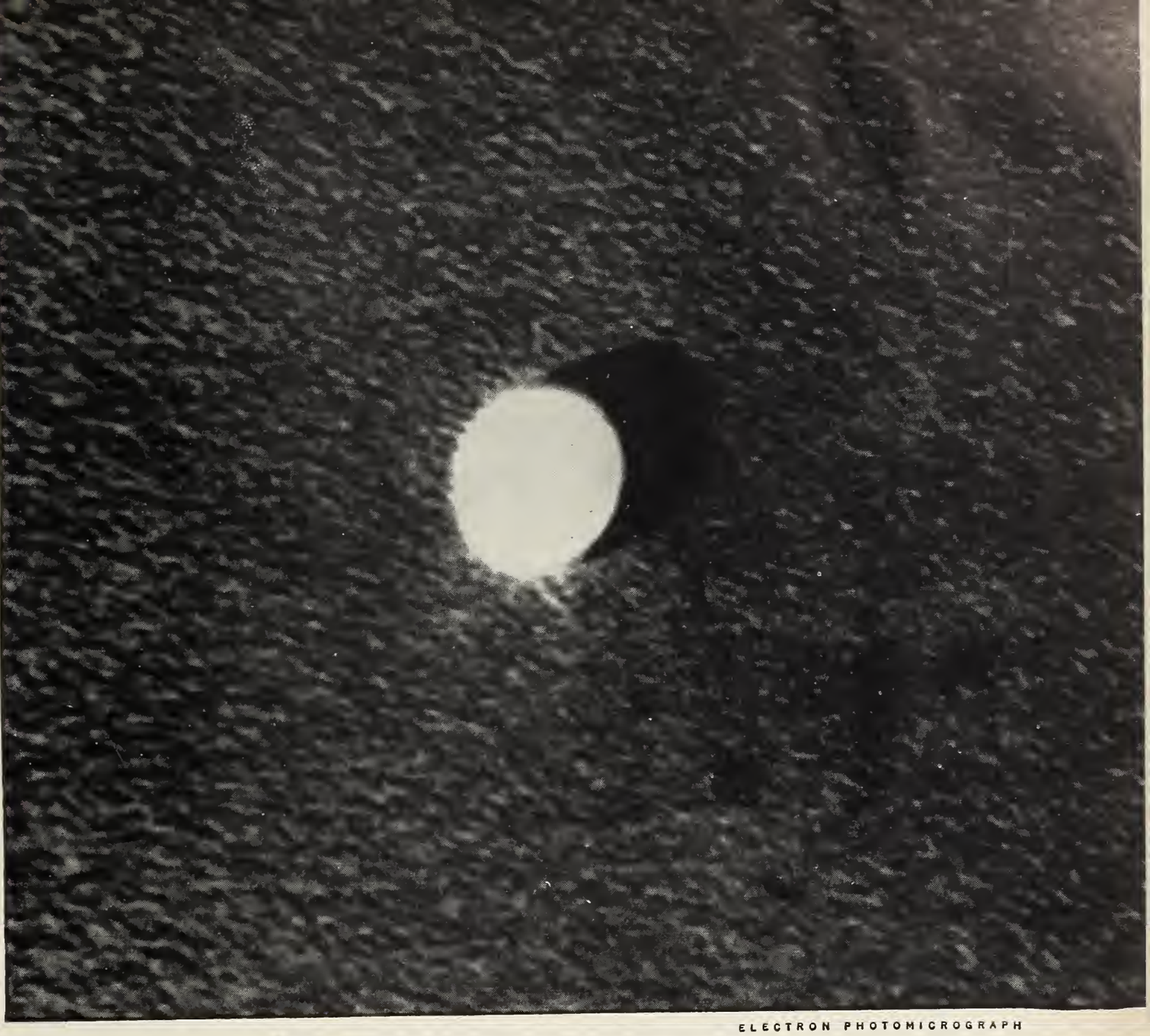
Frank W. Prust, M.D., and **Ruth B. Campbell, M.D.,** Detroit, are the authors of an article entitled "Viable Intestinal Segments for Plastic Repair of the Urinary Bladder—A Preliminary Report", published in *Harper Hospital Bulletin,* September-October, 1954.

J. D. Fox, M.D., and **B. E. Brush, M.D.,** Detroit, are authors of an article published under "Clinical Notes" in *JAMA* of December 11 entitled "A New Illeostomy-Colostomy Device with a Disposable Plastic Bay and No Cement."

* * *

The polio attack rate in Michigan in the year just concluded was about 28 per cent higher than the national average, according to provisional reports. Na-

(Continued on Page 110)



ELECTRON PHOTOMICROGRAPH

Staphylococcus aureus 44,000 X

Staphylococcus aureus (Micrococcus pyogenes var. aureus) is a Gram-positive organism commonly involved in a great variety of pathologic conditions, including

pyoderma • abscesses • empyema • otitis • sinusitis • septicemia
bronchopneumonia • bronchiectasis • tracheobronchitis • and food poisoning.

It is another of the more than 30 organisms susceptible to

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BARRY *Laboratories, Inc.*

DETROIT 14, MICHIGAN

(Continued from Page 108)

tionwide, the number of cases reported in 1954 was the third highest on record.

Michigan also had a high polio attack rate in the year 1952, when 3,912 polio cases were reported. This record was also higher, by 57 per cent, than the national average for that year. It is impossible to predict when and where polio epidemics will strike, which underlines the need for more effective control measures.

Evaluation of the Salk vaccine, administered to 440,000 U. S. children, in the largest medical experiment of its kind ever conducted, is now in progress. Announcement of the vaccine's effectiveness will be made in the Spring of 1955.

During the field trials last spring, about 55,000 children in the state of Michigan were inoculated—half with the Salk vaccine, half with a placebo.

This year, the March of Dimes is much more ambitious because it hopes to raise $64,000,000—because $9,000,000 is needed to purchase vaccine, $2,700,000 for scientific research, $2,900,000 for professional education, and at least $29,900,000 for patient aid, including hospitalization. The March of Dimes has expended $203,600,000 in patient aid since 1938.

* * *

Menominee County Medical Society members elected to take office January 1, 1955, are: President—S. K. Sweany, M.D., Powers; President-Elect—W. S. Jones, Jr., M.D., Menominee; Secretary-Treasurer—L. Grant Glickman, M.D., Menominee; Delegate—J. R. Heidenreich, M.D., Daggett; Alternate Delegate—H. R. Brukardt, M.D., Menominee.

* * *

The Roy Herbert Holmes, M.D., Memorial Committee of Muskegon County Medical Society has made the following report:

"Your committee met informally and wish to recommend that the Muskegon County Medical Society propose and actively support a loan fund for Junior and Senior medical students who will be willing to spend a minimum of three years in general practice in a rural area of Michigan.

"The loan fund to be established through the Michigan Foundation for Medical and Health Education who will administer the same.

"It is the wish of the committee that this fund receive wide publicity to the end that not only fellow physicians of Doctor Roy Holmes but others will make substantial contributions. The committee feels that this project is most expressive of the aims and ideals of Roy who was sincerely interested in young men studying medicine, particularly those with a desire to enter general practice.

"Further, we recommend that Mr. J. Joseph Herbert, attorney for the Michigan State Medical Society, be authorized to draw up an appropriate resolution.

"Respectfully submitted, L. E. Holly, M.D., Chairman, V. S. Laurin, M.D., C. L. A. Oden, M.D., L. I. Powers, M.D., W. M. LeFevre, M.D."

* * *

The tempo of medical progress is reflected in last week's announcement that the Trudeau Sanatorium, the country's oldest private establishment for the treatment of tuberculosis, will close December 1.

(Continued on Page 112)

Income* for the members of the Michigan Medical Profession from the first day* of sickness or injury . . .

NOW! Not for only 26 weeks

— Not for only 52 weeks

but even for your entire lifetime

House Confinement not required at any time

Accidental loss of hands, feet or eyesight pays monthly benefits — not just a lump sum

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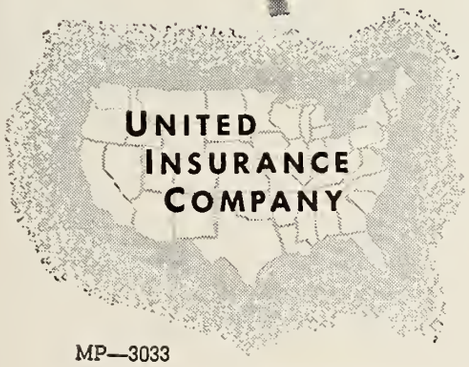
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Covers most accidents from date of policy and most sickness originating more than 30 days after date of policy, excepting those incurred while in military service of any country at war, or resulting from war, any act of war, suicide, attempted suicide, insanity, mental disease, certain foreign travel, any pre-existing condition or any hazard of aviation other than commercial air line passenger travel



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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

THE G. A. INGRAM COMPANY
4444 Woodward Avenue, Detroit 1, Mich.

(Continued from Page 110)

The *New York Times* said the 100-acre Adirondack cottage community, a mile north of Saranac Lake, New York, thus "will yield to scientific progress in the treatment and cure of the disease that spurred its founding seventy years ago."

Dr. Gordon Meade, executive director, summed up the closing of the sanatorium in a few sentences:

"This is a milestone. We can no longer continue because of the decline in the number of tuberculosis patients. A patient's length of stay has been shortened by the new antibiotic drugs and surgery techniques; there have been fewer relapses and lots more home care."

The tuberculosis mortality rate has been dropping steadily. In 1900 the death rate was 200 per 100,000 population; today it is only 12.6 per 100,000.

This story is proof positive that modern medical research has added years to our life and life to our years! —*Bulletin—Ingham County Medical Society.*

* * *

Large Doctor-Draft Call Issued.—More than twice the number of men taken in the last Doctor Draft call will be tapped for April induction, Defense Department announces. This is presumably the last medical officer call under the present Doctor Draft Act, which is scheduled to expire on June 30. The Defense Department has asked Selective Service for 1,275 physicians—825 for the Army, 200 for the Navy, and 250 for the Air Force—and 459 dentists for the three-month period starting next April. The last quarterly Doctor Draft call, issued for December, took 550 physicians and 150 dentists. Priority three men (doctors not educated at government expense who have served no time on active duty) will comprise the **majority of those** taken in April, Defense Department says.

It is known that some of the leaders in the military services want the Doctor Draft law kept on the books beyond next June 30, when it is scheduled to expire. Officials are concerned that many non-veteran physicians have delayed joining the Defense Department's commissioning program on the theory that the Doctor Draft will be allowed to die and they will have no further obligation. Assuming that the regular draft will be extended, they will have a two-year obligation under that law, an obligation which must be served before their 35th birthday. Unless they sign up for a commission in one of the medical corps they might have to serve the two years as enlisted men, like other registrants. Congress has made clear that men brought in under the Doctor Draft are to be offered commissions, but this guarantee does not apply to the regular draft.

* * *

Recent expansion of the Hill-Burton bill is still not enough to solve the nation's 810,000 hospital-bed shortage, Dr. John Cronin, chief of the Public Health Service's division of hospital facilities, told the National Association of Registered Nursing Homes. (Public and non-profit nursing homes were made eligible for U.

(Continued on Page 114)



ELECTRON PHOTOMICROGRAPH

Streptococcus faecalis 40,000 X

Streptococcus faecalis is a Gram-positive organism commonly involved in a variety of pathologic conditions, including urinary tract infections • subacute bacterial endocarditis • peritonitis.

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(Continued from Page 112)

S. construction grants under terms of the new law.) Dr. Cronin said President Eisenhower is interested in helping nursing homes solve the hospital-bed shortage.

* * *

Robert S. Breakey, M.D., and David Siegel, M.D. are pleased to announce their association in the practice of urology at 1211 Bank of Lansing Building, Lansing 16, Michigan.

* * *

Dr. R. J. Himmelberger of Lansing was installed as the new President, at the annual meeting of the Michigan Society of Anesthesiologists held on October 1. Dr. Edward D. Conner of Detroit was elected President-elect, and Dr. Donald Hesselschwerdt of Detroit was elected Secretary-Treasurer. Dr. W. G. Mackersie of Detroit was elected to be the official delegate to the ASA meeting, with Dr. Ferdinand Greifenstein of Detroit as alternate delegate.

* * *

The American College of Radiology in a news release for November, 1954, quoted from a paper "Roentgen Diagnostic Aids in Acute Pediatric Emergencies" by Stuart P. Barden, M.D., which was published in THE JOURNAL of the Michigan State Medical Society, September, 1954.

* * *

The Fifty-First Annual Congress on Medical Education and Licensure will be held at the Palmer House in Chicago, February 5-8, 1955. This is conducted under the auspices of the Council on Medical Education and Hospitals of the American Medical Association, the Federation of State Medical Boards of the United States, and the Advisory Board for Medical Specialties.

* * *

"If every employe of General Motors, Chrysler, and U.S. Steel failed to report for work for a full year, the loss in time and earnings would not exceed the loss caused by accidents that same year."—Reported in *Lansing Journal.*

* * *

A very fine editorial telling of the acquisition, remodeling, and dedication of the Beaumont Memorial was published in the October issue of the *Illinois Medical Journal.* The article was written by Arkell M. Vaughn, M.D., President of the Illinois Medical Association, who attended the dedication of the Memorial at the invitation of the Michigan State Medical Society.

* * *

The Radiological Society of North America, at its 40th annual meeting in Los Angeles, California, December 5-10, paid tribute to the memory of Dr. Augustus W. Crane, the Kalamazoo physician who rose from an obscure practice to international pre-eminence as a pioneer in the development of the x-ray.

The tribute was paid by Dr. Howard P. Doub, editor of the professional x-ray journal, *Radiology,* and radiologist-in-chief at the Henry Ford Hospital in De-

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troit, at the December 6 session in an historical lecture on "The Life of Dr. Augustus W. Crane". Dr. Crane, who died in 1937, improvised much of his own equipment to begin his pioneer work with the x-ray in Kalamazoo which brought him international recognition in that field.

Dr. Crane achieved international recognition as a result of a paper he presented at a meeting of the Kalamazoo Academy of Medicine on Sept. 27, 1898, relating his first year of pioneer work in the x-ray. The following year the paper was published in the *Philadelphia Monthly Medical Journal.*

In his Kalamazoo laboratory, Dr. Crane took some of the first x-rays of the stomach. World famous medical men visited the laboratory to view his plates of gastric ulcers, the appendix, and cancer of the stomach.

* * *

The third annual Symposium on Trauma at Wayne University College of Medicine consisted of two groups of illustrated talks on the surgical care of the injured presented by speakers from the State of Michigan. There were two intermission periods for the purpose of actually demonstrating in the wards of Receiving Hospital the subject matters discussed by the essayists. There were no formal discussions but ample opportunity for informal discussion during the "Ward Walks." The speakers were assisted in the ward walk demonstrations by the Surgical Staff and the residents of the University Surgical Service.

Program

Welcome ..... Gordon H. Scott, Dean
Anesthesia in Trauma.....F. E. Greifenstein, M.D.
Signs and Symptoms in Management of
Skull Fractures ..... J. F. McGuire, M.D.
Fracture of the Ankle ..... Joseph L. Fleming, M.D.
Hazards of Blood Transfusion .. Elmer R. Jennings, M.D.
Fractures of the Forearm ..... John S. Campbell, M.D.
Clinical Evaluation of Open and Closed
Therapy of Burns ..... W. Will Glas, M.D.

WARD WALK - Farwell Annex of Receiving Hospital

Lunch - Cafeteria, Medical Science Building

Courtesy of Parke, Davis & Co.
Soft Tissue Injuries of the
Shoulder ..... Sylvester J. O'Connor, M.D.
Some Aspects of Chest Trauma .... Conrad R. Lam, M.D.
Fractures of the Elbow ..... John M. Pendy, M.D.
Management or Post-operative
Nutrition ..... George L. Walker, M.D.

WARD WALK - Farwell Annex of Receiving Hospital
Guest Lecturer
Fractures of the Upper
Femur ..... Angus D. McLachlin, M.D., Professor of Surgery
University of Western Toronto
Inspection of the Operative and Research Laboratories of the Department of Surgery

* * *

The Kahn test for the detection of syphilis after thirty-one years still far outranks all others currently being used in every part of the world. According to a report by the World Health Organization based on

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surveys of six regions of the world, the Kahn test, originated by Dr. Reuben L. Kahn, University of Michigan professor of serology of syphilis and chief of the University Hospital's serology laboratory, is used in fifty-eight countries. Over 400 important laboratories in those countries still rely on the Kahn test for the detection of syphilis. This is three times more than the number of laboratories using the next most popular detection test.

According to the report, there are still only two basic scientific methods for the detection of syphilis. One, called the "tube-flocculation," is the basis for the Kahn test. The other, called "complement-fixation," is the principle of the Wassermann test. These two testing techniques have produced a variety of refinements and modifications.

The World Health report listed twenty-two differently named tests used in two or more laboratories in the world. The Kahn ranked first in 460 laboratories in fifty-eight countries; the Meinicke test ranked second in 156 labs in twenty countries; and, the Kolmer (based on the Wassermann principle) ranked third in 153 laboratories in twenty-four countries.

Those regions covered by the report included Africa, the Americas, Europe, East Mediterranean, Southeast Asia, and Western Pacific.

Since Dr. Kahn's work has been translated into Russian, there is reason to suppose, although the report does not cover this area, that the Kahn test has penetrated the Iron Curtain.

* * *

Ophthalmology, the first of the medical specialties to establish an American Board (1916), must face a serious threat to its practice. At its Annual Congress in Seattle, Washington, June 20-23, 1954, the American Optometric Association passed a number of resolutions expressing their belief and intent. To quote: "Resolved: That it is the stated policy of the American Optometric Association in convention assembled that *the field of visual care is the field of Optometry and should be exclusively the field of Optometry.*" "Whereas, throughout the years the optometry laws of the several states have granted exemptions to certain groups and classes." "Resolved that the individual state associations are recommended to make serious study of the optometry laws prevailing in their states to the end that exemptions be restricted, limited and ultimately eliminated and that encroachments by untrained, unqualified and unlicensed persons into the *exclusive* field of optometry be prevented through the established enforcement agencies in the respective states."

The implication is clear. The medically trained ophthalmologists are to be forced to give up refraction. The optometrists claim that field. They also claim to be able to recognize eye disease, but any ophthalmologist knows the tragic effects of many unrecognized cases which could have been refracted by optometrists-glaucoma and diabetic retinitis—to mention only two.

It is assumed that the coming legislature may be asked to carry on the suggested restrictions.

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The Eighth Interim Session *of the American Medical Association,* held at Miami, Florida, November 28, 1954, to December 2, 1954, had the following registration from Michigan, up to the morning of December 2:

James Barrow, Detroit; R. C. Bruder, Detroit; Henry K. Chall, Detroit; F. J. Chapin, Bay City; A. L. Cotton, Kalamazoo; H. S. Cross, Grosse Pt.; Joseph H. Curhan, Detroit; John S. DeTar, Milan; John F. Deiuba, Detroit; Dwight C. Ensign, Detroit; M. A. Gertz, Ironwood; Donald V. Hobbs, Detroit; O. J. Johnson, Bay City; Lewis D. Kaufman, Flint; Charles E. Kee, Gladstone; Henry J. Kehoe, Detroit; E. J. Knaggs, Wyandotte; Vilda S. Laurin, Muskegon; S. E. Lerman, Detroit; J. Hugh Lewis, Wyandotte; S. N. Little, Flint; Wm. L. Lowrie, Detroit; J. W. Manning, 3rd, Saginaw; John S. Metes, Detroit; O. W. Mitton, Battle Creek; Robert L. Novy, Detroit; C. J. O'Donovan, Kalamazoo; Clarence I. Owens, Detroit; Pauline Pevin, Detroit; Ralph H. Pino, Detroit; W. Earl Redfern, Detroit; Herbert Rosenbaum, Detroit; I. S. Schembeck, Detroit; N. H. Schlafer, Detroit; J. W. Sigler, Birmingham; Geo. W. Sippola, Detroit; A. W. Suksta, Roseville.

Carl F. Boothby, Hartford; L. S. Fallis, Detroit; A. S. Friedlaender, Detroit; John E. Gleason, Detroit; George B. Hoop, Detroit; W. J. Kemler, Ecorse; Alton Ray Marsh, Detroit; George E. McKeever, Dearborn; Wm. H. Meade, East Lansing; Charles Patrick, Waterford; Wilfred N. Sisk, Kalamazoo; Edward A. Stern, Detroit; Donald White, Lincoln Pk.; J. P. Williams, Pontiac.

W. W. Babcock, Detroit; Robert H. Baker, Pontiac; W. C. Beets, Grand Rapids; W. C. Behen, Lansing; S. K. Beigler, Detroit; Robert M. Bookmyer, Birmingham; William Bromme, Detroit; Meyer O. Cantor, Detroit; Paul J. Cherney, Detroit; Elmer P. Ellias, Detroit; L. Fernald Foster, Bay City; J. F. Harrold, Lansing; Wilfrid Haughey, Battle Creek; E. G. Hester, Saginaw; W. A. Hudson, Detroit; Willard B. Howes, Detroit; W. H. Huron, Iron Mountain; Joseph H. Kerzman, Detroit; Dale L. Kessler, Grand Rapids; Paul B. Kilmer, Reed City; Earl G. M. Krieg, Detroit; S. G. Meyers, Detroit; Saul Rosenzweig, Detroit; D. J. Sandweiss, Detroit; E. W. Schnoor, Grand Rapids; J. Stanley Schultz, Flint; Laurence F. Segar, Detroit; E. F. Sladek, Traverse City; G. W. Slagle, Battle Creek; Gerald D. Spero, Detroit.

T. De Leeuw, Muskegon Hts.; D. J. Drolett, Lansing; Jos. A. Johnston, Detroit; R. I. Larned, Detroit; F. P. Rhoades, Detroit; Wm. A. Siefert, Detroit.

J. Edward Berk, Detroit; A. G. Goude, Hopkins; Gerald O. Grain, Detroit; John M. Hammer, Kalamazoo; Paul J. Ochsner, Lansing.

W. D. Barrett, Detroit; I. Donald Fagin, Detroit; W. A. Hyland, Grand Rapids; J. W. James, Saginaw; R. A. Johnson, Detroit; C. P. McCord, Ann Arbor; G. C. Penberthy, Detroit; G. Shortz, Bloomfield Hills.

Also registered were: William J. Burns, Executive Director, Hugh W. Brennemann, Public Relations Counsel, and J. Joseph Herbert, Legal Counsel.

* * *

An outstanding eight-day cruise to Bermuda and Nassau has been arranged for physicians and their wives following the AMA meeting at Atlantic City in June.

The party will sail from New York at 7 p.m. Friday, June 10, aboard the palatial Furness Line steamer Ocean Monarch. The ship docks early Sunday at historic St. George's Bermuda, for church services and a tour of the city. A sightseeing trip, a visit to Castle Harbour Hotel for tea and a calypso concert are set for the afternoon. On Monday morning a tour of

Hamilton, the island's capital, is scheduled prior to sailing at 1 p.m.

Tuesday is spent at sea with a variety of programs planned—or the day can be used to rest up for Nassau—the next port of call. The party goes ashore at Nassau, capital of the Bahama Islands, early Wednesday. Beaches and cabanas of the British Colonial Hotel are available and a dinner dance will be held there that evening.

The ship leaves Nassau at midnight and the last two days of the tour are spent at sea—with the traditional gala party set for the last night aboard. The ship docks in New York at 9 a.m. Saturday, June 18.

All space is being held for the AMA and reservations should be made immediately. For further information, contact W. M. Moloney, Chicago, Burlington and Quincy Railroad, 105 West Adams St., Chicago.

* * *

The fifteenth annual Parent Institute at the Nursery School of the Michigan School for the Deaf, will be held March 27 through April 2, 1955, on our campus.

The program for the parents, consisting of classes, observations, consultations, scheduled tours and lectures, has been planned to assist parents with their child during the preschool years. There is much parents can do to train their child during these early years and help him to develop habits and patterns which will be important to him throughout his life.

The program for the children is one of attendance at a nursery school to help start them on the road to new experiences in learning.

The key speaker for the fifteenth annual institute will be Dr. L. D. Hedgecock, Consulting Audiologist of the Mayo Clinic in Rochester, Minnesota. He will climax the Parent Institute-Nursery School program by speaking at a banquet April first on "Speech and Hearing Problems of the Young Deaf Child."

Other speakers for the evening lecture series will be: Mr. Keith Osborn, Department of Infancy and Early Childhood, Merrill Palmer School, Detroit; Dr. Harold Powell, Wayne University, Detroit; Dr. Kendall Hooper, Otologist, Flint; Mary Blair, Consultant Special Education Division, Department of Public Instruction, Lansing.

Parent classes will be under the direction of Mr. Thomas H. Poulos, Principal, Michigan School for the Deaf.

* * *

More than 15,000 physicians will gather in fifty-seven cities on February 24, 1955, to watch the largest closed-circuit television program ever staged. The program, jointly sponsored by the American Academy of General Practice, Kansas City, Missouri, and Wyeth Laboratories of Philadelphia, will feature six internationally known medical authorities who will discuss "How to Control Streptococcal Infection."

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The eighth annual Postgraduate Course on Diseases of the Chest, sponsored by the Council on Postgraduate Medical Education of the American College of Chest Physicians, is scheduled for the Bellevue-Stratford Hotel, Philadelphia, March 7-11. 1955. For information write to the Executive Director, American College of Chest Physicians, 112 East Chestnut St., Chicago 11, Illinois.

* * *

The World Health Organization reports that the Kahn test, originated by Dr. Reuben L. Kahn, Ann Arbor, still far outranks all other tests currently being used in every part of the world for the detection of syphilis. The Kahn test has been used for thirty-one years.

* * *

The AMA's Eighth Clinical Meeting in Miami, had a total registration of 7,707. During the meeting, the Board of Trustees announced appointment of a 13-member commission to make a comprehensive survey of the various types of plans through which the American people receive medical services. The commission, which will begin work immediately, will be headed by Leonard W. Larson, M.D., of Bismarck, N. D., a member of the Board of Trustees. Mr. Jay C. Ketchum, Detroit, Executive Vice President of Michigan Medical Service, has been appointed a member of the commission.

* * *

The Ciba Pharmaceutical Products, Inc., in co-operation with the American Medical Association, will sponsor weekly, a fifteen-minute television show entitled "Horizons." The program will be broadcast live on Sundays at 9:15 p.m., E.S.T., over WXYZ-TV, Detroit.

* * *

The American Public Health Association will hold its 83rd annual meeting at the Municipal Auditorium, Kansas City, Missouri, November 14-18, 1955.

* * *

The seventh annual meeting of the American Academy of Forensic Sciences will be held in the Biltmore Hotel, Los Angeles, on February 17-18-19, 1955. Further information may be obtained by writing Dr. W. J. R. Camp, University of Illinois College of Medicine, 1853 W. Polk St., Chicago, Illinois.

* * *

The American Academy of Allergy announces a postgraduate teaching program on February 4-5-6, 1955, in New York City. For information contact the American Academy of Allergy, 208 E. Wisconsin Ave., Milwaukee 2, Wisconsin.

* * *

The annual meeting and scientific session of The American Academy of Allergy will be held February 7-8-9, 1955, at the Hotel Statler, New York City.

* * *

New Blue Cross rates will take effect on the February, 1955 monthly renewal date of your policy. Several minor benefit changes are also being made at this time. Also, a new type of Blue Cross contract for those subscribers who feel they would prefer to have hospital

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service coverage begin after the first few dollars of cost, and at a rate lower than for the comprehensive plan; will be announced. This new plan will be called the Co-operative Contract and provides 365 days—a whole year—of needed hospital care.

* * *

The Council on Undergraduate Medical Education of the American College of Chest Physicians offers three cash awards to be given annually for the best contribution, prepared by any undergraduate medical student studying for a degree in medicine, on any phase of the diagnosis and treatment of chest diseases (heart and/or lungs). For information write Executive Director, American College of Chest Physicians, 112 E. Chestnut St., Chicago 11, Illinois, no later than April 10, 1955.

* * *

Life insurance companies have contributed more than $1,000,000 to the National Fund for Medical Education.

* * *

The Michigan State Board of Alcoholism is again announcing scholarships to the Yale University Summer School of Alcohol Studies, 1955 session. Physicians who are interested in broadening their knowledge of alcholism and its treatment are encouraged to address inquiries to George G. Nimmo, Educational Director, State Board of Alcoholism, 102 South Walnut Street, Lansing, Michigan. The final date for receiving applications is February 15, 1955. The scholarships will provide for registration, tuition, and room and board (exclusive of Sunday meals). The session begins June 26 and ends July 21.

* * *

MEDICAL TELEVISION SHOWS OVER WJBK-TV

Sponsored by the Michigan Health Council

Date	Subject	Guests
Nov. 7	Michigan Fights Epilepsy	H. Waldo Bird, M.D., Detroit Willard W. Dickerson, M.D., Caro Raymond W. Waggoner, M.D., Ann Arbor
Nov. 14	Diabetes Week	Laurence Segar, M.D., Detroit Myer Teitelbaum, M.D., Detroit
Nov. 21	The Convalescent Child	Edward H. Fenton, M.D., Detroit
Nov. 28	FILM	

CORRECTION

The Campaign Committee of the Wayne University Medical Library Fund sincerely regrets an error shown in the publication of the Medical Library Fund Honor Roll. Three doctors were erroneously and unintentionally indicated as deceased. They are: Perry Goldman, M.D.; I. Z. Silvarman, M.D.; Ralph Wadley, M.D.

(Continued from Page 95)

entirely by speech, as in an orthodox platform presentation, and translate much of it to a visual form or context. One physician in a clinic dealing with hepatitis gradually gave his patient a jaundiced appearance by the use of green filters and a studio spotlight. The audience laughed, as he expected they would, but his point undeniably made a lasting impression.

Widespread utilization of color television for medical instruction does not mean that teaching physicians will have to be part actors, part TV technicians. It does mean that they will have at their disposal a method which renders their teaching techniques at once more flexible, more visually clear and, through reaching a larger audience, more effective.

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Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

ALCOHOLISM, by Jackson A. Smith, M.D., Director of the Alcoholic Clinic, Jefferson Davis Hospital; Assistant Professor of Psychiatry, Baylor University College of Medicine, Houston, Texas; Diplomate of the American Board of Psychiatry and Neurology; Staff of the Jefferson Davis Hospital, Methodist Hospital, Hermann Hospital, Houston Tuberculosis Hospital and Southern Pacific Hospital. Philadelphia, London, Montreal: J. B. Lippincott Company. Price $3.00.

NEW AND NONOFFICIAL REMEDIES. Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1954. Issued under the direction and supervision of the Council on Pharmacy and Chemistry, American Medical Association. Philadelphia, London, Montreal: J. B. Lippincott Company, 1954. Price $2.65.

THE PEPTIC ULCER INDIVIDUAL. A study in heredity, physique, and personality by Gerdt Wretmark, MED. LIC., MLM. Lund 1953 Häkan Ohlssons Boktryckeri. From the Department of Medicine, Central Hospital, Orebro (Former Head: Professor Haqvin Malmros, M.D.; Present Head: Gustav Myhrman, M.D.), the Department of Surgery, Central Hospital, Orebro (Head: Professor Gosta Bohmansson, M.D.), the Department of Psychiatry, Sahlgren's Hospital, Gothenburg (Head: Docent Bengt J. Lindberg, M.D.) and the Department of Psychiatry, University of Lund (Head, Professor Erik Essen-Moller, M.D.). Copenhagen: Einar Munksgaard, 1953. Translated by Mr. L. James Brown.

CHILDREN FOR THE CHILDLESS. A concise explanation of the medical, scientific, and legal facts about conception, fertility, sterility, heredity, and adoption. Edited by Morris Fishbein, M.D., with chapters by Sidonie Matsner Gruenberg, Morris Fishbein, M.D., Edward Weiss, M.D., I. C. Rubin, M.D., Nicholas J. Eastman, M.D., J. P. Greenhill, M.D., Fred B. Kyger, M.D. and Richard L. Jenkins, M.D. and Benjamin C. Gruenberg, Ph.D. Garden City, New York: Doubleday & Company, Inc., 1954. Price $2.95.

HUMAN LOCOMOTION AND BODY FORM. A study of gravity and man by Dudley J. Morton, M. D., Formerly Associate Professor, Department of Anatomy, also Associate Clinical Professor, College of Physicians and Surgeons, Columbia University. With the collaboration of Dudley Dean Fuller, Associate Professor, Department of Mechanical Engineering, Columbia University. Baltimore: The Williams and Wilkins Company, 1952.

ACUTE ANURIA. A study based on renal function tests and aspiration biopsy of the kidney by Claus Brun. Copenhagen: Ejnar Munksgaard, 1954. Price D.kr. 30.00.

A DOCTOR TALKS TO WOMEN. What they should know about the normal functions and common disorders of the female organs. By Samuel Raynor Meaker, M.D. New York: Simon and Shuster, 1954. Price $3.95.

PRACTICE OF ALLERGY. By Warren T. Vaughan, M.D., Richmond, Virginia. Revised by J. Harvey Black, M.D., Dallas, Texas. Third Edition. Saint Louis: The C. V. Mosby Company. Price $21.00.

Those engaged in the practice of medicine find it impossible to avoid the field of allergy. The progressive strides that medicine has taken have shown the greater importance of allergy in disease states so that it will be necessary for physicians to become more familiar with allergic manifestation. It is true that pharmaceutical companies have made it possible for physicians to handle a limited amount of allergies with a minimum of knowledge. However, this does not get to the crux of the problem.

This text is a well written revised third edition of a well-established, well-accepted book dealing with the practice of allergy. It is well indexed. Its scope covers the field of allergy in an exhaustive manner. It has taken many man hours to compile the wealth of material contained within its covers. This book deals with the many allergies including inhalants, food, contact, physical factors and their means of diagnosis and treatment.

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Diagnostic studies and methods of performing are well covered. The pharmacological approach to allergy is up to date and well written.

This text is exceedingly well written and is replete with a tremendous source of information on the allergic diseases and should be a must for those engaged in the practice of allergy and internal medicine. It can be recommended for medical students, medical libraries and dermatologists. V. B. L.

THE MANUAL OF ANTIBIOTICS 1954-1955. Preparations, Therapeutic Index, Generic and Trade Names, Producers. Prepared under the editorial direction of Henry Welch, Ph.D., New York: Medical Encyclopedia, Inc. Distributed by American Pharmaceutical Association, 2215 Constitution Ave. N.W., Washington, D. C. Copyright 1954 by Medical Encyclopedia, Inc., New York, N. Y., U.S.A. Copyright under the International Copyright Union. Price $2.50.

A few years ago the profession was confounded by the profusion of vitamins produced under different names by different manufacturers, and we remember hoping some order could be brought out of the chaos. The same thing now holds for antibiotics. Penicillin is produced by many manufacturers, and one particular product has thirty-six trade names—each manufacturer attaching his own name. It is now difficult to be perfectly sure what is meant by a name.

This book is a compilation, alphabetically, of the antibiotics produced by all the recognized manufacturers, which are readily available. There are 76 pages giving indications and ingredients on one column, and the trade names on the other. There are 11 pages of index of trade names, and a manufacturers' index.

This is very compact and concise and seems to us would be extremely useful to any doctor prescribing antibiotics.

THE CONCEPT OF SCHIZOPHRENIA. By W. F. McAuley, M.D., Belf., D.P.M., R.C.P.S.I., principal psychiatric registrar, Downshire Hospital Northern Ireland; late Surgeon Lieutenant R.N.V.R. With a foreword by John H. Ewen, F.R.C.P., D.P.M., formerly physician and lecturer in Psychological Medicine at the Westminster Hospital. New York: Philosophical Library. Price $3.75.

Any disorder accounting for "45 per cent of the resident population of mental institutions" certainly deserves the attention of the medical profession as a whole, to say nothing of society in general. The added fact that it is many times a life long disorder, with its onset between the ages of fifteen and thirty, should bring it even more consideration.

In this volume the author presents a surprisingly complete résumé of this pressing problem. Though it is difficult to select any portion, the chapters on "Neurophysiology" and "Treatment" should be particularly interesting and of value for those practitioners not actively engaged in psychiatry. The author is to be commended for presenting such an excellent guide to the subject of schizophrenia in such a small book.

HANDBOOK OF MEDICAL TREATMENT. Edited by Milton J. Chatton, A.B., M.D., Director of Medical Institutions, Santa Clara County, California; Superintendent of Santa Clara County Hospital, San Jose, California; Assistant Clinical Professor of Medicine, University of California School of Medicine, San Francisco; Sheldon Margen, M.A., M.D., Associate Research Biochemist, Department of Physiological Chemistry and Clinical Instructor in Medicine, University of California School of Medicine, San Francisco; and Henry D. Brainerd, A.B., M.D., William Watt Kerr Associate Professor of Clinical Medicine, University of California School of Medicine, San Francisco; Visiting Physician, Chief of Medical Service, San Francisco Hospital, San Francisco. Fourth Edition. Los Altos, California: Lange Medical Publications. 1954. Price $3.00.

This is a pocket sized handbook dealing with medical disease entities. It is compact and contains within its covers the medical management and treatment of a multitude of medical problems. The information is didactic given in step-like fashion arranged in a very orderly manner.

The therapeutic programs outlined embrace the most recent drugs which are available, and are exceedingly well done.

Emergency treatments are included as well as chemotherapeutic agents. The indexing is excellent.

This small book can be recommended for medical students, residents, interns, the practicing physician, and should be found in every doctors' office and doctors' bag.

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The text is well written, thought provoking, and presented in an acceptable manner. It is stimulating to read on such a complex and difficult problem.

The book can be highly recommended to general practitioners, surgeons, internists, pediatricians and medical students. V. B. L.

COLOR ATLAS OF PATHOLOGY. Endocrine System, Including Pituitary, Thyroid, Parathyroid, Adrenals and Pancreas, Gynecology and Obstetrics, Including Reproductive Organs; Breasts, Male Genital Tract, Skin. Illustrated with 1032 figures in color on 343 plates. Philadelphia, London, Montreal: J. B. Lippincott Company, 1954. Price $20.00.

This is a second volume of a projected three-volume work. When the first book of the series appeared late in 1950, it was generally conceded that no comparable endeavor in the field of illustrative pathology existed, unless it might have been the now out-dated volumes of the German written Henke and Lubarsch. The large section devoted to breast tumors is particularly outstanding. In many instances this issue appears to be even better than the 1950 effort. This is due to the increased number of gross illustrations, not only of organs and tumors, but also of the individual patients, and this contributes to a better correlation between the gross and the microscopic pictures. The text, as in its predecessor, is terse and definitely to the point. To those who are familiar with the cost of color plates, and in this instance well over 1000 appear, it is financially impossible to consider selling a volume for this price, unless some type of subsidy is considered. In this case the assistance is from the U. S. Naval Medical School and Medical Center. It is recommended to all physicians without reservation and particularly surgeons, gynecologists, and urologists.

A.A.H.

FLUID AND ELECTROLYTES IN PRACTICE. By Harry Statland, M.D., Associate in Medicine, University of Kansas School of Medicine; Consultant in Medicine, Veteran's Administration Hospital, Kansas City, Missouri; Attending Physician, Menorah Medical Center, Kansas City, Missouri. Philadelphia, London, Montreal: J. B. Lippincott Company. Price $5.00.

Fluid and electrolyte considerations have been of utmost concern to all practicing physicians, but the method of handling these problems is not always easy to approach or handle. Many texts have been written concerning the problems and many are complex beyond the comprehension of the physician.

Here is a text written in a clear manner where the reader is able to grasp the problem and understand it, and is not lost in a maze of data which only serves to confuse and lose the reader after a few short sentences. The text is divided into two parts and deals with medical, surgical and pediatric fluid and electrolyte disturbances. The general principles are laid down in a clear concise manner, and affords easy understanding of the pathologic disturbances.

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trolyte but often avoided or relegated to a minor role.

The treatment of depletion problems is well done. The solutions available are included and discussed. The bibliography is replete and recent. The index is excellent. The major pathologic considerations are well covered and again the reader has the feeling he is not lost or has to retrace his reading steps as he progresses into their management. V. B. L.

PRIMER OF ALLERGY. A guidebook for those who must find their way through the mazes of this strange and tantalizing state. By Warren T. Vaughan, M.S., M.D., Richmond, Virginia. With illustrations by John P. Tillery. Fourth Edition Revised by J. Harvey Black, M. D., Dallas, Texas. Saint Louis: The C. V. Mosby Company. Price $4.25.

Previous editions of this primer have been well received and this should be no exception.

The difficulty in caring for allergic patients is a time-consuming and often frustrating problem. This primer will save the allergists a great deal of time and explanations. It is comically illustrated to appeal to the patient or relative. The question-answer method is used to bring understanding to the patient.

General directions and instructions are included and are well done.

This text will be of great value to those involved in the practice of allergy and will save the physicians a great deal of time. It will make the balky patient see the physicians problems. It is well written and can be recommended for patient use. V. B. L.

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Surgical Anatomy and Clinical Surgery, two weeks, March 21
Surgery of Colon and Rectum, one week, February 28
Basic Principles in General Surgery, two weeks, March 28
General Surgery, one week, February 14; two weeks, April 25
Gallbladder Surgery, ten hours, April 11
Fractures and Traumatic Surgery, two weeks, March 14
GYNECOLOGY—Office and Operative Gynecology, two weeks, February 14
Vaginal Approach to Pelvic Surgery, one week, February 7
OBSTETRICS—General and Surgical Obstetrics, two weeks, February 28
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Gastroscopy, two weeks, March 21
Dermatology, two weeks, May 9—
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Clinical Uses of Radio Isotopes, two weeks, April 25
Radium Therapy, one week, May 23—
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(Continued from Page 88)

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*Fillauer, Carlton, book review, Orthopedic & Prosthetic Appliance J., 7:54 (Sept.) 1953.

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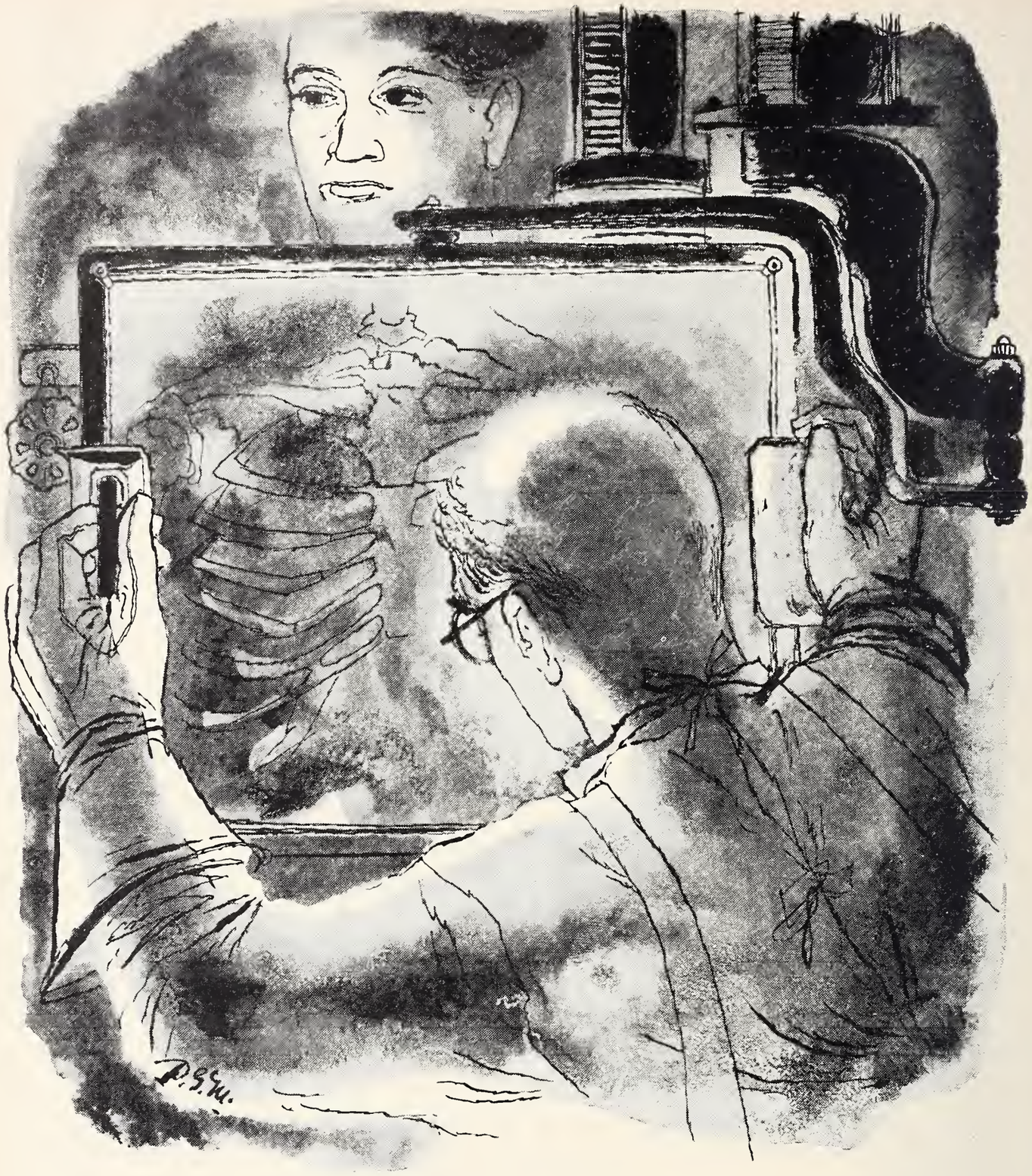
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References
(1) Kirby, W. M. M.; Waddington, W. S., & Doornink, G. M.: Antibiotics Annual, 1953-1954, New York, Medical Encyclopedia, Inc., 1953, p. 285.
(2) Finland, M., & Haight, T. H.: *Arch. Int. Med.* **91**:143, 1953.

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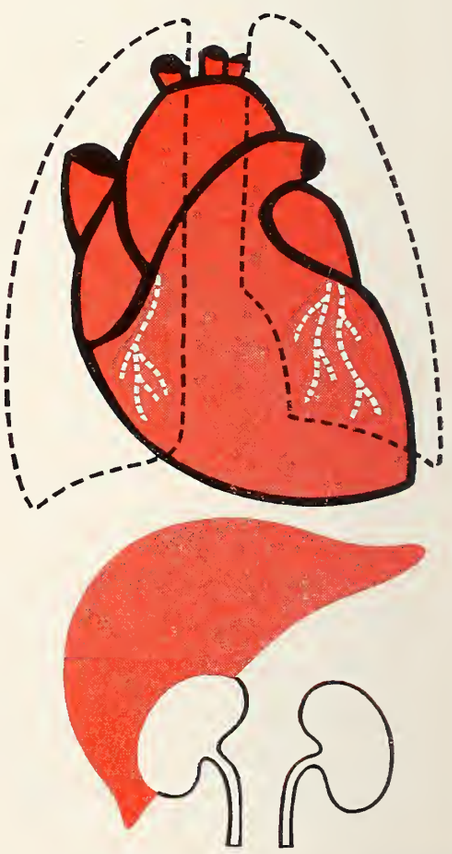
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February cover design by Pearl Turner and G. B. Corneliuson, M.D., of the Michigan Department of Health.

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BARRY COUNTY WINS ATTENDANCE PRIZE

Members of the Barry County Medical Society will hear a prominent guest speaker sometime during 1955 as a special prize for having the highest percentage of attendance at the 1954 Annual Session. The speaker of their choice will be brought from any part of the United States or Canada at the expense of the Michigan State Medical Society.

The attendance at the 1954 Annual Session broke all previous records. The attendance contest among Michigan's County Medical Societies was an important factor in this happy achievement. In the 1954 contest, Lapeer and Monroe Counties were close behind Barry.

Here, in descending order, are the ten county medical societies with the highest percentage of members attending the 89th Annual Session in Detroit: Barry, Lapeer, Monroe, Eaton, Macomb, Huron, Tuscola, St. Joseph, Wayne, and Sanilac.

Of the fifty-five component county and district medical societies of MSMS, only two were not represented at the 1954 Annual Session. In actual number of registrants, Wayne, of course, was first, followed by Oakland, Genesee, Ingham, and Kent Counties in that order.

HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of December 15, 1954

Sixty-five items were presented to the Executive Committee of The Council on December 15. Chief in importance were:

- **The financial report** to November 30 was presented, studied, and given approval: bills payable were approved, and payment was authorized.
- **W. S. Jones, M.D.,** Menominee, MSMS President-Elect, was made Chairman of a Subcomittee of The Council to make further investigation of M.D. Placement Program recommendations as offered by the MSMS Rural Medical Service Committee. Other members of the committee are: MSMS President R. H. Baker, M.D., Pontiac; R. L. Novy, M.D., Detroit; and Ralph W. Shook, M.D., Kalamazoo.
- **National Medical Defense Committee:** Chairman W. H. Gordon, M.D., and member M. L. Lichter, M.D., both of Detroit, were present to discuss the need for further co-ordination and integration of medical civil defense activities in Michigan. An early meeting with A. E. Heustis, M.D., Michigan Health Commissioner, to discuss current problems, was recommended by the Executive Committee of The Council.
- **Committee Reports:** The following reports were given consideration: (a) Mental Health Committee, meeting of November 9; (b) Committee on Prevention of Highway Accidents, November 18; (c) Midwest State Medical Officers Conference, November 20; (d) Rheumatic Fever Control, December 1; (e) Geriatrics Committee, December 9; (f) Committee on Arrangements for March 10 Testimonial Banquet, December 14; (g) Committee on Arrangements for March 9 Conference of Interns, Residents, December 14.
- **Wm. A. Hyland, M.D.,** Grand Rapids, Chairman of Michigan's Delegation to the AMA House of Delegates, presented report on the AMA Clinical Session held in Miami, November 29-December 2, which report was accepted by the Executive Committee.
- **President R. H. Baker, M.D.,** was appointed official MSMS representative to attend the 100th Anniversary Celebration of Michigan State College.
- President Baker congratulated the MSMS Public Relations Department on its series of county societies' public relations meetings being held throughout the state.
- **Dr. Don Phillips,** President of Hillsdale College and author of the successful "Phillips 66" technique of group communication, was invited to participate in the program of the Annual County Secretaries Conference of January 30 in Detroit.
- **The County Medical Society Executive Secretaries Conference** of 1955 was scheduled for Tuesday, February 15, at the MSMS Headquarters in Lansing.
- **Dean A. C. Furstenberg, M.D.,** of the University of Michigan Medical School, and Dean G. H. Scott, Ph.D.. of Wayne University College of Medicine have accepted invitations to appear on a Panel on Undergraduate Medical Education, to be held at a luncheon on Monday, September 26, 1955, in Grand Rapids (during MSMS House of Delegates Annual Session).
- **Assignment of scientific exhibits** for the eight available spaces at the 1955 Michigan Clinical Institute was made by the Executive Committee.
- **The survey of the Medical Advisory Committee** to Michigan Hospital Service (a committee of The Council) was reported as completed. The

(Continued on Page 136)

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REFERENCES: 1. Boland, E. W. and Headley, N. E., *J.A.M.A.* **148**:981, March 22, 1952. 2. Ward, L. E., Polley, H. F., Slocumb, C. H. and Hench, P. S., *J.A.M.A.* **152**:119, May 9, 1953. 3. Snow, W. B. and Coss, J. A., *N.Y. State J. Med.* **52**:319, Feb. 1, 1952.

HIGHLIGHTS OF THE COUNCIL

(Continued from Page 134)

Committee was discharged with high thanks by the Executive Committee of The Council.

- **Legal Counsel J. Joseph Herbert** presented opinions on (a) the question of certifying the death of a patient; (b) re status of chiropodists in hospitals. Legal Counsel also reported that the Gogebic County (Grandview) Hospital legal case had been decided by the Michigan supreme court against the hospital trustees.
- **Public Relations Counsel H. W. Brenneman** reported on recent county medical society PR meetings; proposed program of the January 30 Public Relations Conference; on special dinner for editors and publishers of newspapers to receive MSMS awards at Michigan Clinical Institute; that the Medical Associates brochure would be available from the printer in about 30 days.

Controlled fluoridation of the water supply is in operation in 930 communities in this country with a total population of some 17,000,000. Another 3½ million persons in the nation live in areas that have a beneficial amount of the tooth-decay-preventing element naturally present in their water supplies.—*Philadelphia Medicine,* August 20, 1954.



MEDICAL MEETINGS AND CLINIC DAYS

A list of known medical meetings and clinic days, sponsored by county medical societies and other physician groups in Michigan, follows:

1955		
March 8	Michigan Chapter, American College of Surgeons	Detroit
March 9-11	Michigan Clinical Institute	Detroit
March 11	Executive Committee, MSMS Council	Detroit
Spring	MSMS Postgraduate Extramural Courses	Statewide
April 13	Genesee County Medical Society's Tenth Annual Cancer Day	Flint
April 20	Executive Committee, MSMS Council	Kalamazoo
May 5	Twenty-Seventh Annual May Clinic, Ingham County Medical Society	Lansing
May 11	Annual Clinic Day and Alumni Reunion, Wayne University College of Medicine	Detroit
May 13	Eleventh Annual Clinic Day of the St. Clair County Medical Society J. J. Coury, Jr., M.D., Michigan Bank Bldg., Port Huron, Chairman of Arrangements	Black River Country Club Port Huron
May 18	Executive Committee, MSMS Council	Detroit
June 17-18	Upper Peninsula Medical Society	Gateway
June 6-10	Annual Session, American Medical Association	Atlantic City
June 15	Executive Committee, MSMS Council	Charlevoix
July 14-16	Mid-summer Session, MSMS Council	Mackinac Island
August 18	Executive Committee, MSMS Council	Menominee
September 26-27	Annual Session of the House of Delegates (MSMS)	Grand Rapids
September 28-30	MSMS Annual Session	Grand Rapids
September 25 & 30	MSMS Council	Grand Rapids
October	Clara Elizabeth Fund for Maternal Health and Genesee County Medical Society	Flint
October 13-14	Michigan Cancer Conference	Lansing
Autumn	MSMS Postgraduate Extramural Courses	Statewide

Additions to this list of meetings are invited by the Editor of JMSMS, in order to make this monthly announcement complete and accurate.

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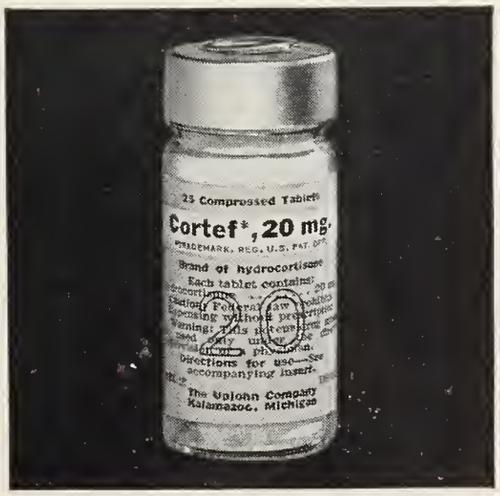
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1. Adequate survey of historical facts of patient's health followed by system review.
2. The patient should be adequately disrobed. Record the weight, height, temperature, pulse, age, sex, color.
3. Examine

Eyes:	Light reflexes—fundoscopic (with mydriatic if necessary); extra ocular muscle movements.
Ears:	Patency of canals; integrity of drums; gross hearing tests.
Nose:	Obstruction; mucosal lesions.
Mouth:	Gums (dentures removed); tongue; tonsils; mucosal lesions.
Neck:	Lymphnodes; thyroid; vessels.
Breast:	Inspection and palpation.
Chest:	Inspection; palpation; percussion; auscultation.
Heart:	Inspection; palpation; percussion; auscultation.
Blood Pressure:	Right arm preferable; if elevated, check for femoral pulse and take blood pressure reading in popliteal space.
Abdomen:	Inspection; palpation; masses (liver, spleen, kidneys, hernia).
G. U.:	Male: Palpate testes; retract prepuce. Female: Bimanual examination and speculum inspection.
Rectum:	Anal inspection; masses; prostate size and texture; (proctoscopic recommended).
Neurologic:	Cranial nerves; palsies; atrophies; reflexes; emotional adjustments.
Extremities:	Bones; joints; varicose veins; arterial pulsations; edema; temperature; color.
Skin:	General appearance; texture; temperature; color; lesions.
Lab:	Urinalysis; hemoglobin; white blood count (R. B. C. if necessary); Kahn; single P. A. chest film or 70 mm chest film; (blood chemistry when indicated)

Say you saw it in the Journal of the Michigan State Medical Society

Paging Dick Tracy, M.D.

To become detectives in the search for hidden or beginning disease is the challenging role confronting all members of the Michigan State Medical Society as the result of the Society's Periodic Health Appraisal Program.

The Periodic Health Appraisal Committee is composed of fifteen members, specialists and general practitioners, and is a joint committee of the Michigan State Medical Society and the Michigan Health Council. Its report was adopted by the Council of MSMS in the spring of '54, and this "go ahead" impetus was further accelerated last September by a resolution passed in the House of Delegates. Last October each member of the MSMS received a letter setting forth the objectives and outlining what the Committee felt should be included in a minimal Periodic Health Appraisal. The Committee encourages additions to this outline by the individual physician as he sees fit.

It is not enough for us as physicians to pick up only the obvious in disease, as a patrolman might arrest the burglars who have broken a plate-glass window on his beat. True, many of our efforts in medicine will, of necessity, be directed towards the evident in diagnosis, and much of our time will be spent in finding the appropriate treatment in each case. But if our patients are to receive the best in medical care, each of us must frequently doff his patrolman's badge and join the detective force. We must search for the hidden culprit threatening health, for the precursors and the beginnings of disease, and for the poor habits of living which hinder our patients from maintaining good health.

Many of our members are already doing this in an efficient, inspiring way. They are finding time in their busy days to give their patients a "periodic health appraisal", and by so doing are rendering these patients an incalculable service. Their example should stimulate the rest of us who may think we are too rushed, or not adequately trained, or that this is not in our line of medicine, or that we just are not interested. Let us examine these excuses.

Too rushed? Perhaps this is true in regular office time, but we can nearly always make an appointment for the patient to return at a period of our work-day when we can take the time adequately to examine him. In the meantime, the basic laboratory work recommended for all patients can be done first, i.e. blood count, Kahn, urinalysis and chest film. This will save a return trip to evaluate the lab findings, and will conserve both our time and that of the patient.

Not adequately trained? Anyone who has been graduated from a medical school, and is licensed to practice in Michigan is adequately trained to perform a periodic health appraisal. To help all of us brush up in areas in which we may be a little dusty, there will be brief articles in succeeding numbers of our MSMS Journal, each discussing certain aspects of the Periodic Health Appraisal.

Not in our line? True, the bulk of these exams will be done by general practitioners and internists. But even if we are in some other branch of Medicine, we can encourage the patients we see to go to their family physicians, whether general practitioners or internists, and arrange for such a Periodic Health Appraisal. In addition, we can each have one himself, and arrange a similar exam for each member of our family.

Not interested? Almost every day each one of us sees a patient who presents a problem in which we may not be enthusiastically interested. But we attempt to meet this problem anyway, knowing that to do less would mean to fail our patient at a point of need. Sometimes we have even learned to like doing so! The same can be true of the Periodic Health Appraisal. Our patients will progressively come to expect it, and if we don't provide it for them they will look elsewhere, to cultists or to governmental agencies.

Let us be detectives as well as patrolmen in this matter of health care!

John R. Rodger, M.D.
Chairman, Committee on Periodic Health Appraisal

Cancer Comment

CANCER OF THE STOMACH

Prepared by R. C. Hildreth, M.D., Kalamazoo, upon recommendation of the Michigan Cancer Co-ordinating Committee

Cancer of the stomach is regarded by some physicians as the equivalent of a death warrant. This view is fostered by the infrequency of cured cases in the experience of any single physician, as well as by some published reports that stress the pessimistic aspects of the disease. No such implication attaches to cancer of the breast; yet if the patient with cancer of the breast has fixation of the tumor to the chest wall, or distant metastases to bone, no mastectomy is carried out and, in most series, the patient does not figure in the five-year survival statistics. Not so with cancer of the stomach. Most studies scrupulously include every instance of the diagnosis, whether or not the patient ever is examined by a surgeon, and whether or not the diagnosis is confirmed by histologic study of tissue removed from the tumor or one of its metastases.

In studies of cancer of the stomach, we should distinguish between the different stages of the disease at the time treatment is carried out. It is not at all unusual to read that five-year survivors comprise 25 to 30 per cent of all patients with gastric cancer in whom a gastric resection "for cure" has been carried out (i.e., all gross evidence of tumor has been eradicated). The percentages are not very different from those for five-year survivals reported for radical mastectomy for cancer of the breast, and at the time of surgery the two conditions are comparable: as far as the surgeon can tell, the cancer has been entirely removed. The condition of a patient who has a gastric carcinoma that is non-resectable because of fixation to the aorta, for example, is analogous to that of a patient with cancer of the breast which is non-resectable by reason of extension to the chest wall. The fact that clinical examination can establish inoperability in the case of the breast lesion, whereas an abdominal operation is required to establish inoperability in the case of the gastric lesion, does not alter the basic similarity. Until a hopeless situation is disclosed by operation, we should adopt the same attitude of cautious optimism which we entertain toward "operable" cancer of the breast.

There are at least four points that should bolster the physician's thinking when he first diagnoses a cancer of the stomach. The first is the inability of the x-ray appearance to determine resectability. Even tumors that involve the entire stomach, as viewed by the radiologist, may be easily resectable because there is no extension beyond the stomach.

Secondly, operative mortality is going down. In a recent series of 145 patients undergoing primary laparotomy for gastric malignancy at the Cleveland Clinic, operative mortalities were 8 per cent.

Excessive morbidity following gastrectomy has lessened. Although en bloc dissection of involved neighboring structures remains in vogue, fewer patients really need the total gastrectomy procedure. This modern approach has lowered severe nutritional disturbances.

And finally, it is observed that, although the scirrhous form carries anominous prognosis, there are apparent cures in all other histo-pathologic types of gastric carcinoma.

Three-fourths of all patients with carcinoma of the eyelid are past fifty years of age.

* * *

The so-called rodent ulcer, with either nodules or pigment, is the commonest form of cancer seen on the eyelids.

* * *

Patients with repeated positive smears must be followed with the greatest care in spite of repeatedly negative cervical and endometrial biopsies.

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This is an actual strain of *staphylococcus aureus,* isolated from a 5-week-old infant. Note extreme sensitivity of the organism to ERYTHROCIN—although it easily resists penicillin and three broad-spectrum antibiotics. This organism may be associated with *sinusitis . . . otitis media . . . tonsillitis . . . abscess . . . bronchopneumonia . . . empyema . . . carbuncle . . . pyoderma . . . bronchiectasis . . . furunculosis . . . pharyngitis . . . septicemia . . .* and *tracheobronchitis.*

for specific therapy against coccic infections...

Wide-range activity against gram-positive pathogens—that's the story of ERYTHROCIN *Filmtab*. As you know, most bacterial respiratory infections are produced by staph-, strep- or pneumococci. *And that is the very range where* ERYTHROCIN *is most effective.* In fact, you'll find it more active against this group of organisms than many other antibiotics.

502087

prescribe

filmtab*

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

Against common intestinal flora



This sensitivity test shows ERYTHROCIN, penicillin and three broad-spectrum antibiotics against a typical strain of *E. coli.* Note that ERYTHROCIN and penicillin do not affect growth of the organism—*while all three broad-spectrum antibiotics show marked inhibitory action.* Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to cause alteration in common intestinal flora—with an accompanying low incidence of side effects.

...with little risk of serious side effects

One reason is because the drug acts specifically. It destroys coccic invaders, yet doesn't materially change the normal intestinal flora. Thus, side effects are rarely encountered with ERYTHROCIN. Nor does it cause the allergic reactions occasionally seen with penicillin therapy. Abbott

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prescribe

filmtab*

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE, ABBOTT)

PR REPORT

COUNTY SOCIETY MEETINGS

> **"Among county medical societies the realization is growing that (1) from here on, organized medicine must have a positive, permanent public relations activity and (2) much of this activity, to be worthwhile, must be carried on by the county medical society in the home community and in the doctor's own office.**
>
> **"Winning friends for Medicine at home—in Michigan and elsewhere—is the foundation for continued medical freedom. Solution of the problem is in your hands."**

The truth of these lines—taken from the foreword to the comprehensive PR manual of MSMS, "Winning Friends for Medicine"—and the determination of county medical societies to stimulate local PR activities during 1955 have become more and more evident in the continuing series of meetings planned by county society leaders for consultation with MSMS and officers and PR representatives.

So valuable were the first meetings, scheduled by individual county societies, that MSMS is now encouraging district get-togethers so that the movement towards a unified, statewide PR program, carried on at the local level, may pick up even greater momentum in the months to come.

The pattern for each of the county meetings was substantially the same. County society officers, Public Relations Committee members, MSMS delegates, and the District Councilor, gathered in the afternoon or evening to discuss PR plans. Present as consultants or advisors were MSMS officers, PR committeemen, and PR staff members. Using the 26-point manual as the foundation, county societies reviewed and evaluated PR programs currently under way (as well as single projects already completed), then point-by-point mapped out what might be done to strengthen PR programs in 1955. Careful consideration was usually given, also, to long-range planning of projects suitable for future years.

In each instance the aid available from MSMS was explained and stressed.

Typical reactions among county society members have been:

"I can't think of a single worthwhile PR project or program that isn't touched upon somewhere in 'Winning Friends for Medicine'." "Before this I never realized all of the PR services and aids available to county societies from MSMS." "It certainly has been enlightening to sit down and figure out where we have been, and where we want to go in our PR program . . . 'Winning Friends for Medicine' is both a foundation and a map for the future."

President Robert H. Baker, M.D., has taken part in many of the county meetings, as has MSMS PR Committee Chairman C. Allen Payne, M.D., and Secretary L. Fernald Foster, M.D.

With single-county meetings still a possibility in several areas, particularly in Jackson and Midland, here is the schedule so far in the series:

1. Macomb—Mt. Clemens, Nov. 1, 1954
2. Muskegon—Muskegon, Nov. 3, 1954
3. Calhoun—Battle Creek, Nov. 10, 1954
4. Oakland—Bloomfield Hills, Nov. 23, 1954
5. Lapeer—Lapeer, Nov. 20, 1954
6. St. Clair—Port Huron, Dec. 6, 1954
7. Washtenaw—Ypsilanti, Dec. 7, 1954
8. Kalamazoo—Kalamazoo, Dec. 8, 1954
9. Kent—Grand Rapids, Dec. 10, 1954
10. Saginaw—Saginaw, Dec. 14, 1954
11. Genesee—Flint, Jan. 4, 1955
12. Berrien—St. Joseph, Jan. 5, 1955
13. Grand Traverse—Traverse City, Jan. 7, 1955
14. Ingham—Lansing, Jan. 17, 1955
15. Ottawa—Holland, Feb. 18, 1955

Here is the preliminary grouping of county and district societies for the series of PR meetings planned during the first six months of 1955:

1. Huron-Sanilac-Tuscola
2. Gratiot-Isabella-Clare
3. Hillsdale-Lenawee
4. Clinton-Shiawassee-Eaton
5. Barry, Ionia-Montcalm
6. Branch, St. Joseph
7. Allegan, Cass, Van Buren
8. Wexford, Missaukee, Manistee, Leelanau and Benzie
9. Antrim-Charlevoix-Cheboygan and Emmett
10. Chippewa-Mackinac, Delta-Schoolcraft, Marquette-Alger-Luce
11. Houghton-Baraga-Keweenaw, Dickinson-Iron, Gogebic, Menominee and Ontonagon
12. Alpena-Alcona-Presque Isle, Otsego, Montmorency, Crawford, Oscoda
13. Roscommon, Ogenaw, Gladwin and Kalkaska
14. Bay-Arenac and Iosco
15. Mason-Mecosta-Osceola and Lake

THE SECRETARY'S LETTER from the AMA recently carried a classic example of bureaucracy at work under Great Britain's scheme for socialized medicine. *The Journal AMA* correspondent in England gave the following report of correspondence between the Ministry of Health and a certain hospital management committee concerning the composition, strength, and size of toilet tissue:

"The Ministry takes exception to the quality of the paper purchased by the committee. It is said to contain 20 per cent 'mechanical wood' and to burst at 5¼ to 7 pound pressure, whereas the specified minimum

(Continued on Page 152)

PENICILLIN PLUS!

Oral BICILLIN is a penicillin of choice because it is synonymous with plus factors in penicillin therapy. It means assured penicillin absorption through its unique resistance to gastric destruction.[1] It means more prolonged action than soluble penicillins achieve.[1] It means penicillin *plus* delicious taste (Oral Suspension), *plus* convenience of administration (Tablets), *plus* the notable safety of penicillin by mouth.

For *all* these plus factors, prescribe Oral BICILLIN.

1. American Medical Association: New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

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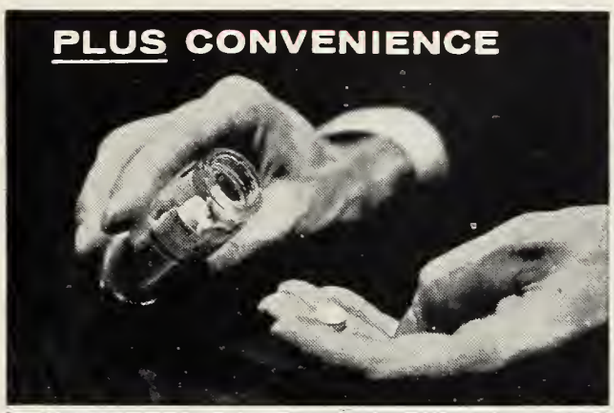
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Benzathine Penicillin G (Dibenzylethylenediamine Dipenicillin G)

Penicillin with a Surety Factor







AMA Washington Letter

THE MONTH IN WASHINGTON

With the 84th Congress well into its first session, all indications point to an active year in medical legislation. Many of the bills will founder somewhere along the way, but as of now an imposing number are lined up awaiting consideration in Senate and House.

Confirmation that medical problems rank high in the administration's work schedule for Congress came early in January in President Eisenhower's State of the Union Message. This is the address, deliverd in person before a joint meeting of Senate and House, in which the President annually outlines in general terms the condition of the country and the new legislation he believes should be enacted.

This message highlighted the President's objectives, but did not tell in specific terms how he expected to reach them. The details came later, in five additional messages to Congress, including one on health on January 24. The President wants Congress to take action on the following health and medical items.

1. A federal health reinsurance service. This idea was rejected by the House last year, but neither Mrs. Hobby nor Mr. Eisenhower has given up hope for it.

2. A plan to insure better and more uniform medical care for public assistance recipients through larger U. S. appropriations and more administrative controls.

3. Federal assistance in construction of health facilities and in providing more trained health personnel (other than physicians).

4. A new federal program to combat mental illness and return more mental patients to useful lives outside institutions.

5. An improved federal program for aiding crippled children and for maternal and child health.

6. Strengthening of the pure food and drug laws to give greater consumer protection.

7. More attention to "the increasingly serious pollution of our rivers and streams and the growing problem of air pollution."

8. An expanded program for the medical care of military dependents.

9. A voluntary health insurance program for federal civilian employes with U. S. contributions and payroll deductions authorized for the employes.

So much for what the Republican President hopes to get through Congress. It is too early to say how much of this program will have the support of the Congress, now under Democratic control. It is clear, however, that many leading Democrats want to enact some legislation the President didn't include in his program. In the early weeks of the session they introduced scores of bills to carry out their ideas.

Federal aid to medical education is prominent in the plans of many of the Democrats, and some of the Republicans. The bills cover a wide range, some restricted to construction grants but others offering help in meeting operating expenses and incentives to increase the number of students. Other bills offer federal grants to voluntary health plans to subsidize coverage of the indigent, the "medically indigent," the unemployed and the aged. Because the administration has declared itself opposed to subsidies, it is unlikely that any measures of this type will win the support of Mrs. Hobby's department and the White House.

Members on both sides of the aisle also are proposing greater emphasis on research seeking the causes and cures of such diseases as cancer, heart disease, mental illness and arthritis. Some of these bills fit in with the Eisenhower program and philosophy, and are likely to have White House support at the hearings.

This tendency to stimulate more basic medical research, both at the federal level and through state grants, may be an important factor when Congress gets around to passing the appropriation bills for the various Institutes of Health, the research arm of U. S. Public Health Service.

Several years ago a Democratic Congress took a serious interest in a bill for federal aid to local public health departments. Some of the influential Democrats have revived this idea, and are working for its passage this session. As expected, the old Truman-Ewing plan for national compulsory health insurance again is before Congress. The first one to introduce a bill along these lines was Rep. John D. Dingell, a sponsor of the original plan. Later others joined with him in backing the idea, but up to now the open support for it is not extensive on Capitol Hill.

What's New in Reinsurance

The eminent Secretary of Health, Education and Welfare has delivered a series of quotable phrases which bear repetition. She has said that the administration is backing reinsurance because "time is running out against those who seek to keep health insurance on a voluntary basis. . . . We

(Continued on Page 152)

aqueous vitamin A



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AQUASOL VITAMIN A DROPS

Aquasol Vitamin A Drops provides 50,000 U. S. P. units of natural vitamin A per gram in aqueous solution.

Aqueous solutions of vitamin A . . . as available in Aquasol Vitamin A Drops . . . are more rapidly absorbed than vitamin A in oil solutions. [1-8]

It is suggested in patients with dysfunctions of the liver, pancreas, and biliary tract which interfere with utilization of fats; in celiac disease and certain other diarrheal states. [1,4,8]

The Research Laboratories of U. S. Vitamin Corporation in 1943 pioneered and developed the making of aqueous solutions of lipo-soluble vitamins . . . now protected by U. S. Patent No. 2,417,299.

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1. Lewis. J. M., et al.: Jl. Pediatrics 31:496, 1947
2. Kramer, B., et al.: Am. Jl. Dis. Child. 73:543, 1947
3. Halpern, G. R., et al.: Science 106:40, 1947
4. Nutrition Reviews 5:286, 1947
5. Clifford, S. H. and Weller, K. H.: Pediatrics 1:505, 1948
6. Popper, H., et al.: Gastroenterology 10:987, 1948
7. Davidson, D. M., et al.: Jl. Invest. Derm. 12:221, 1949
8. Nutrition Reviews 6:248, 1948

THE MONTH IN WASHINGTON

(Continued from Page 150)

still strongly believe in a bill. . . which seeks to compress the experimentation of the next 20 years into less than half the time through the simple mechanism of a broad sharing of risks. We believe such a bill will . . . nurture rather than weaken the voluntary health insurance concept. . . . I very much hope that the AMA will see its way clear to support health insurance."

Now, while the AMA has not given unequivocal approval to voluntary prepayment medical services, its position on this federal tax on the premiums paid for these services is stated clearly. The AMA has believed that the insurance carriers themselves have all the reinsurance money needed and that voluntary health insurance is making extremely rapid progress without reinsurance. It notes that reinsurance will not make uninsurable risks insurable and that the scheme thereby holds out false promises. It feels that without an objectionable subsidy, reinsurance would not reduce the cost of insurance or overcome the inertia of the unwilling buyer. The proposal introduces the federal government into an area where it does not properly belong.

This position is shared with much of the insurance industry, the United States Chamber of Commerce and many groups. It seems not to be shared by the Chief Executive who plans on resubmitting a health reinsurance plan to the 84th Congress. It would not serve the subscribers to Michigan Medical Service but it might very well prove to be a boon to the dilettantes who do best with other people's money. And it will be most interesting to observe the bipartisan approach to an inspection of the reinsurance proposal.—WILLIAM BROWNE, *Detroit Medical News,* December 27, 1954.

PR REPORT

(Continued from Page 148)

burst is at 8 pounds. Again, the pieces are 6½ inches long instead of the prescribed 6 inches, which means, as a little calculation shows, that instead of getting 100 pieces in a roll, the hospital is getting only ninety-two. Even that is not all, for, if the hospital rolls weigh 12 ounces including the core, the Stationary Office rolls weigh 12 ounces without the core, another loss of 5 per cent to the hospital.

"The management committee points out that its 12-ounce rolls do exclude the core, so that the 5 per cent shortage does not arise. As for the length of the pieces, it is considered that 6½ inches provides a greater margin of safety than 6 inches. No adverse effects have been observed from using paper of lower bursting strength or including mechanical wood. The important thing is that the management committee claims that by using a toilet paper that does not comply with specifications something like $560 a year is saved."

WAYNE UNIVERSITY STUDENTS VISIT RESEARCH LABORATORIES



Members of the senior class of the Wayne University College of Medicine and their wives visited Eli Lilly and Company, December 19-22, 1954.

While guests of the Lilly's, they inspected the Lilly Research Laboratories and toured pharmaceutical, biological, and antibiotic production facilities.

L. M. Fahl, Lilly representative in Detroit, who accompanied the group to Indianapolis, appears at the extreme right of the first row.

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for the treatment of **pneumonia**
and other respiratory tract infections

Terramycin®

BRAND OF OXYTETRACYCLINE

For (ESTABLISHED) broad-spectrum antibiotic therapy—supplied in convenient Capsules, Tablets (sugar coated), Oral Suspension (raspberry flavored), Pediatric Drops (raspberry flavored), Intramuscular, Intravenous and Ophthalmic Ointment.

Tetracyn®

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For the (NEWEST) broad-spectrum antibiotic therapy—supplied in convenient Capsules, Tablets (sugar coated), Oral Suspension (chocolate flavored), Pediatric Drops (banana flavored), Intravenous and Ophthalmic Ointment.

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Special Events During the Michigan Clinical Institute

A Testimonial Luncheon, to honor Alexander Brunschwig, M.D., of New York City and Frederick A. Coller, M.D., of Ann Arbor will be held Wednesday, March 9, at 12:15 p.m. in the English Room of the Sheraton-Cadillac Hotel. Sponsors of this luncheon are the Michigan Division and the Southeastern Michigan Division of the American Cancer Society, and the Michigan Cancer Coordinating Committee.

Following luncheon, Dr. Coller will speak on "Enemies of Health" and Dr. Brunschwig will talk on "Contribution of the Laity in the Fight Against Cancer."

All MSMS members are cordially invited to attend. For reservation, contact Edward W. Tuescher, 4811 John R, Detroit.

* * *

The Michigan Industrial Medical Association will hold its Sixth Annual Health Day on Wednesday, March 9, at the Sheraton-Cadillac Hotel, Detroit. The meeting will begin with luncheon in Parlors G-H-I at 12:30 p.m. An honorary scroll will be presented at 3:00 p.m. in the Grand Ballroom to one who has rendered distinguished service to medical education in Michigan and the nation.

Arthur Vorwold, M.D., and O. Todd Mallory, Jr., M.D., will discuss "Industrial Health Education at the University of Michigan and at Wayne University Medical Schools," in Parlors G-H-I, beginning 3:30 p.m. This will be followed by the Annual Business Meeting at 4:30 p.m.

The Annual Dinner of MIMA will be held in the Sheraton Room at 6:30 p.m., when Ralph L. Lee, nationally known speaker of wide experience in the fields of engineering, sales and industrial research, will talk on "The Feel of a Firm."

All MSMS members are cordially invited to attend. For reservation, contact Lyndle R. Martin, M.D., 2000 Second Avenue, Detroit 26.

* * *

The Michigan Regional Committee on Trauma, American College of Surgeons, will hold a meeting on Wednesday, March 9, at the Sheraton-Cadillac Hotel, Detroit. Beginning with color television on trauma subjects at 11:00 a.m. in the Grand Ballroom, the meeting will move to the Sheraton Room at 12:30 p.m. for luncheon, followed by a business meeting.

The afternoon program on trauma, to be held in the Grand Ballroom as part of the MCI program, will run from 1:30 to 3:00 p.m. Just before adjournment of the Assembly, a scroll will be presented to a member who has rendered a distinguished service to medical education.

All MCI registrants are most cordially invited to attend this meeting.

Michigan Chapter, American College of Surgeons Clinic will be held Tuesday, March 8, in the Grand Ballroom of the Sheraton-Cadillac Hotel.

PROGRAM

A.M.

8:00 Registration—Outside Grand Ballroom

9:15 "Sarcoma of the Ovary"—A review, with report of an unusual case
ROBERT G. EDKINS, M.D., Highland Park

9:30 "Carcinoma in Situ of the Cervix"
LYNDON E. LEE, JR., M.D., P. J. MELNICK, M.D., and HARRY E. WALSH, M.D., Eloise

9:45 "Carcinoma of the Esophagus"
G. S. WILSON, M.D., JOEL E. POWERS, M.D., CHAS. G. JOHNSTON, M.D., Detroit

10:00 "Regional Enteritis"
CHARLES S. ROGERS, M.D., JAMES BARRON, M.D., and LAWRENCE S. FALLIS, M.D., Detroit

10:15 "Mistaken Diagnosis in Appendicitis"
ROBERT E. PAXTON, M.D., Lansing

10:30 "Intestinal Decompression Sound and Early Surgery in the Management of Acute Small Intestinal Obstruction"
M. O. CANTOR, M.D., Detroit

Discussion

11:00 "Richter's Hernia"
ROBERT W. GILLESPIE, M.D., and MERLE M. MUSSELMAN, M.D., Eloise

11:15 "An Evaluation of the Surgical Procedures for Femoral Hernia"
M. K. PASTORIUS, M.D., D. J. BARTON, M.D., LYLE D. MILLIKEN, M.D., and BROCK E. BRUSH, M.D., Detroit

11:30 "The Treatment of Ruptured Tendons in the Hand"
PRENTIS J. WALKER, M.D., and JOSEPH L. POSCH, M.D., Detroit

11:45 "Use of Bilobe Pedicle Flap Grafts in the Treatment of Decubitus Ulcers"
ROBERT T. CROWLEY, M.D., and W. O. NICKEL, M.D., Dearborn

Discussion

Luncheon, 12:00 Noon

P.M.

2:00 "Traumatic Rupture of the Spleen"
T. D. GREKIN, M.D., Eloise

2:15 "Splenic Trauma"
FRANK H. POWER, M.D., Traverse City

2:30 "Diagnostic Splenal Portal Venography"
JOHN OREBAUGH, M.D., Ann Arbor

Discussion

3:00 "The Swollen Arm Following Radical Mastectomy"
F. D. DODRILL, M.D., Detroit

3:15 "Review of 100 Consecutive Cases of Thyroidectomy"
JAMES B. RAYMER, M.D., and H. B. FENECH, M.D., Detroit

3:30 "Hurthle-Cell Tumors of the Thyroid"
LAWRENCE W. GARDNER, M.D., Detroit

3:45 "Chronic and Delayed Traumatic Cerebrospinal Fluid Rhinorrhea as a Source of Recurrent Bouts of Meningitis"
RICHARD C. SCHNEIDER, M.D., and JOHN M. THOMPSON, M.D., Ann Arbor

Discussion

4:30 Business Meeting—Election of Officers

6:30 Cocktails

7:15 Banquet—Grand Ballroom

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1.0% (10 mg. per Gm.)
in 5 Gm. and 20 Gm. tubes
2.5% (25 mg. per Gm.)
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A fresh cultured Cottage Cheese with *no cream added* and *no salt added!* An appetizing source of milk's complete proteins, minerals and B vitamins. Small tender curds and sweet, fresh flavor. This low-calorie, high-nutrition food can be used in scores of easy-to-prepare, tasty dishes!

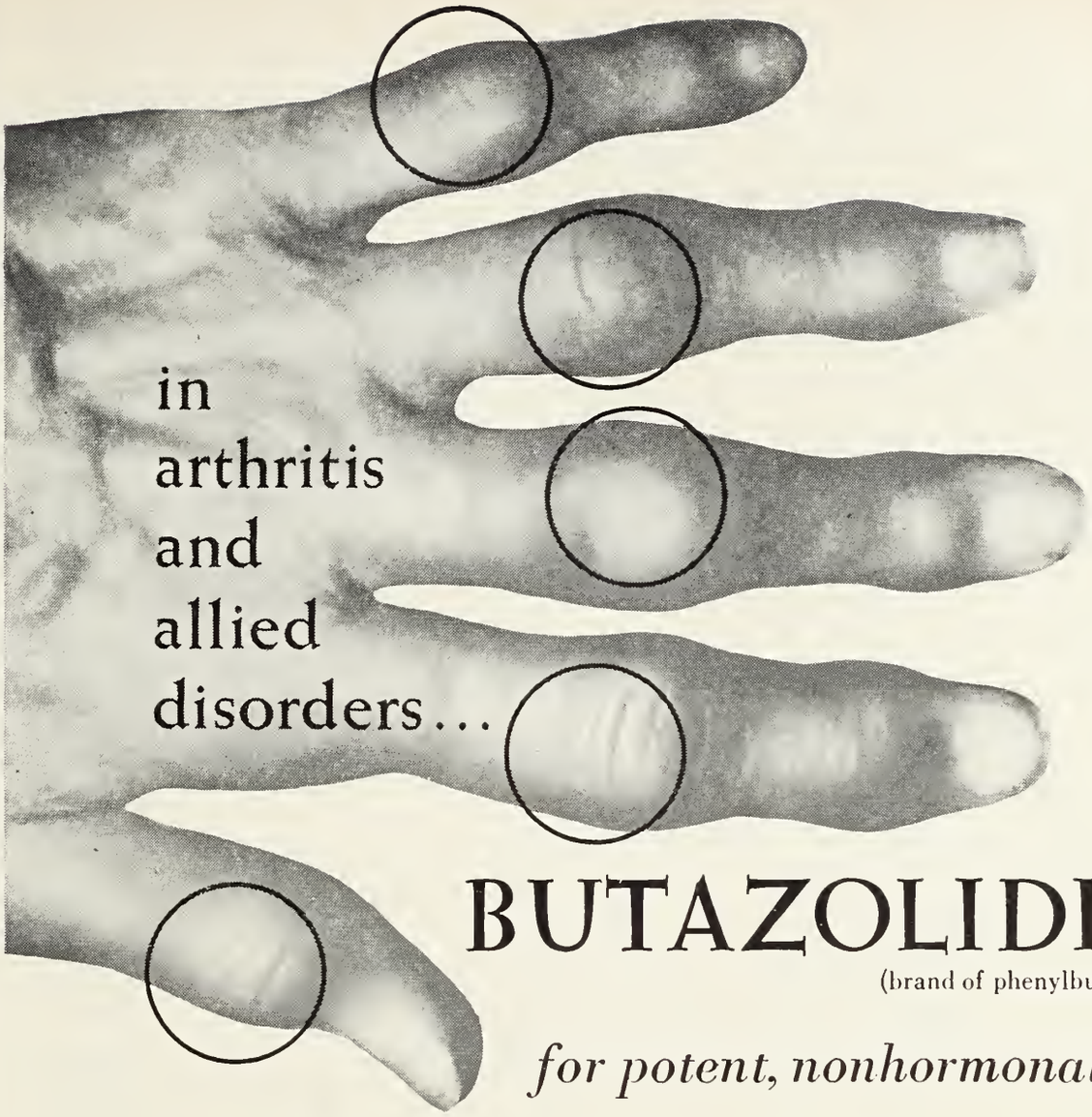
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The anti-arthritic potency of BUTAZOLIDIN is well substantiated by recent clinical reports. In peripheral rheumatoid arthritis, for example, BUTAZOLIDIN produced "major improvement" in 42.9 per cent of the patients studied; in rheumatoid spondylitis "major improvement" in 80 per cent; and in gout 90.9 per cent demonstrated "marked improvement" or "complete remission of symptoms and signs within 48 hours."*

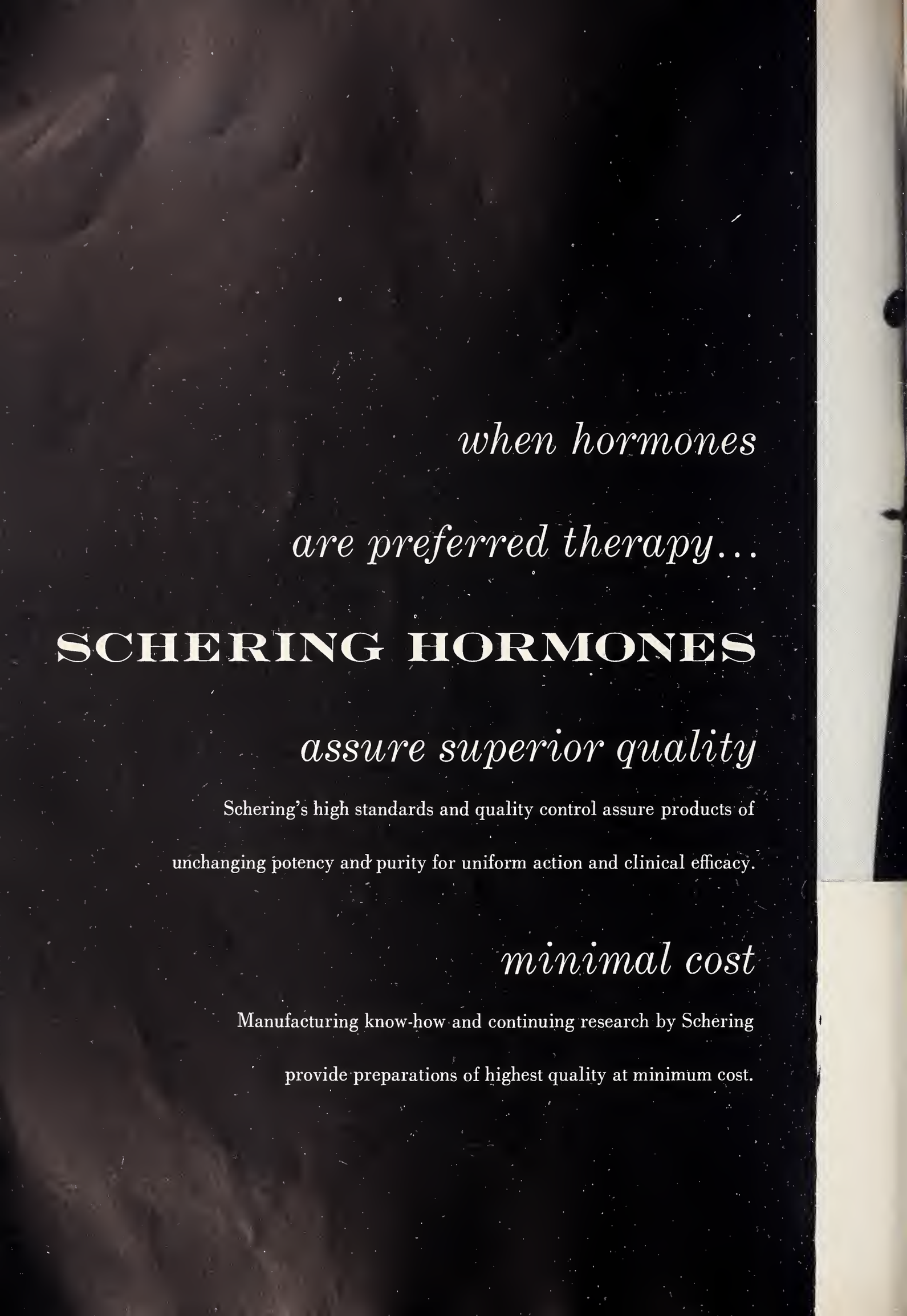
BUTAZOLIDIN being a potent agent, the physician should carefully select candidates for treatment and promptly adjust dosage to the minimal individual requirement. Patients should be regularly examined during treatment, and the drug discontinued should side reactions develop.

Detailed literature on request.

*MacKnight, J. C.; Irby, R., and Toone, E. C., Jr.: Geriatrics 9:111 (Mar.) 1954.

BUTAZOLIDIN® (brand of phenylbutazone): Red coated tablets of 100 mg.

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minimal cost
Manufacturing know-how and continuing research by Schering
provide preparations of highest quality at minimum cost.



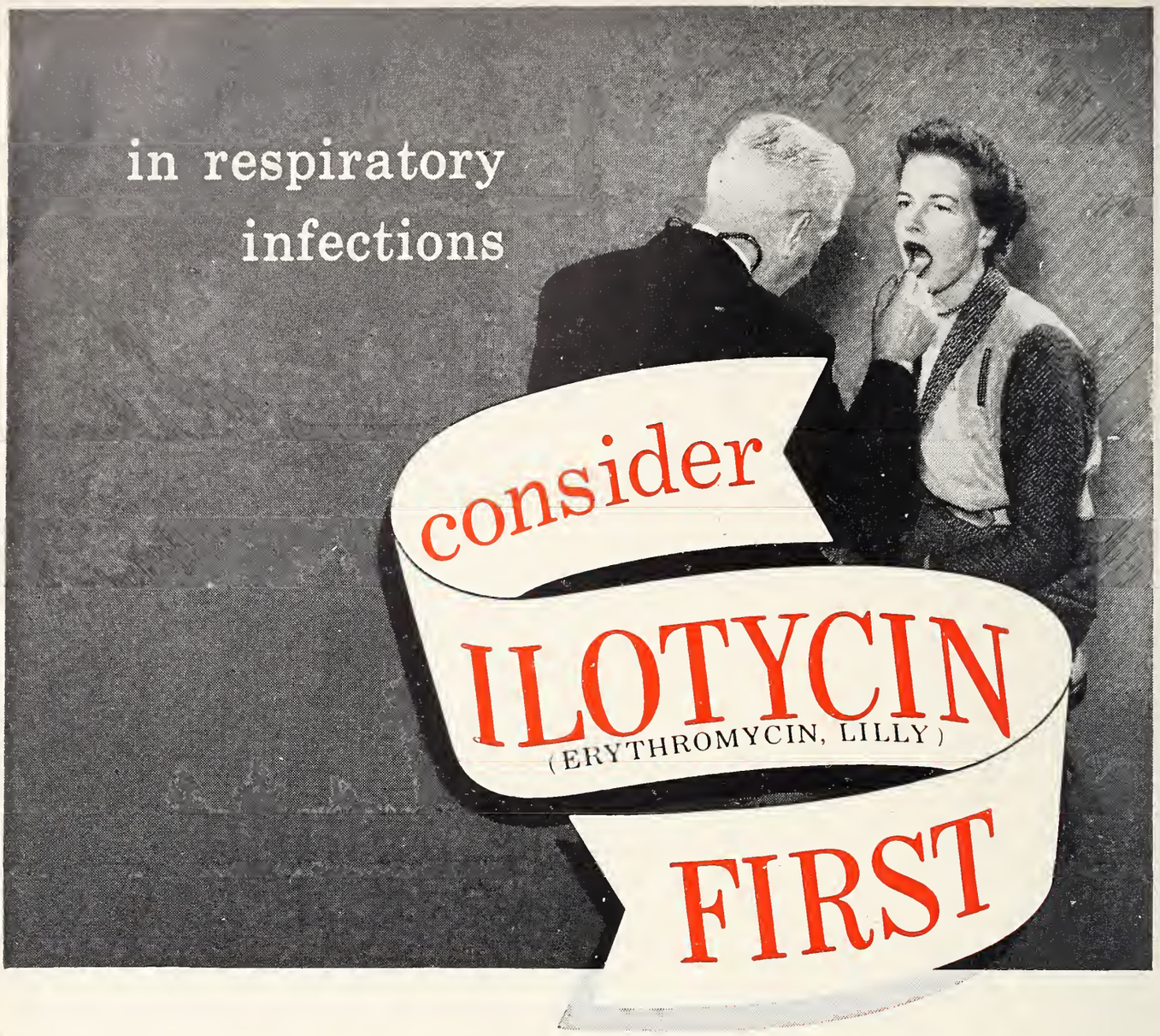
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needn't mean

"change of life"



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Most acute bacterial respiratory infections you encounter respond readily to 'Ilotycin.'

'Ilotycin' kills susceptible pathogens of the respiratory tract. Therefore, the response is decisive and quick. Bacterial complications such as otitis media, chronic tonsillitis, and pyelitis are less likely to occur.

Most pathogens of the respiratory tract are rapidly destroyed. Yet, because the coliform bacilli are highly insensitive, the bacterial balance of the intestine is seldom disturbed.

'Ilotycin' is notably safe and well tolerated. Urticaria, hives, and anaphylactic reactions have not been reported in the literature.

Staphylococcus enteritis, avitaminosis, and moniliasis have not been encountered.

Gastro-intestinal hypermotility is not observed in bed patients and is seen in only a small percentage of ambulant patients.

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Say you saw it in the Journal of the Michigan State Medical Society

The JOURNAL
of the Michigan State Medical Society
Issued Monthly Under the Direction of The Council
VOLUME 54 FEBRUARY, 1955 NUMBER 2

Alexander McKenzie Campbell

An Appreciation

By J. Duane Miller, M.D.
Grand Rapids, Michigan

SERVICE to patients and devotion to the principles of good medical practice, to God, his family, and his country were the keynotes of Alexander McKenzie Campbell's life.

Dr. Campbell's devotion to the welfare of patients during over fifty years of practice was the outstanding characteristic of Dr. Campbell's professional life. Personal service rather than personal gain were, in his mind, of paramount importance. Whether rich or poor the interest in, and treatment of, his patients and their welfare was steady and sustained.

Dr. Campbell's interest in his patients and his devotion to the practice of good medicine led him from the time of his graduation to seek knowledge and experience above the average, this sometimes at great personal sacrifice. He thereby became the outstanding doctor in his specialty in the community in which he practiced.

When he had reached the peak of his professional attainments he then devoted the remainder of his life to the improvement of the care of mothers and infants and improvement of the practice of his specialty throughout the state of Michigan.

Dr. Campbell's ethical, polite, and kindly treatment of his professional associates was always above reproach but was never allowed to interfere with those things that were in the best interest of the patients under his care or that he saw in consultation. His devotion to God was equal to that of his service to humanity and while he served for many years on the vestry of the church in his parish, his practice of Christian principles in his dealings with patients was a daily and practical application of his devotion to the Christian religion.

In early life Dr. Campbell married a gifted and talented young lady. To this union were born two splendid daughters. Dr. Campbell's devotion to his wife and to the welfare of his wife and children ended only with his departure from this life.

Dr. Campbell's sense of duty to his adopted country caused him to enlist twice in its service during periods of emergency. During each of these periods he served diligently the needs of the sick and wounded to the best of his ability.

Throughout his life Dr. Campbell maintained a fine and active interest in the practice of good medicine, his mind constantly searching for the application of research and development in the care of mothers and infants, and a flexible nature that allowed him to develop and apply these methods to the improvement of the care of patients.

Dr. Campbell's understanding of the fundamental purpose and needs of the practice of medicine made him an excellent practitioner. His interest in the improvement of maternal and infant care and his daily practice thereof made him the leader of his profession in his generation. The example he set for his associates in his treatment of patients, his devotion to good medicine, his relation to the medical profession and its improvement and the care of patients is beyond description.

Maternal Mortality Studies in Michigan

By Harold A. Ott, M.D.

Royal Oak, Michigan

THIS ISSUE of The Journal, reporting on certain causes of maternal deaths, is an appropriate memorial to the late Alexander MacKensie Campbell, M.D. His contribution to the constant decrease in maternal mortality cannot be reduced to or suggested by a few paragraphs of tribute. The history of maternal health activities in Michigan reflects the continuity and intensity of his interest and the breadth of his vision. Dr. Campbell's counsel and spirit pervaded all, and directly fashioned many.

Aroused by the large number of maternal deaths throughout the nation, the late George W. Kosmak, M.D., suggested in 1917 that the New York Academy of Medicine study the causes of these deaths. Such was delayed, however, until 1928 when Dr. Kosmak and Ralph W. Lobenstine, M.D., were deputized to study the "public health problems of obstetrics as they affect New York City."

The Shepard-Towner Act of 1923 provided federal support to state health departments for the establishment of Maternal and Child Health Sections; further federal funds for increased activities in these fields became available with the Social Security Act of 1935. Lillian B. Smith, M.D., was appointed Chief of the newly formed section in Michigan in 1925. Two years later, under Dr. Smith's direction, and with the approval of the Michigan State Medical Society, Florence Knowlton, M.D., began a field study of deaths associated with childbirth in out-state Michigan. As the study developed, Joseph H. Curhan, M.D., made a similar study of such deaths in Detroit. Dr. Knowlton made a progress report of 749 out-state maternal deaths to the Michigan State Medical Society in 1928. Dr. Curhan's progress report on 259 Detroit maternal deaths was made to Henry F. Vaughan, M.D., Detroit Commissioner of Health, in 1929.

The full study was completed in 1930. A total of 1,627 deaths occurring between July 1, 1926, and December 31, 1928, were investigated, and narrative and tabulated reports made. It is significant that this study was not restricted to the data from the death certificates. Personal visits were made to each physician who attended these women as well as visits to those hospitals where hospital care was given. It is unfortunate that these data were not fully published and that the study was not given the recognition which it deserved. Its significance and value may be suggested by comparing the causes of death determined by this study with those of the current study as shown in the statistical data presented by Dr. Hersey in this issue. Mention also should be made that the 1926-1928 study commented specifically regarding deaths which were considered preventable, although no assignment of responsibility was attempted.

"Maternal Mortality in New York City. A Study of All Puerperal Deaths, 1930-1932" was published in 1933. It aroused considerable criticism and discussion within the profession, yet the challenge it contained was recognized and accepted. Maternal health committees were formed throughout the country to study the problem of maternal care. The Maternal Welfare Committee of the Michigan State Medical Society was organized in 1933, with D. C. Cameron, M.D., of Alpena as its first chairman. Dr. Campbell, one of the charter members, was appointed chairman in 1934, which position he held until 1939 when he retired from private practice.

Under his chairmanship, with the co-operation of other interested organizations and individuals, Michigan played a leading part in developing program designed to improve maternity care. In 1936, Dr. Campbell and Norman Miller, M.D., conducted a six-week refresher course in obstetrics in Traverse City, Petoskey, Alpena and Grayling. But more than this was needed. Realizing that information regarding maternal health services derived only from a study of maternal deaths obviously would be distorted, the Maternal Health Committee surveyed the quality and distribution of maternal health services as reflected in some 20,000 births. This study was published in 1938. It is interesting to find that at this time 96.5 per cent of registered births were attended by doctors of Medicine and that 46.9 per cent occurred in hospitals. The inadequacies found by this survey

became the major concerns of the committee during the following years.

As special advisor of the Michigan State Medical Society to the Maternal and Child Health Section of the state health department, Dr. Campbell developed educational programs throughout the state. Refresher courses were held at the University of Michigan. For greater effectiveness in this program, obstetrical field consultants were employed. Clair Folsome, M.D., filled the position from 1938 to 1941, followed by Russell de Alverez, M.D., until he left for military service in 1944. Dr. Campbell retired from private practice in 1939 to become full-time consultant to the Maternal and Child Health Section, the salary being underwritten by the W. K. Kellogg Foundation. In this capacity he consulted with individual physicians, health officers, hospitals, and officers of local medical groups. He emphasized the continuing necessity for education in addresses before both medical and lay organizations.

While chronology is essential to coherence in any historical survey, such cannot always be maintained because of concurrent developments. In 1927 the Maternal Welfare Committee of the Wayne County Medical Society was established with Milton A. Darling, M.D., as chairman. It participated in the 1926-1928 study made by Dr. Curhan. In 1941, under the chairmanship of George Kamperman, M.D., it started a detailed critical study of all maternal deaths in Detroit. The chief of the obstetrical staff of the hospital where the death occurred was asked to report the details to the committee. Objections were raised because identity was known, but these did not hamper the study. A report, reviewing 135 deaths, was published in *The Detroit Medical News* in 1942.

The study, interrupted by the war, was resumed in 1945. With A. E. Catherwood, M.D., as chairman, the committee studied a survey made of the methods utilized by similar committees in other cities by G. M. Byington, M.D., the representative of the Detroit Department of Health on the committee. A form, designed to record detailed, comprehensive, and uniform data was adopted. From 1945 to 1950 Dr. Byington personally investigated all the deaths, submitting the report form to the committee. This report carried only a serial number, the identification data being contained on a detachable sheet which Dr. Byington, acting as secretary of the committee, retained. The deaths were reviewed by a subcommitte for the determination of the cause of death, preventability, and responsibility. Reports were made to the society and published annually in *The Detroit Medical News,* as have the reports of all subsequent committees.

Open meetings of the committee, under the chairmanship of Leonard Heath, M.D., were inaugurated in 1949, all members of the profession, including medical students, interns, and residents being invited. A separate letter of invitation was sent to the attending physician by the secretary. The free discussion of the cases, devoid of identifying material, rapidly became an effective means of education. However, few attending physicians accepted the invitations. In 1950 the committee was given permission to send a letter detailing its findings and discussion to the attending physician.

During 1951 through 1954, with the writer as chairman, additional methods designed to gain greater effectiveness for the study were adopted by the committee and approved by the Council of the society. Case protocols were prepared in a uniform manner and sent prior to the meeting to the attending physician along with an invitation to attend, to all members of the committee, and to the obstetrical departments of the hospitals in Wayne County. Members of the committee, selected in rotation, studied the cases and prepared their discussion in advance of the meeting. An evaluation form was devised to facilitate uniformity in reporting the findings of the committee. A review of maternal deaths in Detroit for the five-year period, 1946-1950, was presented by the writer before the meeting of the Central Association of Obstetricians and Gynecologists in Detroit in 1951. Since 1951 an internist and a pathologist have been members of the committee. An anesthesiologist was included in 1954. Since 1953 the committee has sent a letter of its detailed findings and evaluation to the hospital administrator, its chief of staff, as well as to the attending physician. Complete anonymity is still retained in all discussions, the society secretary presently being supplied with only such data as is needed to send the appropriate letters by the State Department of Health. After these have been completed, these data are destroyed.

Based upon the material from the study of maternal deaths, the Michigan Society of Obstetricians and Gynecologists now devotes one of its

meetings each year to a discussion of the problems involved, including selected illustrative cases. The data from the Wayne County study is alternated yearly with that from the Michigan State study.

During the years, other local studies were made, including Grand Rapids, Pontiac, and Flint. In 1949, the Maternal Health Committee of the Michigan State Medical Society, with Robert B. Kennedy, M.D., as chairman, developed a plan, for the study of all maternal deaths in Michigan. This was presented to and accepted by both the Council of the Michigan State Medical Society and the State Department of Health. The personal interview and detailed questionnaire method developed by G. M. Byington, M.D., was adopted for the gathering of data. Since the Michigan plan of study has received much commendation and is serving as a model for others subsequently established, certain of its features deserve mention.

The Michigan study includes all reported maternal deaths as well as deaths from other causes of women known to be pregnant at the time or within thirty days of their death. All such deaths are directed to Goldie B. Corneliuson, M.D., of the Maternal and Child Health Section of the Michigan Department of Health. Dr. Corneliuson was appointed assistant director of the section in 1936, being named chief upon the retirement of Dr. Lillian Smith in 1946. All processing of reports is done under her direction, including the notification sent to the visiting obstetrician who is to make the field study, the receipt of the completed report, the assignment of a code number, the removal of all identifying data, and the distribution of the copies of the coded report.

The state is divided into ten districts, to each of which at least one visiting obstetrician is assigned. These are qualified obstetricians-gynecologists, the majority being diplomates of the American Board of Obstetrics and Gynecology. They are notified promptly after a death report is received by the State Department of Health. Each case is carefully studied by one of the visiting obstetricians and includes a review of the hospital records, pathology protocol, and other pertinent documents. Interviews are had with the attending physician, the consultants, and hospital personnel. On occasion, if data cannot be obtained from professional sources, relatives or others who may have significant information are interviewed. From these data the detailed form is filled out for further study. A summary by the attending physician is included when possible. In addition, the visiting obstetrician prepares a summary of the factual data and includes comment upon the adequacy of the hospital facilities and personnel as well as upon the completeness of the medical records.

The completed report, identified only by code, is analyzed by the Evaluation Subcommittee of the Maternal Health Committee. It judges whether the death was due to obstetrical or nonrelated causes and whether it should be considered preventable or non-preventable. For preventable deaths, responsibility is assigned to the patient, the physician, the consultant, the hospital, or to any combination. Whenever possible, the factors involved also are determined. The committee currently is composed of the Professors of Obstetrics and Gynecology at the University of Michigan and Wayne University and a practicing obstetrician.

In turn the reports are received by the Publications Subcommittee which further study the data, make final classifications, and prepare the material for publication. Except for a paper presented before the Central Association of Obstetricians and Gynecologists in 1953, the papers contained in this issue of The Journal are the first to be published. Before any data or comment based upon these reports may be released for general publication, they must be reviewed and approved by the Council of the Michigan State Medical Society. County societies, such as Wayne County since 1950, are furnished with a copy of the code-identified report for independent analysis and action.

This study, the co-operative efforts of the Maternal Health Committee and the State Department of Health, became statewide in 1950. Harry A. Pearse, M.D., was chairman of the committee at this time, with the following as chairmen of the related subcommittees: Maternal Mortality Study, Alexander M. Campbell, M.D.; Evaluations, Norman F. Miller, M.D.; Publications, Palmer E. Sutton M.D. Under their direction, with the capable and vigorous assistance of the entire committee, the results of this detailed and thorough study are now presented as a preliminary report to the profession at large. The study, now in its fifth year, is destined to continue indefinitely.

While maternal mortality is one of the major concerns of the committee, it continues active in

many other phases of maternal care. Contributions to the advances in maternal welfare in Michigan have been numerous and varied. It is difficult, if not impossible, to give proper credit to the many who through the years have given generously of their time, study, and matured professional experience. It is realized that the loyalty and self-effacement of many may appear unrecognized and unappreciated, yet it seems only proper to list the chairmen of the Wayne County and Michigan State Medical Societies under whose leadership so much has been contributed by so many to the increasingly better health of women in Michigan.

MICHIGAN STATE MEDICAL SOCIETY
Maternal Health Committee

Chairmen
_____
_____
_____
_____
_____
D. C. Cameron, Alpena
A. M. Campbell, Grand Rapids
A. M. Campbell, Grand Rapids
A. M. Campbell, Grand Rapids
A. M. Campbell, Grand Rapids
A. M. Campbell, Grand Rapids
A. M. Campbell, Grand Rapids
W. F. Seeley, Detroit
H. W. Wiley, Lansing
C. E. Toshach, Saginaw
C. E. Toshach, Saginaw
C. E. Toshach, Saginaw
A. E. Catherwood, Detroit
A. E. Catherwood, Detroit
R. B. Kennedy, Detroit
R. B. Kennedy, Detroit
R. B. Kennedy, Detroit
H. A. Pearse, Detroit
H. A. Pearse, Detroit
P. E. Sutton, Royal Oak
P. E. Sutton, Royal Oak
P. E. Sutton, Royal Oak

3019 N. Woodward

WAYNE COUNTY MEDICAL SOCIETY
Maternal Welfare Committee

Years	*Chairmen*
1927-1928	M. A. Darling
1928-1929	M. A. Darling
1929-1930	H. Henderson
1930-1931	H. Henderson
1931-1932	M. A. Darling
1932-1933	J. P. Pratt
1933-1934	J. P. Pratt
1934-1935	H. B. Cushman
1935-1936	H. B. Cushman
1936-1937	G. Kamperman
1937-1938	H. B. Cushman
1938-1939	M. A. Darling
1939-1940	O. C. Foster
1940-1941	R. W. Alles
1941-1942	G. Kamperman
1942-1943	G. Kamperman
1943-1944	G. Kamperman
1944-1945	A. E. Catherwood
1945-1946	A. E. Catherwood
1946-1947	R. B. Kennedy
1947-1948	R. Whiteley
1948-1949	R. Whiteley
1949-1950	L. Heath
1950-1951	L. Heath
1951-1952	H. A. Ott
1952-1953	H. A. Ott
1953-1954	H. A. Ott
1954-1955	H. W. Longyear

TIC DOULOUREUX

The use of a fairly new drug to stop what has been sometimes described as "the worst pain in the world," that coming from tic douloureux, has been reported from the November meeting of the American College of Surgeons, at Atlantic City. . . . Eye complications, including the loss of an eye, had too often been the sequellae of what had previously seemed the best remedy, facial nerve surgery. . . . The newly-used drug is stilbamidine, and it is reported that it seems somehow to paralyze the fifth nerve causing the trouble, without affecting other nerves. . . . The clue to the drug's new use came when patients who were taking stilbamidine for internal fungus diseases reported that their cheeks felt numb. This gave the idea of trying it for tic douloureux to Dr. George W. Smith, neurosurgeon of Johns Hopkins Hospital, Baltimore, and Dr. Joseph M. Miller, of the VA Hospital, Fort Howard, Md. . . . It is reported that the drug has completely eliminated pain in fifteen of the first sixteen patients, with the first patient on whom it was tried being completely free from pain after twenty-five months. The sixteenth patient is reported 80 per cent free from pain, and it is suggested that he may have some condition other than nerve trouble.—*Guildcraft,* December, 1954.

Licensing of Maternity Units in Michigan

By Albert E. Heustis, M.D., M.P.H.
Commissioner, Michigan Department of Health
Lansing, Michigan

THE MICHIGAN Department of Health has worked closely with the Michigan State Medical Society throughout the years in making a concerted effort to assure the highest possible quality of medical and hospital care for Michigan's mothers and infants.

In April, 1926, was begun one of the first maternal mortality studies in the United States under the leadership of Lillian R. Smith, M.D., then director of the State Health Department's Maternal and Child Health Program, with the co-operation of the Detroit City Health Department and the approval of the Michigan State Medical Society. During the study close contact was maintained between the Michigan State Medical Society and the Michigan Department of Health, and the need for maternity consultation services to physicians and hospitals was pointed up. The Michigan State Medical Society appointed Dr. Alexander Campbell as a special advisor on maternal health to the Michigan Department of Health in the middle thirties. On February 2, 1939, he joined the staff as a full-time obstetrical consultant. In addition to Dr. Campbell, Dr. Clair Folsome and Dr. Russell deAlvarez served as obstetrical consultants on the staff of the Michigan Department of Health. These men visited hospitals and other institutions where maternity care was given and discussed with medical staffs and administrators improvements in practices and facilities.

The Department placed more and more emphasis on this phase of the program. Nursing consultants were added to the staff and manuals on maternity and newborn care were prepared with the help of practicing physicians, hospital administrators and others.

During these years, the responsibility for the licensing of maternity hospitals rested with the Department of Social Welfare. On September 28, 1951, the Legislature transferred this responsibility to the State Health Commissioner.

In addition to this legislation passed in 1951, the State Health Commissioner, by virtue of an act passed in 1953, was given other specific legal responsibilities concerning hospitals; namely, the making of rules and regulations to protect the public health; the establishment of minimum standards of maintenance and operation for hospitals built with federal funds; and the certification of all hospitals to the Department of Social Welfare.

At the 1954 session of the Michigan Legislature, in order to clarify questions of constitutionality, the Legislature considered and passed Public Act No. 83 which amended the basic public health law by incorporating in it the material briefly contained in the Welfare Department Appropriation Act. Thus the new law is substantially the same as the old except that the Legislature added the word "enforce" and called upon the State Health Commissioner to define a hospital. *The new law exempted, as did the previous one, the regulation of medical personnel within hospitals* and also exempted all hospitals already responsible to any other standard-setting and standard-maintaining authority of the state. The new law also limited action which could be taken, as did the previous one, to that which was necessary to bring about conformity with the requirements of the federal government. This new law supplements the responsibilities already given for the regulation of maternity hospitals and maternity homes.

In the discharge of our responsibilities concerning hospitals, several steps are noteworthy.

First, a basic philosophy was adopted that the Michigan Department of Health should do more than point out what was wrong or what might be improved in hospitals. Our job, as we see it, is to provide advice and consultation upon how to meet the requirements and to meet them efficiently and economically, as well as practically.

Second, we sought the active cooperation of hospital people themselves and of the members of the Maternal Health Committee of the State Medical Society. We plan to ask the active cooperation of the Joint Commission on Accreditation. We shall endeavor to secure advice and suggestions as to how our procedure might be improved and as to how hospitals might be made even safer places for patient care.

Third, we undertook to interpret the Rules and Minimum Standards with fairness, justness and

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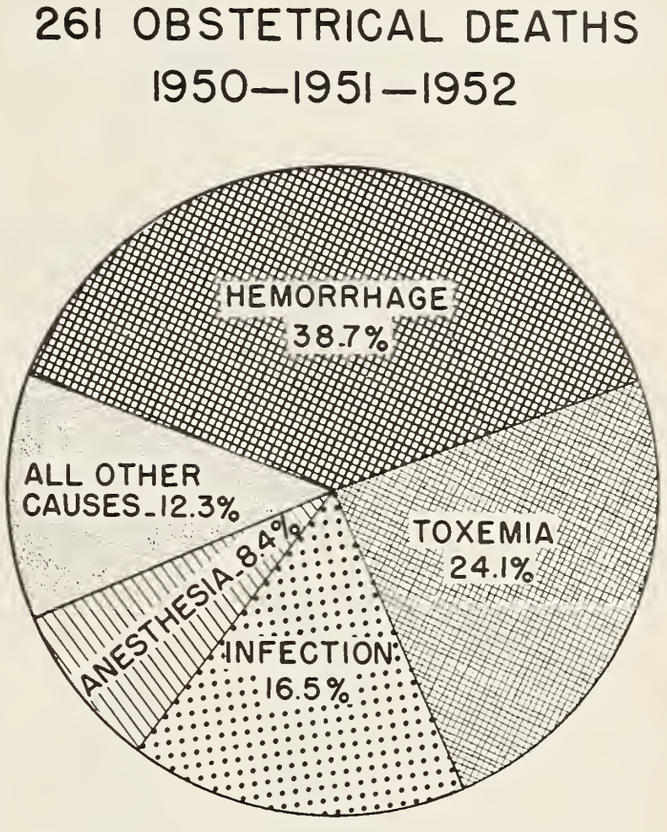
Michigan Maternal Mortality Study 1950-1952

By Margaret S. Hersey, M.D.
Kalamazoo, Michigan
and
Palmer E. Sutton, M.D.
Royal Oak, Michigan

MATERNAL MORTALITY still offers a distinct challenge to the patient, to the physician and to the maternity unit administrator. A study of the records, both a generation ago and currently, gives evidence of our phenomenal improvement but also indicates where present defection exists. While in general Michigan's record parallels the national trend, our position of twelfth place among the states should cause us to lose any degree of smug complacency which may have overtaken us.

In presenting this preliminary report of the current study begun in 1950, the committee has utilized the talents of many and attempted to reflect current thinking and methods. Mechanism at the state level is difficult and publication of observations lags as compared with the large county or city surveys. Summarization of the multitude of minutia is insurmountable. This does not prevent the reporting of broad conclusions. It has been noted for some time that reviews based on observations from death certificates are utterly fallacious. Previous definition of a maternal mortality, which includes a nine-month postpartum period, has been abandoned in favor of a ninety-day postpartum period. Attempts at evaluating preventability is currently thought to be useful and further to charge responsibility to patient or to physician or hospital or combinations of these. In this attempt, the ideal is projected as something that can be accomplished in comparison to actual circumstances. Therefore, the standard for evaluating preventability is high but in a sense justifiable. Our attempts at assigning causes of death is undoubtedly subject to error. The error is shared, however, by the members of the publication committee, by the members of the evaluation committee, by the regional visiting obstetrician and by our consultant members in Cardiology, Anesthesiology and Pathology.

We have attempted to abandon the use of the previously accepted term "non-maternal death."



Graph 1.

We propose as definition, therefore, a maternal death as one occurring in a woman who is pregnant or within ninety days post-partum. We have further attempted to divide maternal deaths according to causes of death as due to obstetrical or non-obstetrical causes. Therefore, the true maternal mortalities, as reported, are those due to obstetrical causes. If this suggested change is acceptable, it does accomplish emphasis on causative factors. We believe the previously used term of non-maternal death as referred to a death of a woman who is pregnant is an ill-use of language and probably results from an abbreviation or inferred elimination of the word cause. When "non-maternal cause of death" is used it has the same meaning as maternal death due to non-obstetrical causes.

A total of 382 maternal deaths occurred during the first three years of our study. Of these, 261 were considered to be deaths due to obstetrical causes and 121 deaths have been classified as deaths from non-obstetrical causes. For comparative purposes the committee has followed the usual

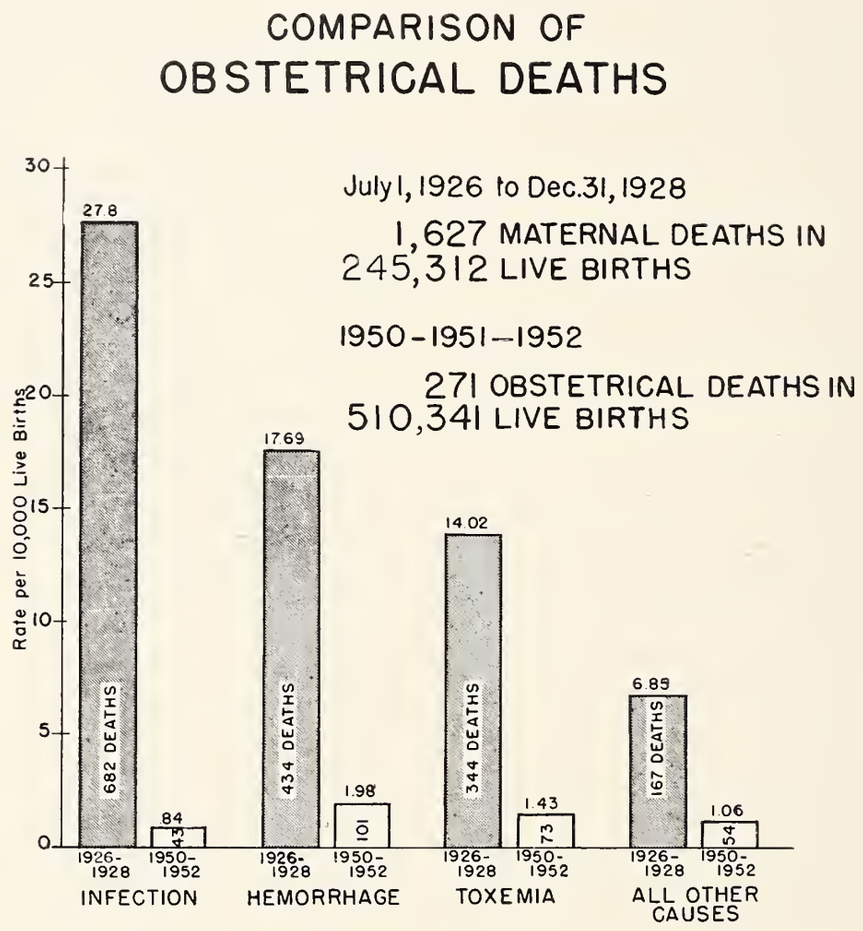
Dr. Hersey is Maternal and Child Health Consultant, Michigan Department of Health.

TABLE I. MICHIGAN MATERNAL MORTALITY STUDY
1950-1952
382 Deaths

Category	Obstetrical Causes	Non-Obstetrical Causes	Total
I. Hemorrhage	101	0	101
II. Infection	43	32	75
III. Toxemia	63	10	73
IV. Heart disease	0	28	28
V. Anesthesia	22	0	22
VI. All other causes	32	51	83
Total	261	121	382

TABLE II. MATERNAL MORTALITY RATE

	1950		1951		1952	
	Deaths	Rate Per 1000 Live Births	Deaths	Rate Per 1000 Live Births	Deaths	Rate Per 1000 Live Births
Maternal mortality study	84	0.52	89	0.52	88	0.51
Michigan department health published figures	91	0.57	94	0.54	82	0.46



custom of classifying maternal deaths into the four main categories of hemorrhage, infection, "toxemia," and all other causes. The two additional categories of heart disease and anesthesia are proposed because of the high incidence as shown in our survey. The deaths from anesthesia were included in the group of obstetrical causes because anesthesia is an integral part of obstetrical management. Heart disease is classified as a non-obstetric death because it is a pre-existing medical entity.

Table I presents the numbers of deaths occurring in the six general categories and Graph 1 presents the percentage distribution of the obstetrical deaths. The deaths are categorized according to the factor which we believe is responsible for the death. Therefore, the following figures do not indicate the total number of cases with a given disease entity. For example, seventy-three deaths are attributed to toxemia, but thirty-two additional patients with a background of hypertension, albuminuria, and/or edema, are included under hemorrhage, anesthesia, infection, et cetera, where this has been the terminal cause of death.

The fetal salvage in these 382 pregnancies is low. Ninety-nine of the 261 pregnancies in the obstetrical group terminated with living infants,

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Michigan Maternal Mortality Study 1950-1952

Category I. Hemorrhage—The Principal Cause of Maternal Deaths

By Harold W. Longyear, M.D.

Royal Oak, Michigan

IN MICHIGAN, as in other states, hemorrhage is the most frequent cause of maternal death. All are aware of its hazards. Despite the almost universal availability of blood for transfusion, deaths due to hemorrhage remain disconcertingly static. It is all to evident that the red tide has not ebbed. Unlike other complications, hemorrhage does not allow time to conjecture about its cause or to deliberate its management. Success here depends upon prompt, adequate therapy. Too little and too late, are reflected too often in failure. Best results are obtained when hemorrhage is anticipated, when blood is available for use should it occur. When hemorrhage is encountered unexpectedly, the volume of blood lost must be appraised rapidly and replacement begun while the cause of the bleeding is searched out and corrected. Blood substitutes and plasma expanders can be used to bridge the gap until blood is available. There is no substitute for blood in the treatment of hemorrhage. Massive hemorrhage is terrifying. The situation usually is desperate. Yet management requires clear and concise thinking. Dr. Norman Miller stated it well, "The true measure of an obstetrician in trouble is the number of steps backwards he is able to take successfully." As in the military, a successful retreat is orderly and well planned. Headlong rout invariably ends in disaster.

During the first three years of the current survey of maternal deaths in Michigan, hemorrhage was found responsible for 101 (38.7 per cent) of all deaths due to obstetrical causes. Hemorrhage also contributed significantly to the death of many patients classified under other categories, such as toxemia, infection, and cardiovascular-renal disease.

The importance of hemorrhage as a complication is emphasized further by the large percentage of preventability and physician responsibility which exists. Improved management of this complication will lower the maternal death rate materially and bring the minimum of maternal deaths closer to realization.

TABLE I. DEATHS DUE TO HEMORRHAGE
Tabulation by International Classification

International Classification		No.	Percent
643	Associated with placenta previa	11	10.8%
644	Associated with placental abruption (33% associated with hypertension)	13	12.8%
645	Associated with ruptured ectopic pregnancy	21	20.7%
650	Associated with incomplete abortion	3	2.9%
671	Associated with retained secundines	3	2.9%
	Associated with placenta accreta	3	2.9%
672	Associated with post partum hemorrhage ? Atony	20	19.8%
677	Associated with perforation, laceration, pelvic organs	26	25.7%
	Associated with post partum inversion uterus	1	.99%
	Total	101	

TABLE II. DEATHS DUE TO HEMORRHAGE
Tabulation by Years

Cause	1950	1951	1952	Total
Rupture or laceration birth canal	7	9	10	26
Ruptured ectopic pregnancy	10	7	4	21
Post partum hemorrhage (? atony)	6	8	6	20
Premature separation placenta	7	3	3	13
Placenta praevia	6	3	2	11
Placenta accreta	1	0	2	3
Retained secundines	0	1	2	3
Incomplete abortion	0	3	0	3
Inversion of uterus	1	0	0	1
Total	38	34	29	101

A brief review of the major causes of deaths due to hemorrhage during this three-year period (Table I and Table II) may focus the problem directly and permit certain specific recommendations.

Ectopic pregnancy was responsible for twenty-one (20.7 per cent) of the deaths due to hemorrhage. The chief signs and symptoms (Table III) were missed period, vaginal spotting and abdominal pain.

TABLE III. ECTOPIC PREGNANCY

Signs and Symptoms	*Incidence*
Missed Period	36%
Vaginal Spotting	50%
Abdominal Pain	60%

A proper diagnosis was made in but 14 per cent of cases. The major error in diagnosis was the treatment of subjective symptoms, overlooking the possibility of ectopic pregnancy, this error resulting from incomplete or inadequate examination of the patient, and avoidance of pelvic examination for fear of contributing to a supposed impending abortion.

Always be ectopic minded. Complete examina-

tion is essential. Once the diagnosis is established or a suspicion of an ectopic pregnancy exists, the patient must be hospitalized at once. Hemograms should be obtained as well as blood secured for transfusion. Examination under anesthesia with cul-de-sac aspiration usually will clinch the diagnosis. If doubt persists, colpotomy with direct visualization of the tubes and ovaries should be done. In its absence, or with uncertain findings, laporotomy is indicated.

Treatment of ruptured tubal pregnancy is surgical. Most patients with ruptured tubal pregnancy will die unless operated upon. It is better to operate and be wrong about the diagnosis than to allow a patient to die because surgery was not done.

Bleeding caused by low implantation of the placenta was responsible for 10.8 per cent of the deaths due to hemorrhage. Recurrent episodes of scant vaginal bleeding preceded significant hemorrhage in three-quarters of the cases. These preliminary episodes generally were regarded as unimportant and ignored. Attempts at diagnosis were not made until after significant bleeding had occurred. Even then, almost two-thirds of the patients received no special diagnostic examination. Only one out of five were examined vaginally. Half of these had placentography.

Fortunately, primary hemorrhage in placenta praevia is rarely fatal. Its occurrence is an adequate warning of impending trouble. A search must be made to discover its cause. When bleeding is minimal and the patient in good condition, blood may be secured and placed in reserve while x-ray studies are made to visualize the placental site. Soft tissue techniques for visualization are usually satisfactory. When significant bleeding occurs, or when continuous bleeding persists, blood transfusion should be started and, with the operating room prepared for immediate surgery, a vaginal examination done.

Proper treatment must consider four factors: (1) the degree of encroachment of the placenta onto the cervical portion of the uterus, (2) the volume of bleeding, (3) the state of the cervix, and, (4) the condition of the mother and baby. Ample blood should be given to support both the mother and the infant. Delivery is to be done by the most conservative method possible. In these deaths both extremes of treatment were used. Forty-five per cent of the patients died undelivered, while 27 per cent were delivered by version and extraction. Simple outlet forceps and cesarean section were used in the remainder. Manual dilatation of the cervix and version and extraction of the baby is extremely hazardous in placenta praevia. In the cases studied, better diagnosis would have directed safer operative measures. In most cases blood replacement was inadequate. One third of the patients were not transfused at all.

Premature separation of the normally implanted placenta was held responsible for 12.8 per cent of the deaths due to hemorrhage. Associated hypertension was present in one-third of these cases which may be significant in producing the abruption. The grave prognosis for patients with hypertension is reflected in the number who die from hemorrhage and toxemia.

Vaginal bleeding was present in two-thirds of these cases with premature separation of the placenta. Abdominal pain and uterine tenderness were present in one-half. The appearance of these signs and symptoms most usually were sudden and dramatic. History and abdominal palpation alone made the diagnosis in 25 per cent of these cases. Vaginal examination was done in 50 per cent, and in 25 per cent additional information was secured by placentography. One-half of the patients were delivered by cesarean section, 8 per cent of which were cesarean-hysterectomies, done because of extensive hemorrhage into the uterine musculature. One out of eight died undelivered. One-third were delivered by version and extraction, by intrauterine bag, or by Duhrssen's incisions of cervix and mid-forceps. Traumatic vaginal deliveries were poorly tolerated and frequently caused additional massive bleeding. Because of the tetanic state of the uterus, intrauterine manipulation was difficult.

There are three fundamentals in the proper management of this complication: (1) treatment of shock, (2) adequate blood replacement, and (3) delivery by the most conservative method possible. The condition of the patient and state of the cervix usually dictates the procedure to be chosen. Inadequate blood transfusion, particularly prior to delivery, was responsible for most fatalities. Less than two-thirds of the patients received blood by transfusion. Although no instance of defibrinization was noted in these cases, the increased likelihood of coagulation defects with placental abruption emphasizes the necessity of careful fibrinogen determinations in each case whenever possible.

Likewise postpartum urinary output should be watched carefully. If oliguria is present, the administration of fluids must be restricted. In this group, two patients died because of unlimited fluid administration in the presence of oliguria.

Rupture or laceration of the birth canal was the most frequent cause of fatal hemorrhage, being responsible for more than one-quarter of the deaths. Many others undoubtedly would have been added to this impressive total had the cause of bleeding been determined in those deaths ascribed to uterine atony.

Uterine rupture occurred in approximately two-thirds of the cases. Almost half of these resulted from oxytocic stimulation. In one-third of the cases pitocin was used to induce labor; it was used to stimulate uterine contractions in the remainder. In one instance it was given in an attempt to expel a retained placenta. Autopsy showed the placenta attached in the interstitial portion of the tube. The entire cornua of the uterus was blown out, an evident result of an excessive dosage of pitocin. In an amazingly large number of cases, pitocin had been used in an attempt to overcome dystocia without adequate re-evaluation of the problem. In some instances it was used to try to force the infant through the pelvis after forceps and other attempts at delivery had failed.

Pitocin is to be used as a uterine stimulant only after careful review of the pelvis reveals no obstruction, disproportion, or malposition. At times x-ray studies are necessary. When no contraindications are present, small amounts of dilute solution may be given if the resultant contractions are carefully observed by the physician himself. Pitocin stimulation in prolonged labor must be done with extreme caution. It must not be attempted until the total problem has been carefully reappraised and the patient properly prepared for continued labor.

Trauma from operative delivery was the next frequent cause of uterine rupture. Version and extraction were most lethal. Oftentimes it was done in desperation after other methods had failed. Invariably it ended in disaster. Present concepts of good obstetrical practice do not insist upon completion by vaginal delivery once it is started. At times it is wiser to admit defeat and to resort to abdominal delivery than to persist and cause irreparable damage to both mother and infant. In several instances rupture occurred after manual removal of the placenta. Any invasion of the uterine cavity demands careful examination for possible rupture or laceration of its walls. The possibility of ruptured uterus was not suspected in two-thirds of the cases. In only slightly more than one in ten was the diagnosis established before laporotomy. In many, all of the classic signs of uterine rupture—pain, shock, and cessation of labor—were present and unrecognized. In others, significant bleeding with or without shock was present. In all, incomplete examination was responsible for the missed diagnosis. Treatment, once the diagnosis was established, for the most part was good, although more prompt use of larger amounts of blood might have prevented operative fatalities. In general, only one-third of these patients were operated, and only half received any blood at all.

Laceration of the birth canal caused nine deaths. Almost all were due to the trauma of operative deliveries. Version and extraction and mid-forcep deliveries each accounted for one-third of the fatal lacerations. Oftentimes the operative delivery followed prolonged labor, during which the patient was inadequately managed. Operative indications frequently appeared to be no more than the desire to terminate a tenuous labor. Two fatalities followed simple outlet forcep deliveries because small vault lacerations were unrecognized and unrepaired. Slow, continuous bleeding can be as fatal as sudden massive hemorrhage.

Twenty deaths, or 19.8 per cent of the hemorrhage group, were attributed to uterine atony. Complete examination of the vagina, cervix and uterus to exclude other causes of bleeding was done in only one-fourth of the cases. In the others, atony was diagnosed on presumptive evidence alone. Management was similarly inadequate. Only two patients received adequate amounts of oxytocic, including pitocin by intravenous drip. Almost half were transfused, but only one-fourth received adequate amounts of blood. Fibrinogen levels were not determined, and two patients died following hysterectomy because of continued bleeding.

Uterine atony is to be diagnosed only after the exclusion of all other causes of postpartum hemorrhage. The vagina and cervix must be thoroughly inspected and the uterine cavity examined carefully for evidence of laceration, rupture, inversion, or retention of placental tissue. Anything which impairs uterine contractility predisposes toward uterine atony. Overdistention from multiple pregnancy, large baby, or hydramnios may lead to

atony as may muscle fatigue following obstetrical trauma or prolonged labor. Multiparity, tumors, and infections are other common predisposing causes. Because of the frequent association of postpartum hemorrhage with these conditions, their existence calls for preparations in advance to treat the hemorrhage should it occur. Prolonged labor existed in almost one-quarter of these cases. Not only was there a failure to have compatible blood at hand, but oftentimes the patient was not rested or given adequate fluids during this trying period. Resultant exhaustion contributed greatly to subsequent atony and fatal hemorrhage. Almost half of these patients were delivered by forceps or other operative procedures. Operative delivery generally requires more anesthesia, which, in conjunction with trauma, further reduced the contractile power of the uterus. The resulting hemorrhage was profuse, and was followed rapidly by shock. Prompt and adequate treatment of shock is mandatory. Blood pressure must be maintained and blood given in generous quantities while the cause of bleeding is being searched out and corrected. When atony is proven, continuous intravenous infusions of pitocin are to be started and the uterus gently held free of the pelvis. Vigorous massage of the uterus contributes little to its contractile ability and should be avoided. Uterine packs may be used in critical situations, but only as a temporary measure. The pack should be removed after the crisis has passed and uterus again observed for adequate contractility. Continued reliance on a pack is unwarranted because prodigious amounts of blood may be unsuspectedly absorbed or siphoned through the pack. If bleeding continues despite these measures, hysterectomy occasionally may be indicated. Fibrinogen levels should always be determined. If depletion has occurred, this should be corrected with adequate amounts of fibrinogen. Six to twelve grams of fibrinogen may be required for adequate replacement.

From the study of these 101 maternal deaths, cardinal principles for the management of hemorrhage may be summarized as follows:

1. Deaths due to hemorrhage are largely preventable.
2. Correction of anemia during the prenatal period enables the patient to withstand hemorrhage better.
3. Supportive treatment during labor, with adequate rest and fluids is essential.
4. Oxytocic drugs used to induce or stimulate labor are to be given in small dosage, with great caution, and only after all contraindications have been ruled out.
5. Anticipate hemorrhage and have blood available for use. Tranfuse early with adequate amounts of blood.
6. Treat shock promptly. Maintain adequate blood pressure. Plasma expanders may be used temporarily while blood is secured. Gelatin 6 per cent has few side effects and a wide range of safety.
7. Search out the cause of the bleeding. Correct it simultaneously with blood replacement.
8. Traumatic vaginal deliveries should be avoided.
9. Delivery always should be by the most conservative method possible.
10. Be ectopic minded.

FEDERAL STUDY OF MEDICAL CARE PAID BY INSURANCE

A Social Security Administration study of voluntary health insurance in 1953 discloses about 20 per cent of all medical care costs were paid by health plans. The study, which is part of a more extensive survey covering 1948-53 published by the agency, estimates the 1953 private medical bill at $9,866,000,000 and payments for benefits at $1,919,200,000. Other statistics: (1) expenditures for hospital services alone were covered to the extent of 41.4 per cent, and physicians' services alone were covered to the extent of 20.7 per cent; (2) physicians' bills accounted for less than a third (28.6 per cent) of all private medical costs, while hospital bills made up 29 per cent; medicines and appliances, 22 per cent; dentists' fees, 9.6 per cent; other professional services, 5.7 per cent; and health insurance, 4.9 per cent.

Michigan Maternal Mortality Study 1950-1952

Category II. Infection

By Howard R. Williams, M.D.
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INCIDENCE OF deaths due to infection has decreased more than any other causative category due to the availability of good antibiotics. However, death due to infection occurs all too frequently when casual reliance on drugs replaces careful diagnostic procedure and definitive treatment. Shotgun methods are inadequate and constitute poor medical treatment. During the current three-year survey, seventy-five deaths, a percentage of 19.6, were due to infection. Forty-three were related to obstetrical causes, and thirty-two to non-obstetrical causes (Table I). Puerperal infection, which includes deaths due to septicemia, peritonitis, pneumonia, hepatitis, and mastitis account for the largest number. Seventeen deaths (39 per cent) were due to obstetric causes. Abortions account for eleven cases (26 per cent), and thrombophlebitis leading to embolism, fifteen cases (35 per cent).

TABLE I. MATERNAL DEATHS DUE TO INFECTION
75 Cases

Int'l Class		Obstetric Causes	Fetal Salvage	Non-Obstetric Causes	Fetal Salvage
002	Tuberculosis pulmonary			1	0
010	Tuberculosis meningitis			1	0
057.1	Meningococcemia			1	1
080	Poliomyelitis			12	1
092	Infectious hepatitis	1	0	5	1
340.3	Acute lepto meningitis			1	1
364	Guilliam barre syndrome			1	0
491	Pneumonia	2	1	6	2 twins
550.1	Appendicitis			2	0
651.2	Abortion (induced)	9	0		
651.3	Abortion (spontaneous)	2	0		
681	Peritonitis and septicemia	13	8	2	0
682	Thrombophlebitis and				
684	Embolism	15	14		
689	Mastitis	1	1		
	Totals	43	24	32	6

It is in the group of *puerperal infection* that we have the best possible opportunity for a constructive program. Modern antibiotic treatment has resulted in the salvage of many uteri which formerly were sacrificed through hysterectomy when cesarean section became necessary in infected cases. In our current series, 76 per cent of puerperal infection deaths followed cesarean section. Of this group, eight patients had been in labor more than twenty-four hours. Prior to section, prophylactic antibiotics were not generally utilized and postoperative treatment was inadequate. Even modern drugs cannot overcome omission and delay in management. Heroic treatment in a moribund patient is of no avail. Prolonged labors were a very important factor in many of these puerperal infections. Proper management of prolonged labor includes careful obstetrical review of the patient to determine the cause of dystocia, adequate rests, fluids, and prevention of infection. Such cases, if not properly supported, are fertile ground for puerperal infection. In four of these cases, unrecognized obstruction of the birth canal existed. Three of these were finally delivered by cesarean section, and resultant peritonitis caused death. In the fourth, though an existing cyst was present, delivery from below was accomplished. However, after delivery, the patient developed peritonitis, pelvic abscess, and eventually death. Ovarian cysts, complicating pregnancy, may be ruptured during labor or delivery, or may rupture postpartum as a result of trauma. Induction of labor, while considered a safe procedure in some cases, was responsible for two of our deaths. In one of these two, the labor was desultory. Several attempts at vaginal delivery failed, and subsequent attempt at craniotomy was also unsuccessful. The patient developed a high fever, was sectioned, and died. In the other case, induction by artificial rupture of the membranes was followed by irregular fetal heart rate, and section was carried out.

Phlebitis and *Embolism.*—This is the second largest group and comprises 20 per cent of all of the infections. The records indicate several patients were discharged from the hospital following a febrile reaction approaching normal, only to die of an embolism several hours or days later. Many of these patients received antibiotics without a definite diagnosis of thrombophlebitis. Some embolic deaths showed on postmortem examination a totally unsuspected pelvic phlebitis. Positive diagnosis and definitive treatment are a must, and indiscriminate use of any antibiotic must be condemned as mismanagement.

Abortion.—The subject of abortion is discussed under several different categories of this survey. Of the 382 maternal deaths, twenty-four (6 per

TABLE II. MATERNAL DEATHS DUE TO ABORTIONS

Category	Spontaneous	Induced		Total
		Induced for Other Than Medical Reasons	Therapeutic	
I	3	1		4
II	2	9		11
III	1		1	2
IV	1			1
VI		6		6
Totals	7	16	1	24

cent) are associated with abortion of some kind. Table II shows the distribution of the abortions among the six categories. Infection has the dubious privilege of leading the list.

This small number of deaths due to abortion probably does not show the complete picture because we believe many of these individuals do not come under medical care and consequently the true cause of death is not ascertained. However, largely because of antibiotic treatment, a considerable reduction in the number of deaths is noted. This is very dramatically shown in a comparison of the figures of the 1926-1928 series and the present series. With twice as many deliveries, the actual deaths compare as 345 to eleven, a factor of sixty-five times as many deaths from infection in the first series as in the second. These drugs have made it possible to initiate active treatment which has not only saved many lives, but has prevented subsequent pelvic inflammatory disease in untold numbers.

Further improvement can be expected only when public education creates an awareness of the inherent dangers of induced abortion. Of the twenty-four abortions noted in this survey, sixteen (67 per cent) were induced for other than medical purposes. These definitely were a responsibility of the patients themselves. Often fatalities result because the patient is unwilling to tell of an induced abortion even after danger signals are present and denies herself the advantages of proper medical treatment.

Deaths from abortion associated with infection can be reduced by continued education of lay and professional people.

Non-obstetric Causes of Death Due to Infection.—Poliomyelitis ranges highest with twelve cases. Interestingly enough, nine of the twelve were in the year of 1952. Tabulated, they are:

Poliomyelitis	12 cases
Pneumonia	6 cases
Infectious Hepatitis	5 cases
Peritonitis	4 cases
Neurological Complications	3 cases
Acute Meningitis	
Meningogoccemia (Epidemic)	
Guillian Barre Syndrome	
Tuberculosis	2 cases

This group comprises patients whose deaths were due to infection not related to pregnancy. The pregnancy was really incidental. This, however, is subject to discussion because of different interpretations as to cause and effect. Two of the four peritonitis cases listed above are a result of appendicitis with perforation. It is a well-known fact that appendicitis in pregnancy, like many other diseases associated with pregnancy, carries a much higher mortality. For this reason, certain investigators would like to call these obstetric deaths. These two patients were not neglected. Both were too sick to withstand an operation. One of the patients with pneumonia was undoubtedly much worse because of her delivery but she was admitted primarily as a pneumonia patient and died of her pneumonia. The pregnancy was merely coincidental.

Conclusion

Reduction of maternal mortality in the future may come from the continued education of physicians in the proper use of our newer antibiotics as well as disciplines which will result in improved judgment when operative procedures are contemplated. The non-obstetric deaths will continue until the associated diseases have been brought under control and this death rate will mirror our success in the treatment of general disease. Education of the public, particularly in the importance of prenatal care as well as the serious consequence of induced abortion, is also a part of this program for reduction in the deaths due to infection in our pregnant patients.

Michigan Maternal Mortality Study 1950-1952

Category III. Toxemia

By Palmer E. Sutton, M.D.
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TABLE I. MATERNAL DEATHS DUE TO TOXEMIA

International Classification	Causes				No. Deaths
	Non-Obstetrical				
VII	Diseases of the Circulatory System				
	444—Essential Hypertension			3	
X	Diseases of Genito-Urinary Tract				
	590—Acute Nephritis			6	10
	591—Nephritis including Nephrosis			7	
	592—Chronic Nephritis			1	
	600—Pyelonephritis				
	Obstetrical				
VII + XI	444—Essential Hypertension with Superimposed 642.2 Pre-eclampsia or 642.3 Eclampsia			8	63
XI	642.2 Pre-eclampsia			18	
XI	642.3 Eclampsia			37	
	Total				73
	Cases with background of Hypertension and/or Edema and/or Albuminuria removed to other categories				32
	Hemorrhage	11			
	Infection	5			
	Heart Disease	4	32		
	Anesthesia				
	Incompatible Blood	8			
	Miscellaneous	4			
	Total				105

THE CASES in this category have in common hypertension, albuminuria and edema, with or without convulsions. Historically, up to a little over a century ago, the only differentiation made was between epilepsy and convulsions associated with pregnancy. The discovery of proteinuria in association with convulsions was noted for the first time 110 years ago and the mechanisms to record blood pressure approximately sixty years ago. It follows, therefore, that for many decades before the sphygmomanometer, eclampsia was considered a form of Bright's disease. In the early decades of this century it became gradually recognized that hypertension preceded the "convulsions of pregnancy" and the concept of pre-eclampsia was born. Still more recently many pregnant women were noted to have hypertension before, during and after pregnancy, thus another symptom complex, essential hypertension, of unknown etiology is included in this category. More recently many observers believe that in the women with essential hypertension the superimposition of pre-eclampsia is common, at least more common than in the patients without essential hypertension, and incidentally more hazardous than either essential hypertension or pre-eclampsia alone. We are confronted therefore with a group of "clinical entities" which present a bewildering mass of phenomena in human physiology and pathology which even today is incompletely understood.

In recent decades the popular designation "toxemias of pregnancy" has been used to include all of these various "entities." As we advance in our knowledge and learn to differentiate nephritis, essential hypertension, pre-eclampsia, eclampsia and combinations such as essential hypertension with superimposed pre-eclampsia, we improve the management of the given patient. Since by common usage the term "toxemias of pregnancy" is retained to designate this group before differentiation, it should be stated that no proof exists that nephritis or essential hypertension is a "toxemia." Further, the category, by common consent, no longer contains hyperemesis gravidarum as the vomiting bears no relationship to the hypertensive disorders of pregnancy. Likewise, the formerly included designation of acute yellow atrophy of the liver is dropped as it presently is considered to be infectious hepatitis. We are left, therefore, with pre-eclampsia and eclampsia as the only "true toxemias." If one further adopts the concept that pre-eclampsia and eclampsia occur only in association with pregnancy, the other conditions are to be considered as "medical entities" pre-existing or concomitantly occurring and remaining in existence following the termination of the pregnancy.

In Michigan the only other known study of maternal deaths was made over a two and one-half year period in 1926-27-28. This category was then designated according to the International Classification of Diseases as puerperal albuminuria and convulsions. We can find no evidence that differentiation as indicated above was made.

In our present three-year period, 1950 to 1952, we have included in Category III, by custom, seventy-three cases having hypertension, albuminuria, and/or edema with or without convulsions who died of this complication *per se*. There are,

TABLE II. MODES OF DEATH IN TOXEMIA GROUP

	Renal	Cardiac and Renal	Abruptio and Renal	Cardiac	Coronary Occlusion	Cerebral Hemorrhage	Tota
Nephritis	7						7
Essential hypertension		1		1	1		3
Essential hypertension + superimposed toxemia	3			3		2	8
Pre-eclampsia	4		4	5		5	18
Eclampsia	7	3	1	23		3	37
Total	21	4	5	32	1	10	73

however, thirty-two additional deaths removed to other categories whose original "background complication" relates them definitely to this group but whose mode of death—by hemorrhage or infection or anesthetic misfortune or incompatible blood or other miscellaneous reasons—swells the numbers of these other categories and depletes this one. Thus Category III loses eleven cases to hemorrhage, five to infection, four to heart disease, eight to anesthesia and incompatible blood and four to miscellaneous. (Table I.)

Comparison of the number of deaths, seventy-three, due to "toxemia" in the present three-year period when there were 510,341 live births, with a generation ago in a two and one-half-year period when there were 344 deaths due to toxemia among 245,312 live births, is gratifying.

Nephritis—Essential Hypertension

In the present study we include ten cases which, according to the information on the charts, indicated that seven patients or approximately 10 per cent of the group exhibited evidence of nephritis when first seen or before the fifth month and the progress of events was entirely one of renal failure. These women were seen prenatally and it would appear that the attendants were unable to appreciate the significance of the findings of albuminuria, hypertension and edema in the first trimester. Evaluation and consultation with an internist to obtain the possible benefit and sharing of the responsibility of caring for such a patient would seem to be indicated. The other three of this non-obstetric group had essential hypertension of years standing. They were over thirty-five years of age and died of cardiac and renal failure, two in association with severe anemia, one in association with obesity and sudden death. Possibly they belong more properly in the cardiac group. When the individual with essential hypertension is in the younger age group, she can generally be managed well while pregnant if attention is given to rest, nutrition, control of weight gain, prevention of anemia and the limitation of sodium intake without creating any apparent permanent damage or increased elevation of blood pressure if she is fortunate enough not to develop superimposed pre-eclampsia. The individual with essential hypertension, however, is ten times more liable to develop pre-eclampsia than her non-hypertensive sister and the hazard is equally increased. Evaluation, therefore, in nephritis and essential hypertension must be early and strict. It should include accurate estimation of cardiac and renal function, diligent and frequent observation to detect superimposed pre-eclampsia, frequent observation of the fundus oculi, preferably by an ophthalmologist. The establishment of the diagnosis of nephritis in early pregnancy, or of long-standing hypertension with diminished cardiac or renal function, or of essential hypertension with superimposed toxemia, is of grave import. These complications are among the leading indications for interruption or termination of pregnancy.

Incidence of Pre-eclampsia and Eclampsia

Even the approximate incidence of toxemia occurring among the total number of pregnancies is difficult to ascertain.

Dieckman's "The Toxemias of Pregnancy" (page 36, Table 4) shows the incidence range in United States for eclampsia is .012 per cent in Oregon for low to 2.82 per cent in North Carolina for high, and for pre-eclampsia is .53 in New Mexico for low to 25.0 per cent in North Carolina for high. The combined averages would give a calculated incidence of 14.14 per cent for entire U. S. for both eclampsia and pre-eclampsia. In Michigan only very rough estimates can be calculated. In the 1937-1940 era the combined incidence, according to Dieckman, was 3.82 per cent in Michigan. If the incidence has remained the same for the present 1950-1952 era, which

seems unlikely and probably high, we might estimate that approximately 19,000 women could have had pre-eclampsia or eclampsia (3.82 per cent x 510,000 live births for three years) in 1950 through 1952. With seventy-three deaths the incidence of death would be 0.37 per cent within the category.

Since we have no way of estimating the total incidence of hemorrhage or infection or heart disease, et cetera, in relation to the deaths in each category, we cannot estimate whether we do better or worse incidence-wise comparing the various categories. In many private practice series it is estimated the incidence of toxemia is between one per cent to three per cent without mortality for periods of ten to twenty years including approximately 8,000 to 12,000 pregnancies.

Hypertension with Superimposed Toxemia—Eight Cases

Two patients sought no prenatal care and a third received insufficient attention, therefore, three of eight had none or poor prenatal care. One was moribund when first seen, one sought care when abruptio occurred and was in extreme difficulty with hypertension + toxemia + chronic anemia + abruptio before Rx. In the other five in this group, prenatal care was not up to standard since chronic hypertension with the additional findings of albuminuria and progressive "toxemia" was recorded, the evaluation was tardy, early consultation was absent and the appreciation of the seriousness did not occur until the patient was in an irreversible state. The mode of death in these eight cases is tabulated in Table II. Fetal salvage in eight cases with one set of twins was one baby (12 per cent).

Pre-eclampsia and Eclampsia

Combining the two groups of pre-eclampsia and eclampsia there are fifty-five cases to be considered. Two died out of state, leaving fifty-three with information for analysis.

Prenatal Care. Seven pre-eclamptics plus twelve eclamptics received no prenatal care or sketchy, scant, inadequate care. Patient responsibility in nineteen instances is 36 per cent of the total. In this group four babies lived.

In the group seeking prenatal care (thirty-four cases) approximately ten might be judged to be non-preventable by average standards (18 per cent). The remainder, approximately 46 per cent (twenty-four cases) present evidences from the record that adequacy and good understanding and prompt evaluation of the problem were lacking. There were instances of untreated anemia, prolonged home treatment one to four weeks with no improvement in albuminuria and hypertension before hospitalization or before convulsions or abruptio or both ensued. The presence of twins, polyhydramnios and pre-eclampsia was not viewed with astute acumen.

In the pre-eclamptic group of eighteen cases the fetal salvage was eleven babies (61 per cent). In the eclamptic group of thirty-five cases the fetal salvage was eighteen living babies including four sets of twins (51 per cent). Combined there were twenty-nine living babies in fifty-three pregnancies (54.7 per cent).

Ideally speaking, even though exact etiology is not known, prevention in this group is the aim. This includes *patient* and *professional acceptance of responsibility* to scrutinize all alterations or departures from the average or normal with meticulous care. It is currently considered good practice to avoid anemia, to provide adequate protein intake, some attention to gain of weight, not in excess of twenty to twenty-five pounds, limitation of intake of all foods containing sodium beginning in the normal patient at four and one-half to five months and in the hypertensive at two months. The presence of rapid gain of weight, followed by rise of blood pressure, should be regarded with suspicion. Institution of bed rest, sedation, use of NH_4Cl for periods of four days, followed in some instances by use of exchange resins may be all that is required. Failure to improve on the above program should call for hospitalization, observation eye grounds, observation of response to various hypotensive drugs including the test for pheochromocytoma; exact record of intake and output of all fluids; and, if albuminuria has occurred, quantitative estimation. Many other observations regarding cardiac, vascular and kidney functions may be in order. If the attendant is aware of the value of these many additional observations, his consultant will be for the purpose of confirmation of diagnosis and evaluation of the indications for future conduct of the case. If his familiarity with these tools for diagnosis is lacking, his Internist Consultant should remain in attendance to supplement with his wisdom the indicated obstetric management for continua-

tion or interruption of pregnancy. Unless the future will prove the value of the use of hypotensive drugs, there is no proved method of treatment of an uncontrolled pre-eclampsia except the delivery of the pregnancy by the best obstetric means according to the stage of pregnancy, the condition of the cervix, the gravidity of the patient, the viability of the fetus and the condition of the patient, and response to management. In certain hands the use of drugs to reduce blood pressure has proven of great value to prevent or stop convulsions, to relieve the peripheral resistance and, according to some, to improve renal blood flow. However, most observers note continuation of the albuminuria, and that the drugs used are successful only while given intravenously. Attempts to carry such patients indefinitely on I.V. therapy is difficult and does not always prevent intra-uterine fetal death. Hypotensive drugs, therefore, along with such other agents as $MgSO_4$, O_2, sedation, balancing of electrolytes digitalization, etc., provide means to control the progressing and even the fulminating eclampsia until such time as it is determined the patient's condition warrants induction or cesarean according to indication.

Rapidly fulminating toxemias require extremely fine judgment as to when and how, and should have the advantage of some degree of expertness and experience as do decisions in other major illnesses.

Low grade prolonged toxemias, apparently judged not serious, in many instances, are tricky and dangerous and may result in catastrophe.

The decision to terminate a pregnancy in the last trimester after 34 weeks presents no problem except to do it when the patient is in the best possible condition and by the best obstetric means indicated by the cervix, the gravidity and the need for haste.

Decisions before, at, or near, the period of viability of the baby requires much more judgment and experience and confirmation of decision by adequate consultation.

In conclusion, we have attempted to indicate that the complications in this category are possibly of the same frequency as a generation ago; and that education of the public and the professional attendant to practice prenatal care in a meticulous fashion pays dividends. Prevention by attending to the alterations from the normal is the aim. Differentiation of the possibilities of the various characteristics which diagnose nephritis, essential hypertension without or with toxemia and the true toxemias, pre-eclampsia or eclampsia, is essential to good management. Much has been accomplished in reducing mortality in the past, but careful analysis of the records shows there are still areas of defection. The public needs to be aware of the absolute necessity of prenatal care. Certain physicians will improve their care of toxemias by more accurate and prompt attention to the basic concepts above related.

LICENSING OF MATERNITY UNITS IN MICHIGAN

(Continued from Page 166)

firmness, and to provide a reasonable time for hospitals to comply with all of the regulations. At first only five so-called critical items were used as a sample to determine the eligibility for licensure or certification. Now some forty-five additional items have been added to the so-called critical list and from time to time additional items will be added until the list includes all of the rules and minimum standards.

We should like to conclude with a note of accomplishment and point out what physicians and hospitals have done to improve patient care. The rules for maternity hospitals were first established in 1951. One year later in December of 1952, of approximately 260 hospitals listed, 114 had provisional licenses. Two years later, in December, 1953, only eighty hospitals had provisional licenses. Two and one-half years later there were fifty-eight hospitals with provisional licenses and now, almost three years later, forty-four hospitals have provisional licenses.

All of us at the Michigan Department of Health are proud of the job that hospitals and physicians have done and we realize so well that these things could not have been accomplished without the active participation of the members of the Maternal Health Committee of the State Medical Society. We shall continue to look to them for advice, guidance and help with continued progress

Michigan Maternal Mortality Study 1950-1952

Category IV. Heart Disease

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IT SHOULD be made clear at the outset that these twenty-eight cases have been presented in a very condensed form and that much pertinent information is lacking. For one reason or another many original hospital records were inadequate and incomplete. It would seem unfair, probably erroneous, therefore, to attempt an analysis and criticism of each case. However, as a group, certain interesting observations have been made which should be helpful to the obstetrician in evaluating the risk in such cases. Sixteen patients had rheumatic heart disease with mitral stenosis. Two others probably had mitral stenosis. If eighteen of the twenty-eight cases (64 per cent) had rheumatic heart disease with mitral stenosis this is not surprising when we consider that rheumatic heart disease would naturally be the most common cardiac defect in the childbearing age group.

The other ten deaths (36 per cent) were due to myocardial failure, the etiological diagnosis being quite obscure in some cases. It is interesting to note that of these ten, four were attributed to coronary thrombosis. If this were true, it would constitute a surprisingly high percentage for this etiological factor in women of this age group. A word of caution is interjected in this regard to the effect that coronary disease is seldom found in women less than forty-five years of age, especially in the absence of diabetes or hypertension. Of the four cases to which the diagnosis of coronary occlusion was applied not one was shown to have had diabetes or hypertension. Sudden and unexpected deaths have been too readily attributed to coronary thrombosis when an obvious cause has been lacking. Pulmonary emboli, rupture of congenital cerebral aneurysms, and other obscure vascular accidents are much more likely in women of this age.

Dr. Ralph is Consultant in Cardiology to Michigan Maternal Mortality Survey Committee appointed by Michigan Society of Cardiologists.

Several of the patients in this group apparently failed to seek, or actually avoided, prenatal care until they were beyond the point of reversible failure. It is impossible for the medical profession to offer this type of individual any help or to accept any responsibility toward them except through hygienic education of the public. In this respect it is heartening to note the interest and enthusiasm with which the public is receiving this type of information which is now becoming so available through publications, public forum, radio, and television. Our responsibility lies in maintaining a careful control of the material in order that it be authenticated and scrupulously presented. The Michigan State Medical Society and several of its sub-specialty groups have made excellent progress. Each member should be proud of the accomplishments so far and should be anxious to lend support in every way possible to the expansion of this service.

The successful and normal termination of pregnancy in a greater number of cardiac patients parallels a greater understanding of the etiological, anatomical, and therapeutic classification of heart disease on the part of internists and cardiologists together with improved prenatal control on the part of obstetricians. Interruptions of pregnancy and sterilizations become fewer and fewer as these specialists combine their efforts on the individual cases. This is exemplified by the report of Doctor Burton E. Hamilton on the results obtained in the prenatal cardiac clinic of Boston Lying-In Hospital. He states that since the clinic was instituted the maternal deaths of women with rheumatic heart disease has declined from 20 per cent to 3 per cent or 4 per cent. That there is need for considerable development and progress in this team work becomes quite glaringly evident in this group of obstetrical deaths. Sixteen (57 per cent) of these patients expired without the possible benefit of consultation, and in six instances a consultant was called when the patient was in terminal failure. If the complete details of each case were known, these figures might be shown to be somewhat misleading. The responsibility does not lie wholly with the attending obstetrician in this regard, for the records indicate that five of these sixteen women who died without consultation had never appeared for prenatal care. In thirteen (46½ per cent) no history or indication of heart disease was detected by the attendant until failure took place. This might also be considered a "par-

donable" group except that it seems unlikely that this many people could die of heart disease, being entirely void of any evidence until they were in serious trouble. It gives the impression that a more painstaking history and a more careful examination would have revealed some significant finding in a number of these individuals. It is understandable that a normal appearing woman presenting herself for prenatal care, and perhaps with a history of one or two or more uneventful pregnancies, might be given a cursory original interview and something less than an exhaustive physical examination. Frequently, in order to detect heart disease an examiner must think of heart disease. It could become easy in a branch of medicine in which a physician is dealing with a great majority of normal, healthy individuals, to forget to think about heart disease. In over half of these obstetrical deaths in which a cardiac defect was involved, there was a history of heart disease and a cardiac defect was noted on the original examination, yet no cardiac consultant was shown to have assisted in the management of the case.

In six instances the medical consultant was introduced to the problem early enough, but too often obviously bowed out of the picture after one examination, and after submitting his original opinion and recommendation. It should be conceded that once a cardiac defect has been recognized in a pregnant woman, she should be the combined responsibility of the obstetrician and the cardiologist. The cardiologist should assume an active part in guiding her through the duration of pregnancy and the postnatal period.

Too often the postnatal period is neglected by even the cardiologist. He breathes a sigh of relief, congratulates the young mother, and departs with a glow of self-satisfaction when he last sees her the day after parturition. Too often he is hastily summoned hours, days, or even weeks later to find a neglected patient in severe congestive failure. Keep in mind the picture of the man who runs with his suitcase and succeeds in catching the departing train, but is found a half hour later slumped in his seat, a victim of myocardial congestive failure. The same applies to the parturient woman who has the vigor and reserve to accomplish the act, but who does not have adequate reserve to accomplish the major readjustment of visceral circulatory balance. Fifteen, over half, of these twenty-eight obstetrical deaths occurred after parturition.

The classificaion of heart disease which has been established in accordance with the recommendation of the Criteria Committee of the New York Heart Association has become a real working aid in distinguishing the favorable and the unfavorable cardiac patient as regards the functional capacity. This functional capacity is given four categories.

Class I.—Patients with a cardiac disorder without limitation of physical activity. Ordinary physical activity causes no discomfort.

Class II.—Patients with a cardiac disorder with slight to moderate limitation of physical activity. Ordinary physical activity produces some discomfort.

Class III.—Patients with a cardiac disorder with moderate to great limitation of physical activity. Less than ordinary activity causes discomfort.

Class IV.—Patients with a cardiac disorder unable to carry on any physical activity without discomfort.

We are often confronted with the debatable point as to whether the cardiac is in greater danger during her first pregnancy or in subsequent pregnancies. Should the cardiac be permitted just one pregnancy, or having successfully consummated the first one, should she be permitted another and another? The figures in this series are inconclusive, of course. Ten were primipara and sixteen were multipara. In two cases the obstetrical history was not obtained. Statistics are obviously of no value in making this decision. Each individual must be considered discreetly with the fundamental thought of her cardiac tolerance and reserve. It is generally thought that the number of previous pregnancies is unimportant in estimating the individual's fitness from a cardiac viewpoint. Pregnancy will have no influence or effect upon the course of rheumatic heart disease in the patient who tolerates pregnancy well and who has never been markedly limited in physical activity, *i.e.*, the patient who falls in the functional capacity Class I and II. We have no good criterion for estimating when this patient is first going to fail. Some investigators of this problem claim that the number of years which have elapsed since the origin of the disease is the most important factor. The greater number of years intervening between the

initial rheumatic invasion and the onset of pregnancy, the greater is the likelihood of failure with pregnancy. Inasmuch as a very large number of these people have no idea when they had rheumatic fever, this is a useless tool. We do recognize that failure increases rapidly after age thirty-five. We probably should use this knowledge in prognosis and discourage pregnancy in women over thirty-five who have rheumatic heart disease. In this group of obstetrical deaths, seventeen were under age thirty-five and eleven were age thirty-five and over. We can assume that there were probably a great many more pregnancies in the women with rheumatic heart disease under thirty-five than there were over thirty-five, and that, therefore, the obstetrical death rate was much higher in the older age group.

We are inclined to feel much more confident of the cardiac who has never experienced congestive failure, yet this series of cases, as accurately as can be determined from the records presented, shows that only four of the twenty-eight women who died had congestive failure previously. That all but four of those who died in congestive failure expired during their original attack is significant, and would indicate that absence of previous failure is not a dependable prognostic criterion. Here again, however, we cannot help but wonder if some of these with "negative" histories might have yielded significant facts had they been carefully searched. For example, a few cases were described as having formerly experienced asthma or prolonged colds with cough. It is likely that these symptoms may have been manifestations of pulmonary edema with a cardiac background. It is obvious that we should be watchful for the patient who has had limited cardiac reserve before pregnancy for she is much more likely to fail during or following pregnancy.

If the typical course of progressive rheumatic heart disease were divided according to decades, we would have the initial infection occurring in the first decade. Recurrence or recurrences following hemolytic streptococcal infections occur during the second decade. The third decade should be quiescent and the heart quite competent. In the fourth decade myocardial reserve begins to lessen and congestive failure sets in. Fortunately, it is during the third phase that the most pregnancies occur and all goes well. When pregnancy occurs in the fourth decade or when the signs of failure begin to appear earlier than the fourth decade; then the obstetrical mortality rate increases rapidly. Once the cardiac has attained the functional classification III and IV she is in great danger with pregnancy in spite of the utmost care. Pregnancy can in no way be made safe for her. The success in lowering obstetrical mortality rates occurs almost entirely in the favorable Class I and II groups, whereas cardiac clinics and excellence of prenatal care have made very little statistical difference in the unfavorable Class III and IV groups.

Of the ten non-rheumatic cases of this series, four were hypertensive. In considering the pregnant woman with hypertensive heart disease, we again turn to our functional classification for prognostic aid. Those who can be placed in Class I and II usually do well, and are considered the favorable group. Those in Class III and IV are unfavorable in pregnancy. With the newer hypotensive drugs we have more to offer the hypertensive patient, although, as we all know many patients are refractory to treatment. Where control of the body weight and restriction of salt have been successfully governed throughout pregnancy, there has been a marked lowering of mortality rate in hypertensives.

The last etiological group of cardio-vascular defects in the child-bearing age to be considered is that of the congenital anomalies. No clear cut example of this appears in the cases studied. The same functional classification applies to these women as to the previous etiological groups. Those with poor myocardial reserve tolerate pregnancy poorly, those with fair to good reserve may tolerate pregnancy well. Wherever possible the exact defects should be defined, for in the diagnosis there will be prognostic help. In a number of cases there will arise the question of surgery during pregnancy for correction or amelioration of the defect. Surgery during pregnancy is in some cases feasible and successful. It is in this surgically correctable group, however, that this type of "prenatal" care should be offered the patient preceding pregnancy, even preceding marriage. It seems justifiable in some cases with congenital heart disease to interrupt an early pregnancy and perform the heart surgery in order that the patient might then proceed more safely with subsequent pregnancies. There is usually some evidence of myocardial stress following cardiac

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Category V. Anesthesia

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THE professional challenge inherent in the study of maternal deaths is evident in those associated with anesthesia. It arises from two important facts, first, that some 90 per cent of all deliveries now are conducted under some type of anesthesia, and second, that deaths related to anesthesia at the time of delivery are increasing. From published reports, anesthesia now appears to be responsible for 10 per cent of all maternal deaths.

Critical study of these deaths indicate that they result principally from inexperienced or incompetent administration, and unwise choice of anesthetic agent or technique. It is too often overlooked that the obstetrical patient presents peculiar, unusual, and often formidable anesthetic problems. During the three-year period of the present study, 1950, 1951, 1952, there were 382 maternal deaths in Michigan. Of these, 261 were considered as being directly related to childbirth. In twenty-two, death was due either to the anesthetic or anesthesia contributed significantly to it. Thus, 8.4 per cent of the maternal deaths in three years were attributed to anesthesia (Table I).

Seven deaths were associated with cesarean section, and ten with vaginal delivery. One occurred during an elective postpartum sterilization. Anesthesia utilized to manage toxemia of pregnancy accounted for the remaining four cases. Spinal anesthesia was the method in twelve cases. Single dose spinal was responsible for nine deaths (40.9 per cent of the total), continuous spinal for three (13.7 per cent). Inhalation anesthesia was used in six cases, the factor in 27.4 per cent of these deaths. Intravenous sodium pentothal was related to two deaths, caudal to one, and one appeared to result from sensitivity to the drugs used in local anesthesia. These deaths demonstrate that the administration of an anesthetic in obstetrics is not without risk. It always must be kept in mind that the drugs which give freedom from pain are the most potent and lethal agents known in pharmacology.

TABLE I. MATERNAL DEATHS DUE TO ANESTHESIA

Year	Maternal Deaths	Obstetrical Causes	Deaths Due to Anesthesia	Percent of Obstetrical Anesthetic Deaths
1950	115	84	8	9.3%
1951	141	89	9	10.1%
1952	126	88	5	5.6%
Total	382	261	22	8.4%

TABLE II.
CAUSE OF DEATH AND TYPE OF ANESTHESIA

Cause of Death	Cases	Type of Anesthesia	Cases
Respiratory arrest	11	Single Spinal	8
		Continuous spinal	1
		Caudal	1
		N_2O-O_2	1
Aspiration	2	Ether	1
		N_2O-O_2-Ether	1
Cardiac arrest	2	Ether	2
Anoxia	2	C_3H_6-O_2-Ether	1
		I V Pentothal	1
Meningitis	2	Continuous Spinal	2
Toxic myelitis	1	Single spinal	1
Laryngospasm	1	I V Pentothal	1
Drug sensitivity	1	Local	1

One half of these deaths was caused by respiratory arrest. In ten cases conduction block anesthesia was responsible, single spinal in eight, continuous spinal and caudal in one each. One resulted from nitrous-oxide-oxygen anesthesia. Aspiration of vomitus was the cause of death in two cases, one patient dying of pneumonia within forty-eight hours as a result of aspiration. Cardiac arrest with ether anesthesia was responsible for two deaths. Anoxia was the fatal factor in the death from cyclopropane-oxygen-ether anesthesia, and in one of the deaths following intravenous sodium pentothal. Laryngospasm with sodium pentothal was the cause of death in the elective postpartum sterilization case. Meningitis was the final fatal factor in two cases following continuous spinal anesthesia used to combat oliguria in toxemia. Toxic myelitis following single spinal anesthesia was the final cause of death in one instance (Table II).

Anesthesia always involves at least three variables, the patient, the agent and technique chosen, and the person administering it. Table III illustrates the problem of two of these, the anesthesia and the anesthetist. In five of these fatal cases, the

Dr. Byrd is Consultant in Anesthesiology, appointed by Michigan State Society of Anesthesiologists to the Maternal Mortality Study.

anesthesia was given by a house officer, three by a resident, two by an intern. In four cases it was administered by the attending physician himself; in one it was given by the attending osteopath. Three of the fatal cases had anesthesia by a medical anesthetist. A nurse anesthetist gave the anesthetic in two of the cases, the floor nurse giving it in two others. In five cases, the person could not be determined. Thus, in only five of these twenty-two deaths was the patient under the care of a person who had had particular instruction and training in anesthesia. In but four did the attending physician administer the anesthetic. Almost

TABLE III. ANESTHESIA AND ANESTHETIST

Anesthesia	Deaths	M. D. Anes.	Nurse Anes.	Att. Phys.	Res. or Intern	Nurse	Osteopath	Unknown
Single spinal	9	1	1	1	3	0	0	3
Continuous spinal	3	1	0	0	1	0	0	1
Caudal	1	0	0	0	0	0	1	0
Local	1	0	0	1	0	0	0	0
I V Pentothal	2	0	0	1	0	0	0	1
Inhalation (6)								
Ether	3	0	0	1	1	1	0	0
N_2O-O_2	1	0	0	0	0	1	0	0
N_2O-O_2-Ether	1	0	1	0	0	0	0	0
C_3H_6-O_2-Ether	1	1	0	0	0	0	0	0
Total	22	3	2	4	5	2	1	5

60 per cent of these cases were given their fatal anesthesia by those whose understanding and experience in anesthesia must be considered minimal. Preventability and responsibility are not evaluated in these deaths. Nevertheless, they bring into focus the sad and undersirable fact that obstetric anesthesia too often is looked upon much like a dowdy, poor relation who should be pleased and satisfied with whatever she is given. Obstetric anesthesia, unfortunately, is haphazard, its choice being determined largely by whom is available to administer it rather than by the proper method for the obstetric and anesthetic problem involved.

Conduction block is an extremely important and useful form of anesthesia for delivery. It is unfortunate that its ease of administration has relaxed the discipline which its use demands. One always must remember that for vaginal delivery that half the usual dose of the anesthetic drug is adequate. In five instances, the amount of drug used was excessive. The recommended doses of the following drugs should be remembered.

For Vaginal Delivery

Procaine hydrochloride .....
25 to 50 mg. with or without dextrose
Piperocaine hydrochloride (Metycaine).....
20 to 30 mg. with or without dextrose
Tetracaine hydrochloride (Pontocaine).....
2 to 5 mg. with 5 per cent dextrose
Debucaine hydrochloride (Nupercaine).....
1.5 to 3 mg. with 5 per cent dextrose
Lidocaine hydrochloride (Xylocaine).....
25 to 40 mg. with or without dextrose

For Cesarean Section

Continuous Spinal

1. Initial dose as listed for vaginal delivery.
2. Repeated in no larger dose, no more frequently than 30 minute intervals.

Single Injection Spinal

Procaine hydrochloride.....75 to 100 mg.
Tetracaine hydrochloride (Pontocaine).....7 to 10 mg.
Debucaine hydrochloride (Nupercaine).....3 to 5 mg.

Fatalities from spinal anesthesia result from circulatory failure. Consequently, an experienced observer must be present to watch blood pressures and respirations closely. When complications arise he should be able to recognize them and cope with them. Disaster does not strike without warning. The anesthetic level does not always remain fixed, it may rise six segments after delivery has been completed. Increased spinal fluid pressure also may raise the level to dangerous heights. Consequently, retching, vomiting, coughing and extra straining on the part of the patient must be avoided or firmly dealt with if they occur.

Hypotension is often seen and can be a serious complication for both the mother and her infant. Intravenous fluids should be started routinely before spinal anesthesia is given for cesarean section; it provides a ready means for prompt administration of vasopressor drugs and other agents to combat shock should it occur. It should be used with equal frequency at vaginal delivery whenever complications are present or may be anticipated, such as following prolonged labor, multiple births, or any operative delivery, except, perhaps, outlet, perineal forceps. Adequate equipment for resuscitation is essential to every delivery room. An anesthetic machine, ready to use,

with an adequate supply of oxygen should always be at hand when spinal anesthesia is given. When respiratory paralysis does occur, the only effective method of giving oxygen is by positive pressure inflation of the patient's lungs at a rate of twenty times per minute.

Aspiration of vomitus or gastric fluid is one of the most feared and serious complications of inhalation anesthesia. Unless vigorously and promptly treated it results in severe morbidity or eventual fatality. Every physician should stress at the onset of labor, as well as during the prenatal course, that the patient should take no food. A liquid, non-curd forming diet occasionally may be permitted. Patients who during labor continually regurgitate small amounts of gastric fluid, and this occurs often in prolonged labor, can be best managed by emptying the stomach with a Levine tube. An endotracheal airway helps avoid gross contamination of the respiratory tract during inhalation anesthesia. If aspiration does occur, catheter endotracheal suction or immediate bronchoscopy will save many lives. Following delivery, all patients who have aspirated should be treated with appropriate antibiotics, humid oxygen by tent or catheter, and should be encouraged to cough at regular, frequent intervals.

The use of conduction block anesthesia for the treatment of pregnancy toxemia has been extremely controversial. It is significant that very few clinics throughout the United States use continuous conduction anesthesia for the eclamptic patient at the present time. The four cases of toxemia treated unsuccessfully by conduction block were at best difficult cases to manage. Two of these were hypertensive patients with some renal impairment who developed signs of a superimposed toxemia. It is in these patients particularly that spinal anesthesia should not be used.

Insufficient data regarding the course of the anesthesia, the drugs and techniques used, and observations of blood pressure, respirations, and pulse made it difficult to arrive at an exact explanation of some of the deaths. Autopsies were performed on eleven of these women whose death was attributed to anesthesia. In the remainder, careful analysis and reconstruction of the course of events permitted the deductions which have been made.

We appreciate keenly the difficulties which presently surround obstetric anesthesia. Trained and experienced anesthetists are not available in sufficient number to have one present at every delivery. Prospects of achieving this ideal are so distant, that for now it must be considered an impossibility. Thus, every obstetrician should know fully the limitations of all forms of anesthesia and the abnormal physiologic states they initiate. As medical anesthesiologists increase in number and in geographic distribution and as they undertake active study of the problems of obstetric anesthesia, those who deliver the parturient will have increasing help and support in continuing the decrease in maternal mortality. And despite the present handicaps, obstetric anesthesia will be materially improved if there is:

1. More detailed understanding of the peculiarities of obstetric anesthesia.
2. Greater experience and competence of the individual administering anesthesia in obstetrics.
3. Scrupulous adherence to the indications and contraindiations of the various techniques.
4. Constant vigilance to anticipate anesthetic complications and their prompt proper treatment when they occur.
5. Greater development of a sense of responsibility for obstetric anesthesia by the obstetrician, the medical anesthesiologist and the hospital administrator.
6. Establishment and subsequent enforcement for each individual hospital of detailed and specific regulations for obstetric anesthesia.

TRUDEAU SANATORIUM

The Trudeau Sanatorium, the oldest institution for the treatment of tuberculosis, one of the most devastating diseases not so long ago, closed on December 1, 1954, because of the decline in the number of patients. The length of stay has been shortened by new drugs and surgery. The Sanatorium was established seventy years ago. In 1900, 200 deaths from tuberculosis occurred in every 100,000 persons, but now the number is 12.6 for every 100,000 persons. Other tuberculosis institutions have also ceased functioning. Such is progress.

Michigan Maternal Mortality Study 1950-1952

Category VI. Deaths from "All Other Causes"

By Margaret S. Hersey, M.D.
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THIS BRIEF analysis is presented of eighty-three maternal deaths from "all other causes." (Table I). Unfortunately, in spite of a thorough investigation of all maternal deaths, the data in many is most incomplete and the cause of death cannot be ascertained, as in those instances where the woman died at home unattended and the death certificate was signed out by a coroner, or she was dead on arrival at the hospital or died shortly after admission without previous medical observation. The size of this group is sufficient to emphasize a plea for the use of autopsy in all cases, particularly those in which death cannot be adequately explained. In other instances the hospital and physician's records were so incomplete that an evaluation could not be made of the factors leading up to the death, and in a few cases the co-operation of the attending physician could not be elicited to secure information of value. From the standpoint of those who are endeavoring to review these deaths that they may be utilized for postgraduate medical education, we ask that physicians in Michigan co-operate with the study by providing adequate histories, physical examinations, and complete records of patients' progress.

In this group of thirty-two deaths from miscellaneous obstetrical causes, there were six due to chorionepithelioma. Five deaths followed transfusion with incompatible blood, three of which were on the basis of the Rh factor.

Another five deaths resulted directly or indirectly from attempts at abortion. Two of these resulted from pulmonary air emboli following insertion of a catheter; two deaths which occurred under suspicious circumstances were autopsied and evidence of instrumentation was present; the fifth followed ingestion of an unknown toxic substance causing marked hemolysis of the blood with a hemoglobin of 5 per cent on admission to the hospital. Autopsy in this latter case revealed evidence of attempted instrumentation as well as toxic degeneration of all the organs.

One patient died following rupture of the bladder with peritoneal extravasation of urine and rupture of the uterus subsequent to a mid forceps delivery in a pre-eclamptic patient; she expired during laparotomy undertaken to correct the condition twenty-four hours postpartum. Three patients died of possible amniotic fluid embolism and two from possible pulmonary embolism not considered to have been on an infectious basis.

In another ten patients the details surrounding the death are so incomplete that to assign a cause would be mere conjecture. However, since these unexplained sudden deaths occurred during labor, delivery, or within a few hours following delivery, and from the meager evidence available appeared to be related to the pregnancy they have been classified as obstetrical deaths. Two of them died in a shock-like state following Caesarean section.

In the group of fifty-one deaths from non-

TABLE I. DEATHS DUE TO ALL OTHER CAUSES

International Classification	Condition	No. Cases
	Obstetrical Causes	
173	Chorionepithelioma	6
650.2	Abortion, without sepsis, self-induced or induced without medical indication	5
677	Delivery with other traums	1
684	Puerperal pulmonary embolism	5
688.2	Sudden death from unknown cause in the puerperium	10
N998.3	Incompatible transfusion reaction	2
N998.4	Immunization with Rh factor with symptoms	3
Total		32
	Non-Obstetrical Causes	
153	Carcinoma of sigmoid	1
163	Pulmonary carcinoma	1
170	Carcinoma of breast	5
171	Carcinoma of cervix	1
191	Sq. cell carcinoma skin-graft	1
193	Glioblastoma	2
195	Pheochromocytoma	1
204.3	Acute leukemia	1
260	Diabetes mellitus	5
292.6	Sickle-cell anemia	1
296	Idiopathic thrombocytopenic purpura	1
331	Cerebral hemorrhage	7
465	Pulmonary embolism	2
541.1	Ulcer of duodenum with perforation	1
570.2	Mesenteric infarction	2
570.5	Intestinal adhesions with obstruction	1
648.3	Air embolism (pulmonary)	1
744	Myasthenia gravis	1
780.2	Grand mal convulsion with suffocation	1
784.5	G. I. hemorrhage	1
795.5	Death from unknown cause	6
E825	Motor vehicle accident	4
E878	Poisoning (ergot and $MgSO_4$)	2
E917	Burns	1
E983	Assault	1
Total		51

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obstetrical causes, there were eleven due to malignancy, including five carcinoma of the breast, one carcinoma of the cervix, one of the sigmoid, one pulmonary carcinoma, two glioblastoma, and one squamous cell carcinoma arising in an ulcer in the grafted area of an old burn. One patient was found at autopsy to have a pheochromocytoma.

There were seven deaths attributed to cerebral vascular accidents in non-toxemic patients, several on the basis of congenital aneurysm. Another five deaths resulted from diabetes. Six accidental deaths occurred: four of which were due to auto accidents, one from burns sustained from a fall onto a hot stove, and one from assault. Two deaths followed gastrointestinal hemorrhages. Two other patients had mesenteric thrombosis, one of which terminated by pulmonary embolism. Two additional deaths from non-puerperal pulmonary emboli followed exploratory laparotomies, one performed for an acute surgical abdomen which revealed a massive retroperitoneal hematoma probably on the basis of a ruptured aortic aneurysm and the other for a mistaken diagnosis of fibroid uterus which proved to be an unsuspected pregnancy.

One death followed intestinal obstruction due to adhesive bands which formed subsequent to a former operation. Other causes include one from suffocation during a grand mal seizure; one from leukemia; one from idiopathic thrombocytopenic purpura; one from myasthenia gravis; and one from sickle-cell anemia.

Ergot taken in an attempt to induce an abortion at three months' gestation was responsible for one death. Another woman ingested a large quantity of $MgSO_4$ on the day following discharge home from the hospital after a spontaneous abortion and died from magnesium intoxication. Death in another woman at approximately three months' gestation resulted from air embolism following douching; the autopsy revealed air under pressure under the placenta, but in this case there was no evident attempt at abortion.

In the remaining six deaths in this group data is not complete enough to assign a cause; since they did not seem to be related directly to the pregnancy, they have been classified as non-obstetrical deaths.

In a study of the above non-obstetrical deaths, it is apparent that even though the cause was unrelated to the pregnancy, in some cases had the patient received adequate prenatal care with surgical or medical consultation when indicated, the condition might have been successfully treated and the patient might have survived her pregnancy. For example, one patient received prenatal care from the second to the sixth month of her pregnancy when she was hospitalized for an undiagnosed coma. Admission urinalysis showed a 4 plus sugar and a blood sugar was reported as 435 mgm. per cent. It is hard to comprehend why a woman with such a severe diabetes did not show a positive urine sugar earlier in pregnancy! And in the record of a second patient who was admitted to the hospital in coma at seven and one-half months, it is stated that prenatal care was begun in the third month; glycosuria was recorded as present at all visits—yet the diabetes was unrecognized and untreated until after coma developed!

From this critical review of maternal deaths in Michigan, it is the belief that if knowledge currently known about the management of obstetrical complications had been utilized, many of these 382 mothers would have survived their pregnancies. Better education of the public concerning the value of early prenatal care would also reduce the number of deaths which are now charged to patient responsibility because they did not seek medical care.

AID FOR ASTRONAUTS

It has been suggested by I. M. Levitt, Director of Philadelphia's famed Fels Planetarium, that space travellers should be furnished specially designed polaroid "sunglasses," with tiny photelectric cells and motors hooked to the polaroid lens, so that a constant amount of light will reach the eyes.

Dr. Levitt points out that after the earth's atmosphere has been passed there is nothing to soften the light of the sun nor to produce a haze that will cast shadows; in one direction will be utter darkness, in the other direction, brilliant light.

The eye's marvelous adaptive power will be equal to this difference in brilliance of a billion times, but the demand must not be made too suddenly.—*Guildcraft*, December, 1954.

Use of Dried Fibrinogen (Human) for the Control of Hemorrhage

By H. D. Anderson, Ph.D.,
and
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DRIED FIBRINOGEN (human) is a product prepared from human blood by modification and elaboration of the method of Cohn et al.[3]

A number of reports indicate that this product is useful in the management of severe hemorrhage due to low levels of fibrinogen associated with the following conditions:

1. Obstetrical hemorrhage. Recent reports by Schneider[13] and also Hodgkinson et al[6] provide an extensive discussion of the obstetrical conditions which cause hypofibrinogenemia. Premature separation of the placenta and the role of fibrinogen in the control of hemorrhage are described by Moloney et al[9] and Weiner et al.[15,16] Amniotic fluid embolism has been discussed by Schneider[13] and Reid et al.[10,11] Long standing fetal death has been described by Schneider[13] and Hodgkinson[6] and Reid.[12]

2. Congenital absence of fibrinogen has been described by Alexander et al,[1] MacFarlane[8] and Lawson.[7]

3. Hypofibrinogenemia in surgical patients with cardiac arrest has been described by Coon and Hodgson.[4]

4. Pulmonary surgery (manipulation of lung tissue in pneumonectomy, et cetera) may be associated with hypofibrinogenemia.[5]

5. Blood transfusion reactions may cause sharp decreases to critical levels of blood fibrinogen. Five cases have been reported to us to date where transfusions of fibrinogen controlled severe hemorrhage which followed transfusion reactions.

During the period from May, 1952, to September, 1954, the Michigan Department of Health prepared and distributed 939 bottles of fibrinogen. Distribution was arranged on a nationwide basis by the Medical Staff, Blood Program, American National Red Cross, who also agreed to obtain adequate clinical reports from each physician using the product. A brief summary of these reports was presented earlier.[2]

It is not the purpose of this report to present detailed discussions of any of the individual cases; however, it should be pointed out that approximately one-half of the cases treated were diagnosed Abruptio Placentae, and two-thirds of the cases were associated with pregnancy.

TABLE I. CASES TREATED WITH FIBRINOGEN

Type of Case	No.
Abruptio Placentae	64
Miscellaneous Postpartum	21
Postsurgical-Post-traumatic	20
Dead Fetus	8
Transfusion Reaction	5
Congenital Hypofibrinogenemia	4
Miscellaneous	9
	131

It is also interesting to note that in the 131 cases reported to us, hemorrhage was controlled in all but two cases by fibrinogen together with whole blood. In those cases which did not respond there was little doubt that fibrinogen was administered too late.

It has been repeatedly pointed out by Reid et al,[10,11,12] Schneider[13,14] and Hodgkinson et al,[6] that in mild cases of fibrinogen depression whole blood, fresh plasma or dried plasma may be sufficient to restore adequate levels of fibrinogen. Certainly whole blood is an important part of therapy for any hemorrhagic state. Reid et al have emphasized in several reports, however, that in acute depression of fibrinogen, hemorrhage is profuse and fibrinogen replacement is required. Weiner[15] states: "to replace fibrinogen from an extremely low level to the normal level by blood transfusion is an impossible task . . ." This was repeatedly demonstrated in the cases reported to us. Innumerable transfusions of whole blood failed to control the hemorrhage, yet fibrinogen administration controlled it rapidly. The average pint of blood probably does not contain more than 1.25 gm of fibrinogen, yet many patients without extensive blood loss may require from 6 to 14 gm of fibrinogen within a few hours. To provide this fibrinogen through whole blood tranfusions would dangerously overload the vascular system. To terminate pregnancy associated with Abruptio Placentae, amniotic embolism or long standing dead fetus by Caesarean section or induction of labor without correcting dangerously low fibrinogen levels may have serious consequences.[11,15,16]

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These observations emphasize the importance of adequate laboratory control in the diagnosis and treatment of such cases. It is especially important that quantitative tests for fibrinogen should be performed when hypofibrinogenemia is suspected. Schneider[14] has proposed a rapid method which requires a minimum of laboratory equipment and skill, for use in following the fibrinogen levels during the course of therapy. The use of oxalated or citrated plasma instead of whole blood in the test may have one advantage, namely, that it is easier to differentiate clot lysis from clot fragmentation. Where true clot lysis exists more fibrinogen may be required to establish and maintain adequate levels of fibrinogen.

Because of the varying requirements of different patients no definite dosage of this product can be recommended at this time. In the case reports which we have received the dosage ranged from 1 to 10 grams. The critical blood level is considered to be 100 to 150 mg. per cent,[16] and sufficient amounts of fibrinogen should be given to raise the blood levels above 150 mg. per cent Sufficient quantities of whole blood should be given along with fibrinogen, to restore the patient's blood volume.

No serious immediate or delayed reactions have been reported following the intravenous administration of the product when used as recommended. The data are not adequate to state whether or not the method used in the preparation of this product completely destroys the virus of homologous serum jaundice (hepatitis B); therefore, each physician must consider that such a risk may exist. This again emphasizes the importance of laboratory control to determine when and how much fibrinogen may be required.

As prepared and distributed by the Michigan Department of Health each bottle contains a variable amount of fibrinogen (1 to 3 gms), but a constant amount of buffer salts (6.0 gm dextrose, 1.47 gm sodium citrate and 0.34 gm sodium chloride). When reconstituted with 200 ml of water for injection (sterile, pyrogen-free distilled water) the resulting solution is isotonic with whole blood. The product is subjected to ultraviolet radiation before it is dried, to reduce the risk of transmitting homologous serum jaundice (hepatitis B). It is intended for intravenous administration and must be used within one hour of the time of reconstitution. A standard blood recipient set with filter should be used for administration.

Dried fibrinogen (human) is available to the profession of Michigan on request. The authorities of fourteen hospitals have agreed to act as distributors for this product. These have been selected geographically so that, with the facilities of the four state laboratories no accredited hospital in Michigan is more than seventy-five miles from a source supply of fibrinogen.

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Surgical Diagnosis and Treatment of Acute Gynecologic Conditions

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ACUTE GYNECOLOGIC conditions for which surgical treatment is necessary fall naturally into two general groups, abdominal emergencies and vaginal emergencies. Because acute appendicitis is the most commonly encountered emergency involving the lower part of the abdomen, it is necessary to include it in any discussion of the diagnosis and the surgical treatment of the acute lesions of the pelvis.

The relative frequency with which some of these conditions were encountered during a five-year period (1945 to 1949, inclusive) at the Mayo Clinic may be of interest. During this period, 1,970 emergency operations were carried out on the general surgical services at the clinic. Nine hundred and twenty (46.7 per cent) of these emergency operations were carried out with the preoperative diagnosis of acute appendicitis, while 270 (13.7 per cent) were done for gynecologic lesions.

The proper management of any of these conditions demands a complete history and a thorough physical examination. As Carrington[1] pointed out in a discussion of diagnostic errors in a series of 1,932 emergency gynecologic cases, the cause of error was usually in overlooking some detail of the physical examination or of the history but not in the ability or lack of ability of the examining physician. The total knowledge that the surgeon has obtained concerning the patient and her background as detailed by a careful history enables him to apply the finest discrimination in surgical judgment before and during the operation, while the knowledge that the surgeon has of the situation that he faces, as well as his recognition of the more common dangers of surgical treatment, aids in the prevention of postoperative complications and in reducing morbidity.

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Appendicitis

Appendicitis cannot be easily disposed of in this discussion, as it often cannot be easily disposed of in the diagnosis at the bedside. Yet, in the very great majority of cases acute appendicitis behaves according to a definite pattern, and a careful history usually defines that pattern, even through a haze of confusing details. The onset with pain, which is usually periumbilical in location, is so typical of appendicitis that a story of initial symptoms of nausea and vomiting or of fever appearing prior to the occurrence of pain makes the physician wary of other conditions than appendicitis. The fact that nausea and vomiting come after pain in development of the symptom complex is valuable evidence. Most important is the fact that the original, vaguely localized pain shifts in a few hours to a more definite location which is usually in the right lower quadrant and the pain is now fairly constant in severity; the appendix which lies over the pelvic brim and which produces a downward shift in pain is a variant of the same feature, that is, a shift in position and a more definite localization of pain. The development of nausea and vomiting and fever after the appearance of pain lends weight to the diagnosis but is more inconstant than the nature of the pain.

The physical signs of appendicitis are also typical in the great majority of patients but such factors as the age, general condition and physique of the patient affect the intensity of the tenderness, rigidity and "rebound tenderness" which are usually present in the right lower abdominal quadrant; but the point of greatest tenderness nearly always coincides with the point of most intense pain in acute appendicitis. The emotional and constitutional make-up of the patient affects the responses to the maneuvers of the examination in a variable degree, and an appreciation of these factors, obtained by a careful and observant history, is often of considerable importance in the basic decisions of diagnosis and treatment.

Protective spasm of the overlying muscles, though it may be of relatively slight degree in some cases, is added evidence of real peritoneal irritation at this area. Rebound tenderness is more variable than rigidity, and while often present, it

is not necessarily "referred" by the patient to the site of greatest pain and tenderness. Rectal or vaginal examination should never be omitted. In the presence of acute appendicitis these examinations may yield some tenderness to pressure in the right side of the pelvis; however, in the case of the pelvic appendix the tenderness is often exquisite and may establish the diagnosis. The absence of significant gynecologic findings lends much weight to the diagnosis. But it is in the presence of other conditions, either surgical or nonsurgical, that these examinations are most important; in the former the proper placement of the incision and the orderly conduct of the operation are made easier, and in the latter the avoidance of an unneeded operation is possible. The laboratory data are valuable, in a confirmatory way, in acute appendicitis, but are of much less importance than the history and physical examination. The elevation of the leukocyte count and the increased proportion of neutrophils are merely the evidences of an inflammatory process, the nature and location of which must be determined by sound clinical methods. The sedimentation rate is a more reliable diagnostic factor in that it is almost always within normal limits in acute appendicitis and elevated in almost 100 per cent of the cases of acute pelvic inflammatory disease.

Abdominal Gynecologic Emergencies

Of the 270 emergency gynecologic operations in the period mentioned, 108 (40 per cent) were abdominal, and these were the most serious of the acute gynecologic conditions. Seventy-seven of these cases (71.3 per cent of the abdominal emergency operations) involved intraperitoneal hemorrhage, and ruptured ectopic pregnancy was the commonest cause of the bleeding (57 of 108, or 52.8 per cent).

Ectopic pregnancy occurs about once in 300 normal pregnancies,[9] and in 70 per cent of cases the patients are multiparous. Also, a patient who has had one ectopic pregnancy has an increased likelihood of having a second ectopic pregnancy since the condition of the two tubes may be similar. Generally the patient is seen in mild shock and is pale and perspiring; the abdomen is extremely tender, with marked rebound tenderness but little or no muscle spasm to continuous pressure. Pelvic examination will definitely show extreme pain on any movement of the cervix and also may reveal a tender bulging mass in the cul-de-sac of Douglas and possibly a mass in one adnexa. Suggestive signs of pregnancy should be sought, such as softening of the cervix, enlargement of the uterus, bluish discoloration of the introitus, and so forth. The temperature is low or subnormal, the pulse rapid and weak and the blood pressure low, depending on the degree of shock that is present. The leukocyte count will become elevated after a few hours as a result of the blood in the peritoneal cavity, but it is not an accurate measure of the amount of bleeding. Restlessness, particularly with "air-hunger," is the more reliable clinical sign of severe loss of blood.

The history of typical cases will be of a very sudden onset of acute low abdominal pain, usually with a sensation of faintness if not actual fainting or collapse. The pain is continuous, and if blood reaches the diaphragmatic peritoneal surface there will be referred pain to the shoulder, an excellent diagnostic aid. The last menses may be absent or possibly delayed but most often are scanty. However, the spotting may continue for days after a normal period should have ended.

The differential diagnosis of a typical ruptured ectopic pregnancy is not difficult, but certain other acute abdominal conditions have to be considered. Torsion of an ovarian cyst may produce pain as sudden and as continuous as in ruptured ectopic pregnancy; however, pelvic examination will disclose the cyst or at least show that the tenderness is definitely limited to one adnexa without as much pain on gentle manipulation of the cervix as is found in ectopic pregnancy. The suggestive signs of pregnancy are lacking and the menstrual history is normal, while there is no evidence on clinical grounds or in the laboratory findings to indicate a severe loss of blood.

Acute appendicitis is confusing only when the appendix is located in the pelvis; even so, the history of gradual onset of centrally located abdominal pain which later becomes localized, and the gastrointestinal symptoms of nausea and vomiting point to the diagnosis of appendicitis. The menses are normal. The marked physical signs in appendicitis are often localized to a very small area in the abdomen, and there are no signs of sudden severe shock and no evidence of bleeding.

Acute pelvic inflammatory disease may be confused with tubal abortion with slow bleeding but not with the sudden typical tubal rupture and hemorrhage. Acute pelvic inflammatory disease

customarily follows the menses or some other pelvic insult, and may cause vaginal bleeding. However, the temperature and leukocyte count are increased, the sedimentation rate is always elevated, the tenderness on pelvic examination is usually bilateral, bilateral adnexal masses may be palpable and there may be evidence of recent acute infection in the vagina or cervix.

In cases of tubal abortion when the products of gestation are separating or are passing out of the fimbriated end of the tube, the bleeding and shock are not so catastrophic. With the tissue in the fimbriated end of the tube, the intra-abdominal bleeding may slow or even cease for hours or days and then resume. A suggestive history of an abnormal menstrual period followed by prolonged spotting plus rather sudden pain in the pelvis should lead to consideration of ectopic pregnancy; when a tender mass is present in one tube the diagnosis is practically complete. If the patient's general condition indicates that only minimal bleeding has occurred it may be worth while to await the results of a Friedman test. Alternately, or if the general situation and the Friedman reaction do not clarify matters, posterior colpotomy can be done easily; the presence of free blood in the cul-de-sac is sufficient evidence for abdominal exploration.

When the patient is in shock at the time of admission the characteristic history and physical findings leave little doubt as to the diagnosis, and when the diagnosis of bleeding ectopic pregnancy has been made the only definitive treatment is surgical. The patient can be treated for shock while the operating room is being prepared. A large-bore needle should be inserted in a vein as soon as possible, and administration of blood, blood substitutes or glucose solutions should be started, depending on the urgency of the patient's condition. In any case, the needle should be satisfactorily in place in the event that the transfer of the patient to the operating floor produces increased bleeding and possibly sudden vascular collapse. If time is not available for blood grouping and cross matching, blood from group O, Rh-negative donors should be used, and the operation should be started immediately. The abdomen is quickly opened through a lower midline incision, and a hand is passed immediately into the pelvis. The uterus is identified and the tubes are rapidly palpated to determine which one contains the pregnancy. This tube can then be tightly clamped between the fingers to control the bleeding, and the situation is now under good control. While transfusions are continued at the indicated rate and volume, the clots and fresh blood should be evacuated from the abdomen, exposure of the pelvis obtained and finally salpingectomy carried out. The stump of the tube should be peritonealized with the round ligament. The remainder of the blood is removed as completely as possible, and it may be used for autotransfusion if desired. However, sufficient blood should be given to restore the estimated loss of blood. The opposite tube must be inspected, since bilateral ectopic pregnancies have occurred.[2] The appendix is best left alone when there has been considerable intra-abdominal bleeding, since its removal in the presence of such an excellent culture medium is an invitation to infection. In the succeeding days further whole blood replacement can be guided by hemoglobin determinations. These patients are usually young women, often with small children at home, and are faced with heavy household duties; their convalescence can be so greatly speeded up and helped by adequate blood replacement rather than by slow self-formation of blood, that the slight danger of a transfusion reaction is outweighed.

Regardless of how serious the condition of these patients appears when they are first seen, accurate diagnosis with early surgical intervention and early restoration of the circulating blood volume will reduce the risk to approximately 1 to 2 per cent. There were no deaths among the fifty-seven patients with ruptured ectopic pregnancies in this group.

The second commonest cause of intraperitoneal hemorrhage was bleeding from ruptured corpora lutea or endometrial cysts, which occurred in nineteen of the 108 abdominal emergencies (17.6 per cent). In seventeen cases the bleeding came from ruptured corpora lutea. In some of these cases bleeding was of minor degree; in others, the bleeding was of sufficient amount to cause protracted pain and, sometimes, to give signs of severe loss of blood. Classically, "Mittelschmerz" is the name applied to follicular cysts causing pain at the time of ovulation about fourteen days before the onset of the expected menses; but the name also has been loosely applied to ruptured corpus luteum cysts occurring a few days later in the cycle. The condition is characteristic of young, unmarried women, 70 or 80 per cent of the patients being less

than twenty-five years old.[4] It is due to the rupture of the graafian follicle cyst at the time of ovulation with the spillage of a small amount of blood into the peritoneal cavity. It also occurs in the third week of the menstrual cycle, when the corpus luteum has formed. When a corpus luteum ruptures, the bleeding may be more severe than after rupture of a graafian follicle cyst and very rarely has been exsanguinating.

Although the incidence of these conditions is not known, McSweeney and Wood[6] stated that in their experience there is one case of operation for ruptured cyst to every thirteen appendectomies. It is indeed a common condition when looked for, and in more than 50 per cent of the cases in which operation is performed there is a past history of similar attacks. These may occur at monthly intervals, may be on alternate sides and may cease spontaneously. In most cases the menstrual cycle is otherwise normal. With a sudden onset the pain is most severe at the beginning. It is usually unilateral and located low in the abdomen or in the pelvis. The temperature is minimally elevated and the leukocyte count rarely exceeds 12,000 per 100 cc. of blood. Nausea and vomiting occur in about a third of the cases. On abdominal examination, the tenderness is minimal, there is little, if any, muscle spasm, and there is no point tenderness as in appendicitis. Pelvic examination may show tenderness in one of the adnexal regions or a boggy sensation to the cul-de-sac.

Operations in these cases are usually carried out under diagnosis of acute appendicitis or ectopic pregnancy. But Mittelschmerz differs from acute appendicitis in that the pain starts low in the abdomen and remains there. It is maximal from the beginning and is associated with little tenderness and almost no muscle spasm. Mittelschmerz differs from ectopic pregnancy in that the menstrual history is normal, the pain occurs at midcycle, there have often been similar episodes in the past, the suggestive signs of pregnancy are absent, the Friedman reaction is negative, and there may have been no possibility of pregnancy.

When the diagnosis of Mittelschmerz can be made, the treatment is conservative but the patient should be kept under observation, since occasionally the bleeding is severe. The clinical course usually improves definitely in a few hours or in a day, and the leukocyte count returns to normal at the same time. If the diagnosis rests between appendicitis and Mittelschmerz, exploratory laparotomy should be carried out, and if signs of bleeding are sufficiently developed to suggest the possibility of ectopic pregnancy, the operation should, of course, be performed without delay. Exploration is best carried out through a midline or paramedian incision, and the bleeding follicle or corpus luteum cyst can be readily identified. As much ovarian tissue as possible should always be preserved. A few sutures may control the bleeding, or the lining of the cyst can be removed and the raw area closed by a locking hemostatic suture. The ovary should not be removed, for similar attacks can later involve the solitary remaining ovary. Both tubes should be inspected, for an unruptured ectopic pregnancy can be associated with this lesion. There is no objection to appendectomy after the usual small amount of blood has been removed from the pelvis.

Ruptured endometrial cysts were the source of intraperitoneal bleeding in two of the emergency cases, and in five other cases operations for ruptured endometrial cysts were done on scheduled lists but not as emergencies[7] during this five-year period. In these lesions the pain is sudden in onset, is experienced in the lower part of the abdomen and does not "shift" its location. Nausea, vomiting and fever are not usually a part of the picture, nor is shock associated with the pain. The patients tend to seek advice in a few hours, yet appear to be in remarkably good condition and are certainly not in shock. A menstrual history of increasing dysmenorrhea, and a history of sterility or "one-child fertility" may give the first diagnostic lead. Examination reveals lower abdominal tenderness and rebound tenderness, but little to no rigidity. The uterus and uterosacral ligaments are distinctly tender on manipulation. Nodules in the recto-uterine pouch and along the uterosacral ligaments, when present, are important findings. The diagnosis is often one of suspicion rather than of confirmation, and exploration is often necessary.

With the abdomen opened, the surgeon can make the diagnosis of ruptured endometrioma immediately by the presence of the collapsed cyst and the characteristic chocolate-colored fluid in the pelvis. The only true cure for endometriosis is removal of all ovarian tissue, since the endometrial cysts are dependent on functioning ovarian tissue for their activity. If the patient is nearing the menopause the treatment of choice is bilateral oöphorectomy, with or without hysterectomy. In

younger women the decision as to whether some ovarian tissue should be preserved will depend on the amount of pain and disability that the patient has had with her menses and whether she realizes that later surgical treatment may be necessary if conservatism is practiced. Hence, the importance of making or at least suspecting the diagnosis before exploration when these matters can be discussed with the patient. If the situation has not been explained to the patient preoperatively, it is far better to be conservative in the case of the young patient.

The remaining case of intra-abdominal bleeding in the seventy-seven cases in this group represents an unusual occurrence in which a capsular vein of a uterine leiomyoma ruptured spontaneously, giving signs of acute peritoneal irritation and loss of blood. The patient was treated successfully by total abdominal hysterectomy and the case has been reported previously.[3]

Torsion of an ovarian cyst or of a fallopian tube is a surgical emergency; yet many of the patients may have experienced previous milder attacks of pain or even have known of the presence of an adnexal tumor. Any tumor may twist on its pedicle but in the majority of cases the tumor is a cyst; in torsion of a tube the tube is usually adherent at its distal end and the torsion occurs about its long axis. Sixteen cases of torsion, ten involving cysts and six involving fallopian tubes, were dealt with among the 108 abdominal emergencies (14.8 per cent).

In torsion of a cyst the onset was typically sudden in more than half the cases; in others it was gradual. The pain is low in the abdomen and generally is unilateral; it may be "referred" along the thigh on the affected side. Nausea and vomiting are frequently present. Age of the patient is of no aid in diagnosis, since cases occur before puberty and after the eightieth year of life. There is no history or evidence of previous old pelvic infection, nor are signs of pregnancy or irregularity of menses present to suggest an ectopic pregnancy. Temperature, sedimentation rate and leukocyte counts are within normal range at first. Roentgenographic examination of the pelvis may visualize a mass directly, or may show some calcification as in a dermoid. Examination reveals that the lower part of the abdomen is tender and there is often rigidity of considerable degree if necrosis is present. The majority of tumors that twist on their pedicles are large enough to be readily palpable, and Kelberg and Randall[5] reported that the tumor could be palpated before operation in forty-one of their forty-two cases.

Torsion of a fallopian tube is usually much rarer than the experience in this group of cases (six in sixteen cases of torsion) would indicate. The symptoms are quite similar to those of torsion of a cyst but the physical findings are not so definite.

In the surgical treatment of torsions the abdomen should be opened through a midline incision with the patient in moderate Trendelenburg position. Cysts involved by torsion necessarily have distinct pedicles, and can be readily delivered and the pedicle divided between clamps. It is often necessary to remove the tube with the cyst, even if it is not involved in the actual torsion. The remaining ovary must be examined since in many cases ovarian tumors occur bilaterally. In the case of a twisted fallopian tube the treatment consists of salpingectomy with preservation of the ovary if feasible, but since this condition occurs primarily after adhesions from pelvic inflammatory disease, additional surgical procedures in the pelvis may be necessary and advisable. Since these patients are usually in good general condition and have not suffered from loss of blood, there is no reason for not performing appendectomy also.

Acute salpingitis is a medical disease in its early stages and should be treated by antibiotics, rest, adequate fluids and diet, and pelvic heat. In many cases nowadays the inflammation will subside and never require surgical attention. It is primarily in cases of early salpingitis when the diagnosis rests between acute salpingitis and appendicitis that pelvic inflammatory disease enters the field of the surgical emergencies. Pelvic inflammatory disease characteristically starts after some provocation such as childbirth, menstruation, alcoholic or sexual excess, or abortion. The pain occurs bilaterally, low in the abdomen, and the patients show evidence of a severe acute inflammatory process and often are acutely ill. The temperature may range from 102 degrees to 104 degrees Fahrenheit and the leukocyte count and the sedimentation rate are greatly increased very early in the disease. The lower part of the abdomen will usually be exquisitely tender, especially to the rebound maneuver, but with very little rigidity. There may be evidence of acute infection in the glands about the introitus or in the vagina or cervix; smears and cultures from these areas will determine if a neisserian infection is present. Bimanual examination will re-

veal extreme tenderness on motion of the cervix similar to ectopic pregnancy and bilateral adnexal tenderness or masses.

If acute appendicitis cannot be eliminated from the diagnostic possibilities exploration should be carried out. If acute salpingitis is present, even with purulent material oozing from the ends of the tubes, they should be left alone. Sulfonamides or other antibiotics, or both, may be left in the pelvis and, combined with postoperative therapy, a good chance of recovery with patent tubes is offered. Cultures of the peritoneal fluid often show no growth or organisms; therefore, it is advisable to take cultures from the vulvovaginal area at the time of examination. If the infection proves to be a flare-up of an old hydrosalpinx with sealed and obviously useless tubes, bilateral salpingectomy should be carried out. In some cases an abscess may be encountered, which will require drainage. Occasionally an abscess of the cul-de-sac later forms and does not resolve under antibiotic treatment, but this can be relieved by posterior colpotomy. In the present group of 108 abdominal emergencies, salpingitis was encountered on abdominal exploration in six cases (5.6 per cent). In four cases in which the inflammation was quite early, the operation was concluded as an exploratory laparotomy; in the other two cases residual hydrosalpinx was found and salpingo-oöphorectomy was carried out. In two cases abscess of the cul-de-sac was treated by posterior colpotomy and drainage.

Other abdominal emergencies which were encountered included three cases of strangulation of uterine fibroids, two cases of perforating carcinoma of the uterine fundus and two cases of perforating carcinoma of the ovary. In strangulation of uterine fibroids, which may occur in the gravid or nongravid uterus, the symptoms are rather severe abdominal pain with little nausea or vomiting. There is no evidence of shock or hemorrhage. The onset is not as typically acute as in torsion of a cyst and there is less abdominal rigidity than in the latter disease. The tumor itself is usually palpable and is exquisitely tender. Treatment consists of exploration and either myomectomy or hysterectomy. If necessary, myomectomy may be done during pregnancy with reasonable assurance that the fetus will not be lost.

Rarely do perforating malignant lesions of the uterine fundus and ovary produce signs and symptoms of peritoneal irritation and only if some malignant tissue, cyst contents or blood is suddenly spilled into the peritoneal cavity. Symptoms then vary from mild to rather severe sudden lower abdominal pain, depending on the amount of spillage and its nature. Nausea and vomiting are usually not observed. Abdominal tenderness, rebound tenderness and moderate rigidity may be noted when large contamination of the peritoneum produces fairly severe pain. Temperature and leukocyte count are usually not affected. Bimanual examination may reveal the tumor, but when a malignant cystadenoma ruptures it may produce symptoms as severe as those of acute appendicitis while the cyst has collapsed and is not palpable. Exploratory operation is usually carried out under a diagnosis of "acute abdomen" or "twisted ovarian cyst"; total abdominal hysterectomy was carried out in both of our cases of carcinoma of the fundus, and salpingo-oöphorectomy in the cases of perforated cysts.

Vaginal Gynecologic Emergencies

Vaginal emergencies do not cause the diagnostic difficulties that are produced in the abdominal cases. The presenting symptom is either hemorrhage or tumor. Cervical or endometrial polyps or pedunculated fibroids may twist on their pedicles or become infarcted. The patient may neglect the early symptoms and then present herself for emergency treatment only because of prolonged bleeding or of a malodorous discharge, and an examination then shows the necrotic tissue in the vagina. Small polyps can be removed by twisting them off at the bases but a pedunculated fibroid may be so large that it fills the vagina and must be removed by morcellation, in which case the resultant bleeding often requires tight packing of the uterus while treatment is directed at controlling the infection. In severe infections and when hysterectomy would otherwise be indicated, the operation is best delayed until the infection subsides.

Aside from unusual causes, such as severe bleeding from a ruptured hymen or from a cervical or uterine polyp, vaginal bleeding of such volume as to require emergency treatment nearly always arises in association with the termination of pregnancy, either by abortion or at term. It has been estimated that one in every four pregnancies ends in abortion, miscarriage or premature delivery, and the vast majority of these occur within the first sixteen weeks of gestation.[8] The abortion may be complete, incomplete or inevitable when

the patient is first examined, and the bleeding may vary from a very mild degree to the point of exsanguination.

If the hemorrhage is severe, supportive treatment with blood transfusion must be started immediately, and regardless of any evidence of infection the uterus must be emptied as quickly as possible. An intra-uterine pack can be used to control the bleeding, and antibiotics to combat infection.

When bleeding is mild or moderate, conservative treatment should be tried first. The patient is kept in bed and given intravenous fluids, and sedatives and oxytocics are employed. During this trial period the hemoglobin, erythrocyte and leukocyte counts are determined while urinalysis, blood group and Rh determination are also done. If the abortion has not been completed within twenty-four to forty-eight hours after institution of such treatment, dilatation and curettage should be carried out to save time and expense to the patient and to decrease the morbidity.

Most of these patients are young and healthy, and intravenously administered thiopental sodium (pentothal sodium) is a very satisfactory anesthetic agent, especially when supplemented by nitrous oxide-oxygen inhalation anesthesia. As little as 15 cc. of a 2.5 per cent solution of thiopental sodium may be enough for the whole procedure. The cervix is usually patulous, and may not need to be dilated while the use of a placental forceps will speed the removal of the larger portions of retained placenta. After the depth of the uterus has been estimated by bimanual examination with the patient under anesthesia and then measured by a uterine sound, curettage is begun with a large dull curet. As the uterine wall regains its tone a large sharp curet may be taken up. When the surgeon is satisfied that the uterine cavity is empty he should go over the whole interior again and by so doing he may assure himself that no areas have been overlooked as he both feels and hears the gritty response of uterine musculature to the sharp curet. The uterus is wiped out with a gauze strip, and if bleeding continues the cavity should be packed snugly. If the bleeding has been brisk, or if the uterus fails to contract to a firm consistency, then 1/320 grain (0.0002 gm.) of oral ergonovine maleate (ergotrate maleate) should be given every six hours for thirty-six hours. If an intra-uterine pack has been necessary it should be removed in twenty-four hours.

The patients in greatest danger are those who present themselves with sepsis, usually the result of criminal abortion. These patients may have suffered from extreme loss of blood, and often delay seeking a physician until the septic process is well established in the pelvis. The infection can be overwhelming, the patient's blood pressure low and her pulse thready. Adequate antibiotic treatment and blood replacement are both imperative and a very guarded prognosis should be given to the patient's family. Gentle curettage is necessary if the bleeding is moderate or severe in amount.

Of the 270 emergency gynecologic operations, 162 (60 per cent) were vaginal emergencies. In 155 cases the operation was required for vaginal bleeding; in seven cases acute abscesses about the vulva, arising in Bartholin's or Skene's glands, were treated by incision and drainage. In 120 (77.4 per cent) of the 155 cases of vaginal bleeding, retained placental tissue after incomplete or inevitable abortion was removed by dilatation and curettage. In twelve cases the retained placental tissue was removed after full-term delivery; in ten cases by dilatation and curettage, in one by subtotal abdominal hysterectomy, and in one by total abdominal hysterectomy. The only postoperative death in the 270 gynecologic operations was that of the patient treated by total abdominal hysterectomy.

This patient had suffered from a massive postpartum hemorrhage which was not controlled by packing, and hysterectomy became mandatory. In the postoperative period convulsions and coma developed, and at necropsy on the sixth postoperative day, multiple large areas of metastatic melanocarcinoma were discovered throughout the cerebrum. The primary lesion, it was later discovered, had been a "mole" on the forearm, which had been removed some two years previously. The child is alive and well and to date has shown no evidence of the tumor having crossed the placental bed.

In twenty cases (12.9 per cent) menometrorrhagia was of sufficient degree to require emergency operation. Bleeding was controlled by curettage in seventeen cases, vaginal hysterectomy was carried out in two cases, and total abdominal hysterectomy in one case.

In three cases of vaginal bleeding, curettage recovered hydatidiform moles; in all three cases cu-

(Continued on Page 205)

Management of Labor at Term

By Roy W. Mohler, M.D., Sc.D.
Philadelphia, Pennsylvania

THE TITLE for this presentation was chosen with considerable deliberation for two reasons. First, the instructions given me by your program committee stated that about 60 per cent of my audience would be physicians in general practice who are interested in the management of obstetric patients; second, this title will allow me to discuss some experiences which I have had in the management of labor and the deductions I have drawn from these experiences.

In many of our Philadelphia hospitals, the services of the Obstetric Department are open to men of the community who do not confine their interest or activities to obstetrical or gynecological problems. It is indeed in such a hospital where I have served for many years as either head or acting head of an Obstetric Service.

There have been many advances made in obstetric practices in the past thirty years. When my interest in obstetrics began, I was a junior medical student at Jefferson Medical College where there was an out-patient delivery service and I had the opportunity of attending many home deliveries. These deliveries were managed with untrained help and inadequate facilities and according to the standards of that period actually culminated successfully in every respect. The babies usually were healthy and the mothers seldom had any immediate morbidity. Of coure, we had no facilities for anesthesia, forceps delivery, episiotomy and perineal repair. Analgesia to a minor degree was available to us but was seldom used. Since that time obstetric practice has changed almost entirely and now most deliveries occur in well-equipped hospitals in which there is specially trained help such as residents, interns, medical students, nurses and anesthesiologists. Not every hospital has a complete list of physical facilities and personnel available but I think generally labor and delivery are managed with adequate physical facilities and with quite well trained and interested personnel. These changes have created a dilemma for most of us and it is really very difficult to decide how we shall use these changed circumstances to their best advantage.

Obstetric practice at the present time occupies in many instances the same position in relation to the patient as the family practice of the general practitioner. It is for this reason that the physician in so-called general practice continues to be chosen to care for the obstetric patient and it is for this same reason that many general practitioners are willing to assume considerable responsibility and usually acquire skill in the management of obstetric patients. Personally, I do not feel that it is necessary for a physician to be certified by an obstetric board to do capable work and give good and acceptable care to the patient. I do feel, however, that it is very necessary for a physician to be interested in the practice of obstetrics and to qualify himself by experience and judgment before he assumes the full responsibility for the care of obstetric patients. What I mean to imply is that if these services are demanded of a physician and he is interested in doing obstetric practice then it is the physician's responsibility to qualify himself to meet the present standards of the practice. I am sure that opportunities to qualify for the practice of obstetrics are available to all interested physicians in Michigan as they are in Pennsylvania. I feel quite confident that many patients away from the metropolitan areas will continue to choose the general practitioner who is their good friend and esteemed neighbor to render this important service.

The management of labor at term culminates most frequently an association of a patient and her physician over a considerable period of time. The result is looked forward to with a good deal of apprehension by the patient and her family and the physician must assume an unusual responsibility and exhibit judgments and skills in his part of this important event.

Since obstetric practice has changed, many new techniques in the management of labor have been well publicized in lay journals and other media for publicity. Some patients are naively familiar with these techniques and the physician is

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often embarrassed by questions as to whether he is going to do so and so during labor. They often relate that Dr. Blank looked after a friend and she did not have a labor pain or they may relate that a physician used forceps to deliver the baby of a friend and the baby was badly injured from forceps delivery and, therefore, they do not want forceps used on their baby. Every physician is familiar with the stories of tragedies and successes which have occurred in an obstetric practice. These emotional reactions to a medical service places the physician in a unique position when he chooses to look after an obstetric patient.

In the medical literature most of the new techniques for the management of labor are described and it would be impossible for any one physician to develop competence in the use of all of them. Many of the techniques are of controversial value but some are acceptable and will be universally adopted. I shall discuss in some detail a few of these procedures with which I have become familiar, and some techniques which I have found valuable in my own service. I shall also express my own evaluation of them.

Elective Induction of Labor

Elective induction of labor is a controversial procedure at this time. If one understands from his own experience and judgment what the indications and results will be, I think it is a valuable and safe procedure. There is seldom a real medical indication for the induction of labor and for that reason if one chooses to induce labor, it is usually because of convenience for the physician or his patient. The physician I think is perfectly justified to arrange his obstetric work so that he can do it under the optimum circumstance for himself so long as it does not jeopardize the patient. One justification for the elective induction of labor which in my own experience seems valid, is the long distance which a patient must travel from her home to the hospital. Accidents can occur before she arrives in the hospital if she waits until labor has begun. This applies frequently in a metropolitan area. The arrangement of home circumstances, care for the children during the mother's confinement, and the securing of help are all valid reasons for the patient to want to have her baby at a specific time.

I think we should be candid with our patients and ourselves about the indications for induction of labor and accept the responsibility for this decision. With some patients it will be popular and acceptable and with others it will not be acceptable. However, if we decide to induce labor electively, the procedure must be safe and no morbidity nor mortality can result from the procedure *per se*. This point will be difficult to prove either way, but a practical solution can be known.

The technique which I have used with satisfactory results and no tragedies that I have been able to determine is as follows: The patient is chosen for induction within a week of her expected term who has had a previous normal labor. Seldom is a nulliparous patient chosen. The size and maturity of the child is determined by x-ray study. A vaginal examination is done in the office or clinic and if the cervix is well effaced, the vertex presenting, and the cervix dilated sufficiently to admit a finger without discomfort, the patient is told of the procedure and she is allowed to choose if she wants to have labor induced. The patient is admitted to the hospital the night before the day which is selected for induction of labor. Routine studies and any other indicated studies are made. On admission to the hospital she is prepared for labor and given a sedative to induce a good night's rest. The following morning about 7 a.m. an enema is given of plain water. Sometime between nine and ten a.m. the patient is examined vaginally and the membranes are ruptured with a special type of long and sturdy Allis forceps. After the membranes have been ruptured, a moderate amount of amniotic fluid is allowed to flow in order to accomplish uterine decompression. If the uterus is soft, ½ minim of Pitocin is given intramuscularly to promote an immediate uterine contraction and determine uterine sensitivity to Pitocin. The patient is allowed to have a uterine contraction. The position and station of the presenting part is checked and then the patient is allowed to return to her bed in the labor room. After this procedure an interval of time is allowed for labor to begin spontaneously if it will. In the event labor does not begin spontaneously in six or eight hours, ½ minim of Pitocin is again given intramuscularly. If this fails to start labor, an interval of a few hours is allowed before more Pitocin is given. This plan in my experiences has worked well. I have known of no tragedies. In a few instances labor has been delayed for an undesirable time, twelve hours or longer. In only one instance was it de-

layed so long that I thought a cesarean section should be done, and, in that particular instance I did the induction for what I thought was a post mature infant on a nulliparous patient who had been a sterility problem. I shall not discuss intravenous Pitocin as a means of stimulating uterine contractions although it has been used extensively on my service.

The Determination of the Existence of Labor

Determination that a patient is in labor is frequently not easy and has seemed to me to be a fundamental cause for mismanagement of labor and delivery in many instances. Serious accidents have occurred both to mother and child from mismanagement of a labor that actually did not exist.

Labor can be described as a dynamic process of increasing intensity. By this I mean that the uterine contractions become progressively more painful and increasingly more frequent. I feel that all patients should be examined vaginally early in labor unless the status of the presenting part in relation to the pelvis and the condition of the cervix has been determined by vaginal examination a short time before labor began.

In order to make determinations in labor, I have depended upon vaginal examinations rather than rectal examinations in spite of the prejudices which have developed against this procedure. With the exercise of a careful technique no bad results will develop from vaginal examinations in labor. When labor is progressing so rapidly that no examination is necessary except to determine the station of the presenting part then these determinations, of course, can be accomplished easily and satisfactorily by rectal examination.

Real labor will induce changes in the condition of the cervix and in the relationship of the presenting fetal part to the mother's pelvis which can be recognized only by careful observation and vaginal examination. If these changes do not occur either the patient is not in labor or some mechanical impediment to the progress of labor exists. If the patient is not in labor, a mild sedative or analgesic will stop the labor and give the patient rest and time for the initiation of real labor. If some mechanical impediment to labor exists, the condition should be re-evaluated and managed as indicated. If changes in the status of the presenting part have occurred and the cervix is changing, I think at this point the judicious use of artificial rupture of the membranes will frequently facilitate the progress of labor. The value of this procedure can be demonstrated in instances where before labor began the presenting part was well engaged and in a station of plus one or two, and after labor began considerable fore water develops and the presenting part recedes in its station. It is in such instances particularly that rupture of the membranes will produce dramatically rapid advance of the presenting part and facilitate the normal progress of labor.

At this point, I should like to conjecture somewhat about the mechanics of labor and cervical effacement. The presenting part of the fetus acts as the fulcrum which enables the myometrium to affect its full force by evolving the lower uterine segment and disappearance of the cervix. The density of the vertex for instance is much greater than that of the mobile and compressible fluid in the amniotic sac. It is also more dense than the soft breech. It is for this reason that labor will advance more rapidly after rupture of the membranes in many labors where the vertex is presenting.

Attendance of the Patient in Labor

If one chooses to look after a maternity patient it seems to me that the chief medical attendant should be available for that service continuously and should be present long enough in early labor to determine the existence of labor, the relationship of the fetus to maternal parts and the exact status of the labor. These responsibilities should be personal responsibilities. By careful study of the patient when it is assumed that labor has begun, it is usually possible to determine that the patient is actually in labor and the kind of a labor the patient will have. It is my conviction that real labor is consummated in a relatively shorter period of time than is usually given—three or four hours for a primiparous patient and much less time for a multiparous patient if the patient is watched and managed properly during labor.

Type of Analgesia

Analgesia in labor has always been a controversial problem with obstetricians and has become very good material for the lay medical writers to use to familiarize the public with the dramatics of medical problems. Every medical publicist can make a reputation by writings which

have an emotional appeal to the ready public and certainly painless childbirth will appeal to the emotion of almost all women and men. I have been fortunate in my experience with the use of various analgesias in labor. I have seen most of them used judiciously and injudiciously, and as I reflect from my experiences, I sometimes shudder because of the past injudicious use of them. Through my experience, I have come to the conclusion that one must choose between allowing good, normal labor to progress as it will usually, or else inhibit it with the use of analgesia. I do not mean to imply by this statement that analgesia should never be used and that I never use it. I think I can epitomize my opinion by stating that all types of analgesia inhibit labor to some degree. Many have a deleterious effect on the fetus. If necessary to use analgesia then one should choose an element which is safe and can be used with a technique which has been learned and thoroughly understood. It is not necessary to describe any particular technique at this point because I think the general tendency in obstetric practice at the present time is to use analgesia in a fairly judicious manner.

It would seem that if the attendant will really make himself available to the patient in labor that analgesia and its effects will be less necessary.

When labor has progressed normally, the presenting part will present and will cause bulging of the perineum and perhaps some gaping of the vulva and show of the scalp or other presenting part. It is at this point that I think a well-trained obstetric anesthesiologist should be available to give well-controlled inhalation analgesia with the height of the contraction and pain. This technique must be well controlled or the progress of expulsion will be inhibited. The analgesia must be adequate, however, to enable the performance of an episiotomy. If at this point the pains and progress of labor are too much inhibited, the analgesia may be discontinued and sometimes a small dose of Pitocin (½ minim) may be necessary to stimulate the expulsive forces. Spontaneous delivery will almost always occur after a few well-controlled pains and in the event it does not so happen, outlet forceps may be applied to facilitate delivery of the head under complete anesthesia. When the head is delivered mucous should be allowed to emit from the upper respiratory tract of the infant and the delivery of the other parts of the infant should be very *deliberately planned and carried through without haste.*

I shall not discuss the management of breech deliveries at this point since it requires special skills and techniques. Needless to say, breeches occur in only 4 per cent of instances and they are almost always a special problem.

Occiput posterior and other troublesome positions in labor, I have not considered a part of this presentation. They should be recognized by careful evaluations of the problem during the labor and managed by special consideration.

Technique of the Third Stage of Labor

The technique which I prefer for the management of the third stage of labor is much like the technique referred to as the Brandt procedure in some of the standard textbooks. Apparently the procedure was developed and practiced with the Long Island Hospital group when Dickinson and Pomeroy were active at that institution. Brandt published a report of this procedure in an article which appeared in *The American Journal of Obstetrics and Gynecology,* Vol. 25, 1933. The principle of this technique is to allow the placenta and membranes to separate spontaneously. After separation has occurred, the uterus becomes soft and enlarged. After this softening and enlargement a firm contraction will normally and usually occur. At this point, the uterus should be pushed out of the pelvis by inserting the hand over the abdomen between the symphysis and the uterus. This mechanism may be facilitated by inserting a finger into the vagina and releasing the incarcerated uterus. This manipulation will push the uterus out of the pelvis well up into the abdominal cavity where it can be palpated and manipulated as necessary. Also this procedure will convert the uterus, the lower uterine segment or cervix, and the vagina into one plane and allow the placenta and membranes to be discharged through the cervix without fragmentation. During this procedure a very slight traction on the cord in the direction of the plane of the birth canal and repeated manipulation to mobilize the uterus into the abdomen will facilitate the separation of the membranes and their delivery from the genital tract.

The advantages of this procedure are that the uterus is made available for manipulation through

the abdomen for stimulation when it becomes necessary to promote contraction, and of placing the uterus in a position so that the circulation to the uterus can be controlled by pressure if that becomes necessary.

Some of my colleagues have objected to this procedure because of the possibility of air embolism and also because it may be unnecessarily traumatic. These objections do not seem valid to me if the technique is learned and practiced with understanding, and I have concluded that the advantages far outway its dangers. I think that postpartum hemorrhage from non-contraction of the uterus can always be controlled and complete separation and expulsion of the membranes is most likely to occur.

In this presentation I have tried to present to you some practical problems in obstetrics and particularly the management of labor which I have encountered in my experience on a teaching service in a large metropolitan area.

Obstetric practice is difficult and inconvenient work, but very satisfactory work. This I think is demonstrated by the fact that so many physicians are interested in it. It is a frequently demanded service and many physicians must remain interested in it and work at it. New proven techniques and improved facilities are evolving constantly and these must be utilized to their best advantages. Maternal and fetal mortality and morbidity are being observed and analyzed very critically by our colleagues. It is for this reason that I thought it important to present to you a discussion of this kind.

MICHIGAN MATERNAL MORTALITY STUDY

(Continued from Page 168)

a known salvage of only 38 per cent. There were sixty-four stillbirths, nineteen neonatal deaths, seventy-one undelivered, and eight instances in which the condition of the infant was not stated. Of the group of 121 patients dying from non-obstetrical causes the fetal salvage was even lower. There were only thirty-one live births or a 26 per cent survival. In this group, there were thirteen neonatal deaths, twenty-seven stillbirths, and fifty patients undelivered.

The only other previous maternal mortality study made in Michigan during a two and one-half year period from July 1, 1926 to December 31, 1928, offers an interesting study for comparison of two series of deaths almost a quarter of a century apart. During the 1926-1928 period there were 1,627 maternal deaths occurring in 245,312 live births and in 1950-52 there were 271 deaths from comparable causes occurring in 510,341 live-births (Graph 2). A few observations from the older study are of interest. Of the 1,627 deaths, there were 465 or 28.5 per cent in which abortions were either the direct or indirect eause. This figure did not include criminal abortions, which were not classified among puerperal deaths but as homicides. It was stated in the older report, "if we include criminal abortions, our rate would be considerably increased." In the current series, 24 deaths or 9.2 per cent were related to abortions. Of these, eleven resulted from infection, as compared to 345 septic abortions in 1926-1928. Of course, we have no way of knowing whether or not the incidence of abortion has decreased throughout the years or if this stands as a tribute to the life saving value of the antibiotics!

In the 1926-1928 study, 665 out of the 1627 pregnancies or 40.8 per cent terminated with live births; there were 310 stillbirths and 639 no births including abortions, ectopic gestations and undelivered cases or 949 with no fetal salvage. *We did not improve in this regard during the first three years of the 1950's* (Graph 2).

Your Personal Inventory

We Americans always keep looking to our future. Our past is short, so is our patience. "It is tomorrow that captures our imagination. We like to guess—we want to know." Such is our economic and national philosophy.

But what are the physicians' thoughts as we embark on a new year? In medicine, we cannot ignore or forget our past. We glory in our progress to date. Only by a careful appraisal of our accomplishments and our failures, can we look forward to more progress and better service.

Have you given thought to a personal inventory of your own contributions to medical progress?

Have you gained the profound respect of those you serve? "The medical meeting serves as a grindstone that keeps our wits sharp, fresh and alert." Are you a participant?

Do you give more emphasis to tools, or to experience and judgment?

"Humility is a golden virtue, a potent therapeutic force." "Hope is the single thread that supports the ill patients—it is never to be severed." Every patient who comes to you has fear in his heart. His fears may be on the cost of your services. Try practicing the Golden Rule. Do you allay his anxieties while you diagnose and treat his ailments?

Do you rely on laboratory study to replace a careful history and physical examination?

"Face your blunders fearlessly. When a patient has abruptly discharged his doctor, the doctor has not properly discharged his duties."

Have you contributed of your time, energy and intelligence to the rapidly increasing obligations of the doctor in Public Relations? The public looks to medicine for much advice and leadership. The scope of these demands is unlimited. The physician who fails to take his share of the profession's responsibility in this new phase of medical practice is shirking his duty.

As you review your Personal Inventory of the quality of your medical practice and service to the public—are you satisfied with your past? Can you look forward with firm resolution to take your part in guiding the destinies of our profession in the future?

President's Message



Robert H. Baker

President, Michigan State Medical Society

Editorial

REINSURANCE

MRS. OVETA Culp Hobby, Secretary of Health, Education and Welfare, talking to the AMA at Miami, November 29, reiterated the administration's program of "reinsurance." She repeated the President's dislike of "socialized medicine," his belief in private enterprise especially in the field of health insurance, and the theory that indigent care is a State problem.

The President's plan is expressed as voluntary, not compulsory. We can conceive that the plan could be just as voluntary as the act establishing federal insurance for bank deposits. It is completely voluntary but no bank could operate without it. Undoubtedly none wishes to, as it could not gain the confidence of the public after all the advertising of the past years of federal insurance on deposits.

The same could happen in health reinsurance. We do not need it. It would add another cost to health insurance because the plan of the government is that "reinsurance" is to be self-supporting within five years. That means another bureaucracy added to the health insurance expenses, paid by the insured.

VETERANS' MEDICINE

COMMANDER Seaborn P. Collins, president of the American Legion, told the House of Delegates at the Miami AMA meeting of the many endeavors in which the AMA and the American Legion are of one accord, including private non-socialized medicine of the best possible quality. He talked primarily about the controversy regarding medical care for non-service-connected disability. He challenged the AMA to appoint a joint committee with the American Legion to study the problem and arrive at a solution.

Michigan has had such a joint committee working for some time and also including all four veterans' organizations instead of only the American Legion.

Spot studies have shown that on any day fifty per cent of patients in general hospitals are either veterans or members of veterans' families. This must be true because there are now 22,000,000 veterans and if the average family is three and one-half in number, that accounts for 77,000,000 people or half of our population. Naturally half the hospital patients are veterans or members of a veteran's family.

This emphasizes the statement made by Commander Collins that the veterans are paying their own way. The problem of abuse of VA hospitals is thus confined to a comparatively small number who (all admit) are getting the most elaborate and complete medical service known and mostly in luxury hospitals with no limit of stay accounting for the enormous expense.

We are trying to solve the abuse of our voluntary insurance plans. Here is another over-utilization of the same ilk. Why cannot a high level committee work it out? We believe Mr. Collins' suggestion is good and it has been followed. The solution is not as simple as the House of Delegates' action last year assumed, but it is possible.

NEEDED FEDERAL LEGISLATION

WE HAVE mentioned needed federal legislation many times, but another suggestion may be of benefit. The Social Security bills need some amendment to make them more just and relieve some hardships. First the provision for loss of benefits has been improved effective January 1, 1955, by reducing to 72 the age at which one's benefits will be paid no matter how much he earns. The present law is quite complicated, but if a person between 65 and 72 earns over $1,200 during the year he will forfeit his payments for every month in which he earned over $80.00. There should be no forfeit at all. *If the man or woman has qualified for Old Age and Survivors Insurance he should receive it without question.*

There should be some provision by which a person who has earned benefit rights and becomes totally or permanently incapacitated could be paid his benefits during that period of disability. As the law now stands this disabled worker can draw nothing until he reaches 65. A third amendment needed is to relieve the doctors from certain bureaucratic domination in certifying to disability.

Such certification can easily be done the same as in industry, by certification of private doctors.

Payroll Deductions

The Congress knows there are over two and a quarter million persons in the employment of the federal government. Industry recognizes that its employes wish many privileges and benefits which may be paid for by payroll deductions. Government should recognize the same obligation and pass a law which authorizes employes to request and obtain payroll deductions for certain specified activities or conditions which should include insurance, health service benefits, community chest donations, savings, and similar programs. This would simplify life generally. Long ago hundreds of thousands of classified government workers would have been getting the same benefits as their friends, Blue Cross and Blue Shield particularly. Up to date, payroll deductions have not been possible from government workers. A simple authorizing law would be sufficient.

Subsidies

Action of the Supreme Court some years ago makes another federal law quite necessary. The Supreme Court decided that anything the government subsidizes it may control. There may not have been any abuses growing out of this decision, but some dangerous situations are apparent. Government has subsidized the schools, and look at the state and federal domination. Medical education is sadly in need of much assistance. We fear what might happen if the necessary funds were advanced by the federal government which has been willing and anxious to get into the picture. The American Medical Association, its members and some friendly industries have attempted for several years to raise the needed money by popular subscription. We have given great sums of money and have helped the schools immensely, but the estimated need right now is about ten million dollars a year to supplement the various monies now available for medical education. The schools cost about $145,000,000 a year to run. Ten million more would give them the needed boost. Private subscription has been woefully inadequate. Government is ever ready to help but we dare not accept.

We suggest that if Government is unselfishly interested, Congress might easily by specific action abrogate the control implication carried by a "subsidy." This action by the Supreme Court could by joint action be declared vacated, and monies given to the medical schools without a control being implied. It could be done, and might solve many health and welfare problems. Blue Cross and Blue Shield have shied from any contacts or implications which might in any way lead to subsidy and domination. Care for the indigent, aged, incapacitated and many groups might be arranged if it were not for this fear of subsidy. A correlary stipulation could be a resolution from the Congress allowing government agencies in dealing with their employes to recognize the insurance principle which is not now done even though the government is probably the greatest insurance organization in existence.

Remove the control implication from whatever could be considered by the government as a subsidy.

SELECTING SPEAKERS

WE wish to thank the membership for their interest and assistance in helping to select the speakers for the Annual Session program. The Michigan State Medical Society is very happy to have your help in making these selections.

When the ballots are returned to the Section Officers, the returns are very carefully weighed and every attempt is made to try to obtain the speakers according to the preference of the membership. Even though the invitations to speak are sent out eight months in advance, occasionally we find the speakers have other engagements and send their regrets. When this occurs, it is necessary for the Section Officers to look elsewhere for a speaker.

We are looking forward to another fine group of speakers at our next Annual Session, thanks to your help and co-operation.

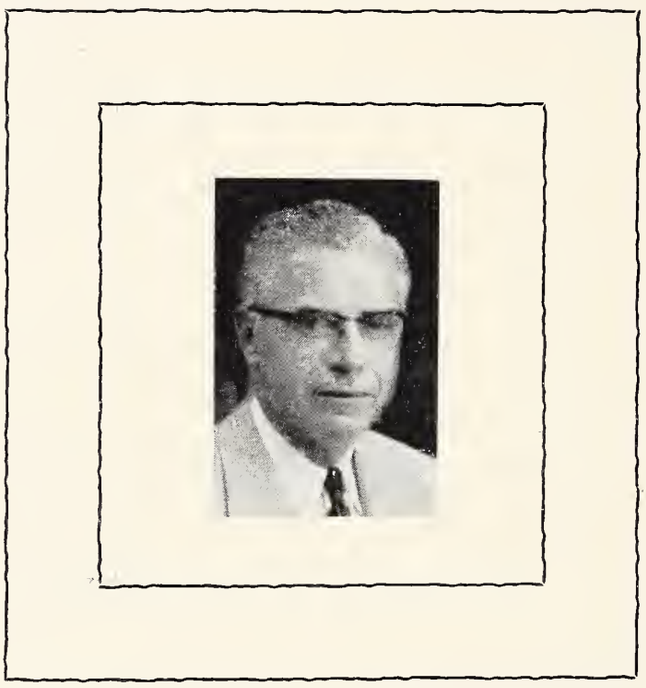
Federal Trade Commission General Counsel Earl Kintner, in a speech before the District of Columbia Bar Association, reported that FTC will take court action against firms which have persisted in monopolistic or unfair trade practices despite formal commission actions forbidding them. He also said charges against seventeen health and accident insurance companies are only a prelude, "many more are in the mill."

Donald E. Johnson

"He who loves his brother walks in the light . . ."

As a man matures, he is likely to become concerned about humanity. When so concerned, he may come to know that humanity is a dignity one must strive to win; full of personal sacrifice and often gained at the price of self-effacing contribution.

Take Donald E. Johnson, of Flint, for example. A new phase of his life began from a neighborly chat over the backyard fence one autumn evening some ten years ago. Not then realizing the future import of his simple question, he asked his neighbor, George Curry, M.D., "What can I do to help in the fight against cancer?"



Right then and there it was decided that his effort would be conducted on an educational basis and a project was conceived that has progressed year after year to achieve no little significance.

Such projects usually get under way after endless debate, definitions, conferences, and bickerings —with the purse strings tightening up jerk by jerk after each argument—but not so in this case. "You go ahead," Mr. Johnson simply said. "Get only the best and I will sponsor it; but, mind you, keep my name out of it."

With Dr. Curry as its chairman, the Cancer Education Committee of the Genesee County Medical Society went to work forthwith. Six months later—after a great deal of time and effort in planning, correspondence, and final arrangements, the Genesee County Medical Society presented its first Cancer Day Program, on March 20, 1946.

The first program followed the same general pattern used in succeeding years. Customarily, five outstanding authorities in various scientific fields related to cancer each make a one-hour presentation on a timely topic concerned with cancer research or treatment. The speakers are procured from nationally known centers of clinical and experimental research, from coast to coast. The Genesee County Medical Society Cancer Day Program, which brings to Michigan doctors of medicine up-to-the-minute details of the progress against cancer, has been established as a tradition; a tradition made possible only by the munificence of its voluntary sponsor, Donald E. Johnson. The Cancer Day Program has been greeted with ever-increasing attendance and enthusiasm, and will be held for its tenth consecutive year on April 14, 1955.

For the first four years, Mr. Johnson was more or less successful in demanding that his sponsorship remain anonymous. In deference to his wishes, every attempt was made to keep his anonymity, but eventually the secret began to leak. So brilliant a light could not be hidden under a bushel, or a container many times that size.

Modesty eventually was forced to yield, and Mr. Johnson was finally introduced from the rostrum to accept publicly the acclaim and homage that was his due. In his shy and whimsical way, he merely asked that he be given the privilege to continue his help.

Donald E. Johnson was born in Flint, a member of a family which came to Genesee County 100 years ago. He grew up in Flint, then attended the University of Michigan, graduating in 1926. Launching his journalistic career with a two-year stay in Lansing, he returned to Flint to stay. Mr. Johnson is now the owner and publisher of the Flint *News Advertiser.*

Mr. Johnson is quite emphatic in declaring he likes Flint and will be happy always to live in Flint with Mrs. Johnson and their three children. In his home community, he is noted for his faculty for just dealing, his unceasing kindnesses, and his

charities, together with a long list of civic activities.

His interest and leadership in cancer education and cancer control work continues in Flint, but now extends far beyond the borders of his native city.

Mr. Johnson is a member of the Genesee County Medical Society Cancer Education Committee—and a working member. He attends all meetings and does his share of the detail work. He is also a member of the MSMS Cancer Control Committee, and holds the important position of Executive Committee member of the Michigan Division, American Cancer Society. Nationally, he served as Director-at-Large on the Board of the American Cancer Society.

One position for which he can be more than proud is his membership on the Advisory Council of the National Cancer Institute. This exclusive group consists of six laymen and six doctors of medicine, and a major function is to pass on all federal money allocated to cancer research. This four-year federal appointment was made in 1953 by the Secretary of Health, Education and Welfare.

Latest and most amazing of Mr. Johnson's adventures for the public good took place last August. Being cognizant of the Harvard conferences which pool all of the sound activities in cancer research through group study, Mr. Johnson decided to do something similar in Michigan. So on August 18, 1954, he invited twenty-five distinguished men from the University of Michigan, representing all its science departments, to meet with a group of prominent medical scientists at a high level conference. Others who attended were an experimental pathologist from Yale, the director of cancer research of the Michael Reese Hospital, a representative from the National Cancer Institute research staff in Washington, and the medical director from the center of the nation's atomic energy activity at Oak Ridge, Tennessee. By plane, bus, and train this group assembled at the Rain Bow Club on the Pere Marquette River in Northern Michigan to be Mr. Johnson's guests at a three-day conference. Important developments in the field of cancer study are expected from this unprecedented meeting.

In 1953, the Genesee County Medical Society elected Mr. Johnson to honorary membership. In September, 1954, the House of Delegates unanimously elected him to honorary membership in the Michigan State Medical Society. This is little indeed to manifest our appreciation for the faith and devotion of a man who has the kind of dreams that make his house a haven for the unfortunate. Yet, at the moment, it's all we have to offer.

—A. C. Pfeifer, M.D.

ACUTE GYNECOLOGIC CONDITIONS

(Continued from Page 195)

rettage completely controlled the bleeding, and none of the patients has had a recurrence. However, these patients are kept under observation for a period of eighteen to twenty-four months before being dismissed from our care.

Summary

A review of the diagnosis and treatment of emergency gynecologic conditions and a discussion of acute appendicitis in the differential diagnosis of these conditions have been presented. Particular emphasis has been given to the bleeding intra-abdominal emergencies since in these the life of the patient so often depends on the accuracy and efficiency with which the diagnosis is made and the surgical treatment carried out.

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Beth Milford

President, State Woman's Auxiliary

Last year when directors of the Woman's Auxiliary to the Kalamazoo Academy of Medicine voted to invite the President-elect of the State Woman's Auxiliary to their annual meetings, the members of the board asked Kalamazoo President Mrs. Keith Bennett what their guest was like.

Mrs. Bennett's reply was typical. She said that Beth Milford had always been so quiet at state meetings that she had begun to wonder how such a person came to be elected to a state office. Then, Mrs. Bennett reported, she had attended the organization meeting conducted by Mrs. Milford after she became President-elect and received a great surprise. The minute Mrs. Milford opened the meeting, Mrs. Bennett continued, her enthusiasm and confidence seemed to electrify the group; everyone went out from that meeting determined that Michigan's Woman's Auxiliary would be a leader in membership that year.



The results speak for themselves: When the year ended, Michigan was third from the top, with eight new counties joining the state organization.

When Mrs. Milford visited Kalamazoo, the favorite question seemed to be, "Why do you sit quietly and say nothing when you know you have the ability to speak?"

The answer: "Because I have always felt there was nothing more unimportant than a Vice President, unless perhaps it might be a Second Vice President. I feel when you are Vice President it is time for listening and learning, and when it is my turn to speak—which is next year—I will."

Mrs. Milford is a native of Pennsylvania, where her grandfather served as Governor and her family founded the Wharton School of Commerce at the the University of Pennsylvania. Born in Bradford, Pennsylvania, Beth Wharton was one of seven children, and lost her father when she was four years old. Her mother started a small department store, and Beth worked in the store from the time she was nine years old. She feels her experience in the store helped her to feel at home among strangers and to overcome a natural shyness. Beth was president of her high school graduating class of 400. She won the gold Keystone Medal as the best high school speaker in Pennsylvania in her junior year. When she was a senior, she won the A.A.U.W. scholarship to the University of Michigan. She received her A.B. degree in 1933 and her Master's Degree in Business Administration the next year, both from Michigan. Mrs. Milford was entirely self-supporting while at the University, and upon graduation was awarded a fellowship to study personnel methods at Lord and Taylor's department store in New York City.

She returned to the University of Michigan in 1936 and attended Law School for one year. After a period of teaching high school English, she became an instructor at Pennsylvania State College. In 1938, Mrs. Milford became head of the Economics Department at St. Mary's College, Notre Dame, Indiana, and in 1940 came to Ypsilanti to teach Economics at Michigan State Normal College.

It was in 1941, that Beth married Albert F. Milford, M.D., who was then a captain in the U. S. Army Medical Corps. They now have five children, one girl and four boys.

While active in many state and local organizations, Beth has always put her family first. Her chief hobby is cooking and baking, which she says is very relaxing because her family is so appreciative. Beth has been a Cub Scout den mother twice, and was a Brownie troop mother for two years. Every Saturday all the family go horse-

back riding. Usually, all five Milfords spend their summers at Portage Lake, near Ann Arbor, where all the children are excellent swimmers, but this past summer after the AMA Convention in San Francisco, the family camped out at four national parks for six weeks.

A little over a year ago, Beth's mother died suddenly. This was a great shock because they had maintained very close ties over the years. A few weeks later, Dr. Milford was stricken with polio and Beth considered very seriously resigning her office in the Auxiliary. However, she said she decided not to 'because it would give every doctor's wife with children a readymade excuse for not helping with Auxiliary work."

Mrs. Milford says she finds that everyone has her own particular responsibility and declares: "By the grace of God, I have five healthy children. Some people have poor health, a parent to take care of, a sick husband or perhaps a sick child. Each one has her own particular responsibility, and it isn't difficult to find an excuse for not doing Auxiliary service if one wishes to. I feel my responsiblities are very happy and light compared to some people's! I am grateful for my good health, and I hope I may always serve in some small way to help further my husband's profession."

In October, Mrs. Milford was invited to be a guest at the thirtieth birthday celebration of the Pennsylvania Auxiliary. Her picture appeared in the *Pennsylvania Medical Journal,* and she had the pleasure of announcing that she had organized an Auxiliary in her home county in Pennsylvania, which the Pennsylvanians themselves had been unable to do previously.

True to her family tradition, Beth has always had an active interest in politics. She has been Washtenaw County Vice Chairman for one of the major political parties. She served for seven years on the Family Agency Board, was active in Red Cross, Cancer Society, Theta Lambda Sigma sorority alumni, University of Michigan Alumni Club, A.A.U.W., Hospital Auxiliary, Junior Chamber of Commerce Auxiliary (of which she was President), Ladies' Literary Club, the Michigan Federation of Women's Clubs, and two square dance clubs.

When she became President of the State Auxiliary, Mrs. Milford resigned her active membership in all other activities except the presidency of the Ypsilanti Child Care Center Board. This is a nursery school and care center for the children of working mothers. Last summer the school building was declared a fire hazard and was torn down and many thought the school would have to be closed. However, Mrs. Milford contracted with the UAW-CIO for the use of their labor hall, and with funds from the Ypsilanti Community Chest, the Ypsilanti Child Care Center is now one of the finest in the state. Mrs. Milford felt she just couldn't give up the presidency of the Center because of the great need of the children and because of its excellent possibilities for good public relations.

I have traveled with Beth all over the state to visit auxiliaries and am often asked, "What is she like?" To me she is best described by a little poem she has hanging in her breakfast room:

Life is like a journey taken on a train,
With a pair of travelers at each window pane.
I may sit beside you all life's journey through,
Or I may sit elsewhere never knowing you;
But if Fate should choose me to sit by your side,
Let's be pleasant travelers—It's so short a ride.

Mrs. John W. Kemper.

HEART DISEASE

(Continued from Page 181)

surgery and if this can be performed without the additional stress of pregnancy, it is, of course, to be preferred.

In conclusion, we learn from this group of obstetrical deaths the importance of a searching history and a thorough physical examination, the basis of all good medical practice. The favorable influence of teamwork between the obstetrician and cardiologist upon maternal health is obvious. The cardiologist's responsibility to the obstetrician and to the patient throughout the period of gestation and throughout the puerperium is stressed. The importance of the functional classification of heart disease has been emphasized so that a clearer differentiation of favorable and unfavorable pregnant cardiacs may be recognized. The unfavorable cardiac can in no way be made favorable for pregnancy, except in the occasional case which may be suitable for corrective surgery.

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

NEW RULING OF NATIONAL INSTITUTES OF HEALTH

According to a new ruling of the National Institutes of Health, all pamphlets accompanying biologic products have to carry the following warning: "A separate heat sterilized syringe and needle should be used for each individual patient to prevent transmission of homologous serum hepatitis and other infectious agents from one person to another."

PARAPERTUSSIS MAY BE EXPLANATION

The fact that twice as many cases of whooping cough have been reported this year as last year may be explained in part by the fact that parapertussis often enters the picture in this way. Long drawn-out cases of whooping cough in immunized children may be parapertussis. Whooping cough vaccine does not protect against this form of the disease.

PRESENT STATUS OF FLUORIDATION

About one-sixth of Michigan's people are now drinking water with sufficient fluoride to prevent tooth decay, either because the water is naturally fluoridated or because of controlled fluoridation of their supply. Forty-five communities in the state with a total population of about 868,000 now fluoridate their water.

As was predicted, past experience in securing public acceptance and adoption of water purification and water softening is repeating itself in the campaign for fluoridation. Sporadic and vocal opposition has resulted in a referendum in a number of Michigan cities, with varying results. In only three cities has fluoridation been discontinued after it was instituted, and in each case it was by a narrow vote margin.

LOCAL HEALTH DEPARTMENT SITUATION FAVORABLE

The year-end review of public health progress in 1954 showed that the health officer situation for the full-time local health departments is in the most advantageous position it has enjoyed for many years. Out of 43 full-time health departments, only three do not have a licensed doctor of medicine as administrator. These three have budgeted positions that are not at present filled, and they are being served by acting directors.

The qualifications of the health officers in terms of special academic training and experience is at its highest level also.

Local health departments showed continued progress in the financial support of their programs. Total expenditures of local health departments in Michigan rose from $7,028,156 in the State's fiscal year 1952-53 to $7,517,312 in 1953-54. Even more significant is the rise in local fund support from $6,036,295 in 1952-53 to $6,658,908 in 1953-54.

FROM "THE CURRENT STATUS OF THE TUBERCULOSIS PROBLEM IN MICHIGAN"

1. Tuberculosis continues to be a major health problem in Michigan although the reported incidence, the attack rate, dropped to a new low of eighty-two cases per 100,000 in 1953, as compared with 157 in 1910, 115 in 1940 and eighty-seven in 1950.

2. The number of new cases remains substantially the same, fluctuating between 5,600 and 6,400 annually with an average of 6,001 during the past seven years.

3. Sixty-three per cent of the new cases reported during the past four years were active. The remaining 37 per cent had passed through the communicable stage before discovery.

4. Only 14 per cent of the new cases reported are found in the minimal active stage.

5. The death rate from tuberculosis reached the lowest point in Michigan history in 1953 when 607 persons died from the disease. This is a rate of nine deaths per 100,000 population.

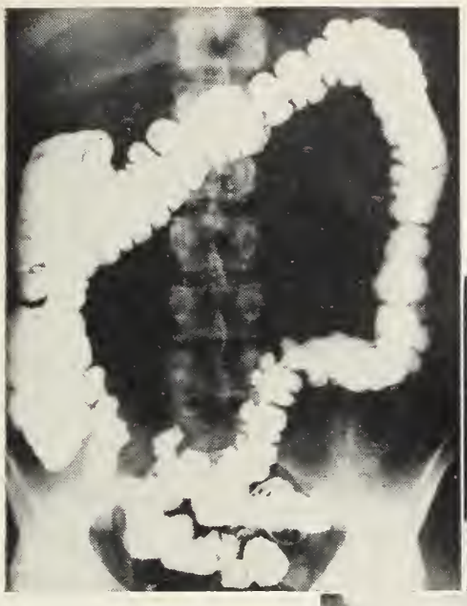
6. During the past six years Department mobile x-ray units took 1,492,029 films throughout the State with an average of thirteen tuberculosis suspects found per 1,000 films.

7. Michigan is now in the most favorable position in its history in number of acceptable tuberculosis beds, there being currently available 5,134 acceptable beds. During March, 1954 for the first time, the number of acceptable beds exceeded the tuberculosis hospital census.

8. Of the patients admitted to tuberculosis hospitals in 1953 with pulmonary tuberculosis 88 per cent were in the moderately advanced or far advanced stage at the time of admission. Of the newly discovered cases of pulmonary tuberculosis during the same period, 83 per cent were found with the disease in the moderately or far advanced stage.

9. In 1949, 73 per cent of the patients discharged from tuberculosis sanatoria were discharged with medical consent. In 1953 the percentage of discharges with medical consent had fallen to 59 per cent. Discharges from sanatoria against medical advice have increased from 27 per cent in 1949 to 41 per cent in 1953. The number of persons discharged against medical advice when their disease is still a public health hazard has doubled between 1949 and 1953. The percentage of persons leaving sanatoria against medical advice has increased 71 per cent between 1949 and 1953.

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Rectal distention is a vital factor in initiating the normal defecation reflex, and sufficient bulk is thus of obvious importance in restoring this reflex. Metamucil provides this bulk in the form of a smooth, nonirritating, soft, hydrophilic colloid which gently distends the rectum and initiates the desire to evacuate. Metamucil demands extra fluid, imparting even greater smoothage to the intestinal contents.

It is indicated in chronic constipation of various types—including distal colon stasis of the "irritable colon" syndrome, the atonic colon following abdominal operations, repressions of defecation after anorectal surgery and in special conditions such as the management of a permanent ileostomy. Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

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MICHIGAN AUTHORS

Lloyd L. Olsen, M.D., and **Russell T. Woodburne, Ph. D.,** Ann Arbor, are the authors of an article entitled "The Vascular Relations of the Pancreas," published in *Surgery, Gynecology and Obstetrics,* December, 1954.

A. Waite Bohne, M.D., and **Robert J. Fetz, M.D.,** Detroit, are the authors of an article entitled "Interstitial Cystitis," published in *AMA Archives of Surgery,* December, 1954.

Howard B. Latourette, M.D., Isadore Lampe, M.D., and **Fred Jenner Hodges, M.D.,** Ann Arbor, are the authors of an article entitled "Organized Clinical Investigation of Cancer," published in the *University of Michigan Medical Bulletin,* November, 1954.

George E. Shambaugh, Jr., M.D., Chicago, is the author of an article entitled "Management of Hearing Impairment," published in the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY, September, 1954, a digest of which appears in the *Digest of Ophthalmology and Otolaryngology,* November, 1954.

C. H. Wright, M.D., Detroit, **Vaughan C. Mason, M. D.,** Diplomate, American Board of Obstetrics and Gynecology, New York, N. Y., and **Martine Pinton, M.D.,** Paris, France, are the authors of an article entitled "Spontaneous Intraperitoneal Hemorrhage" published in the *American Journal of Surgery,* October, 1954.

J. E. McIntyre, M.D., Lansing, is the author of an article dealing with malpractice phases of psychotherapy published in a recent issue of the *American Journal of Psychiatry.*

Wayne L. Whitaker, M.D., chairman of the Screening-Examining Board, and assistant dean of the University of Michigan Medical School, is the author of an article entitled "Evaluation of the Foreign Trained Physician in Michigan," published in the *Journal of Medical Education* by the Association of American Medical Colleges, November, 1954.

J. DeWitt Fox, M.D., and **Brock E. Brush, M.D.,** Detroit, are the authors of an article entitled "A New Ileostomy-Colostomy Device With a Disposable Plastic Bag and No Cement," published in *Journal of the American Medical Association,* December 11, 1954.

William H. Havener, M.D., Columbus, Ohio, and **Charles T. Knorpp,** Ann Arbor, are the authors of an article entitled "Differential Radiophosphorus Uptake of Lens," published in *AMA Archives of Ophthalmology,* December, 1954.

Windsor S. Davies, M.D., Detroit, and **W. H. Bailey, M.D.,** St. Louis, are the authors of an article entitled "Malignant Melanoma of the Cornea," published in *AMA Archives of Ophthalmology,* December, 1954.

The American College of Surgeons held a four-day meeting in Cleveland, Ohio, February 21-24, 1955, at the Cleveland and Hollenden Hotels. Michigan men participating on the program were: Laurence S. Fallis, M.D., Charles S. Stevenson, M.D., and V. Everett Kinsey, M.D., all of Detroit, and Carl E. Badgley, M.D., James H. Maxwell, M.D., Jack A. MaCris, M.D., and Paul E. Hodgson, M.D., all of Ann Arbor.

* * *

Max Karl Newman, M.D., Detroit, presented a paper entitled "Pharmacotherapeutic Procedures in Cerebral Palsy, Adjunct to Physical Medicine and Rehabilitation" at the thirty-second Session of the American Congress of Physical Medicine and Rehabilitation, Hotel Statler, Washington, D. C., on September 10, 1954.

At the American Institute of Electromyography and Electrodiagnosis at the Hotel Statler, Washington, D. C., September 6, 1954, Doctor Newman presented a paper entitled "Electromyographic Survey of Cervical Cord Root Compression."

* * *

A special March draft call for sixty-eight physicians was announced recently by the State Selective Service Board. Of this number, Wayne County will be asked to provide forty-four physicians and twenty-six dentists.

* * *

Cause for Pride—Michigan Medical Service, as of November 30, had 3,007,391 members. This is the first time we have officially reached the 3,000,000 mark. These figures are arrived at from totalling reports of the thousands of groups. The first accurate physical count is now in process and, as of the end of July, 1954, indicated our summation count as just reported was 99,000 short. When the accurate count by individuals is finished we expect to add another 100,000 to our list. We are justly proud. Michigan was first to reach the first million and the second million, but we believe we are second to reach the third million.

* * *

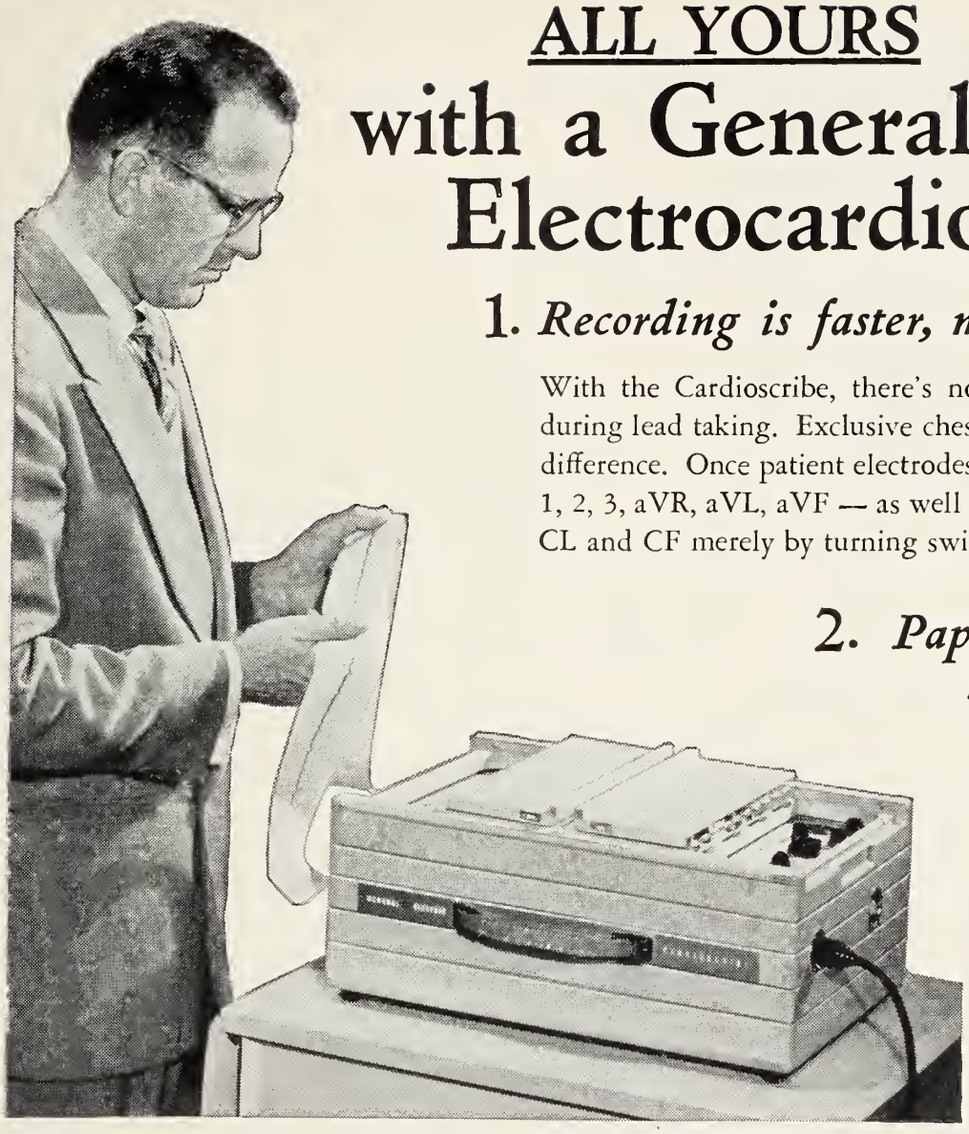
Elected Chairman—L. Fernald Foster, M.D., of Bay City, Secretary of the Michigan State Medical Society, was elected Chairman of the State Journal Advisory Board at the Miami meeting of the American Medical Association.

* * *

The Gill Memorial Eye, Ear, and Throat Hospital will hold their Twenty-Eighth Annual Spring Congress, April 4th to 9th, 1955, in Roanoke, Virginia. This pioneer institution in refresher courses in this country announces a fine program which includes Albert D. Ruedeman, M.

(Continued on Page 212)

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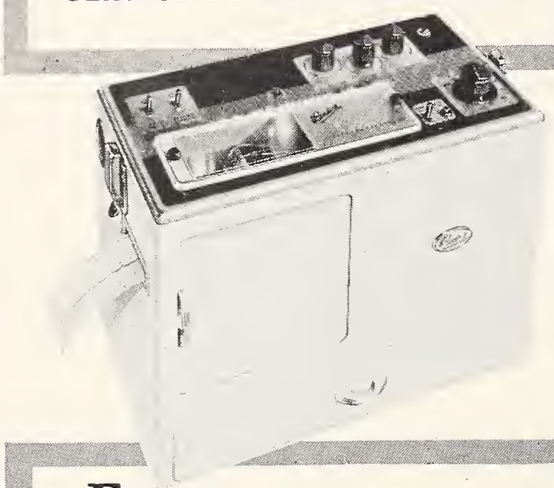
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(Continued from Page 210)

D., F.A.C.S. of Detroit, Richard Schneider, M.D., F.A.C.A., and John Sheldon, M.D., F.A.C.S. of Ann Arbor.

* * *

Symposium on Blood—Wayne University College of Medicine held its Fourth Annual Symposium on Blood on Saturday, January 22, 1955. Papers were presented by Raymond W. Monto, M.D. and Brock E. Brush, M.D., Henry Ford Hospital, Detroit; R. A. Heinrich, M.D., E. C. Vonder Heide, M.D., E. A. Sharp, M.D., and K. C. Corrigan, M.D., Harper Hospital, Detroit; Shirley A. Johnson, M.D., Wayne University, and Robert I. McClaughry, Wayne University. Walter H. Seegers, M.D., and E. A. Sharp, M.D., Detroit, presided.

* * *

American Congress of Physical Medicine and Rehabilitation—To stimulate interest in the field of physical medicine and rehabilitation, the American Congress of Physical Medicine and Rehabilitation will award annually a prize for an essay on any subject relating to physical medicine and rehabilitation. The contest, while open to anyone, is primarily directed to medical students, interns, residents, graduate students in the pre-clinical sciences and graduate students in physical medicine and rehabilitation. Any subject of interest or pertaining to the field of physical medicine and rehabilitation may be submitted. Manuscripts must be in the office of the American Congress of Physical Medicine and Rehabilitation, 30 N. Michigan Ave., Chicago 2, not later than June 1, 1955.

* * *

The 33rd annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held August 28-September 2, 1955, inclusive, at the Hotel Statler, Detroit. Scientific and clinical sessions will be given August 29, 30, 31, September 1 and 2. All sessions will be open to members of the medical profession in good standing with the American Medical Association.

In addition to the scientific sessions, annual instruction seminars will be held. These lectures will be open to physicians as well as to therapists, who are registered with the American Registry of Physical Therapists or the American Occupational Therapy Association.

Full information may be obtained by writing to the executive secretary, Dorothea C. Augustin, American Congress of Physical Medicine and Rehabilitation, 30 North Michigan Avenue, Chicago 2, Illinois.

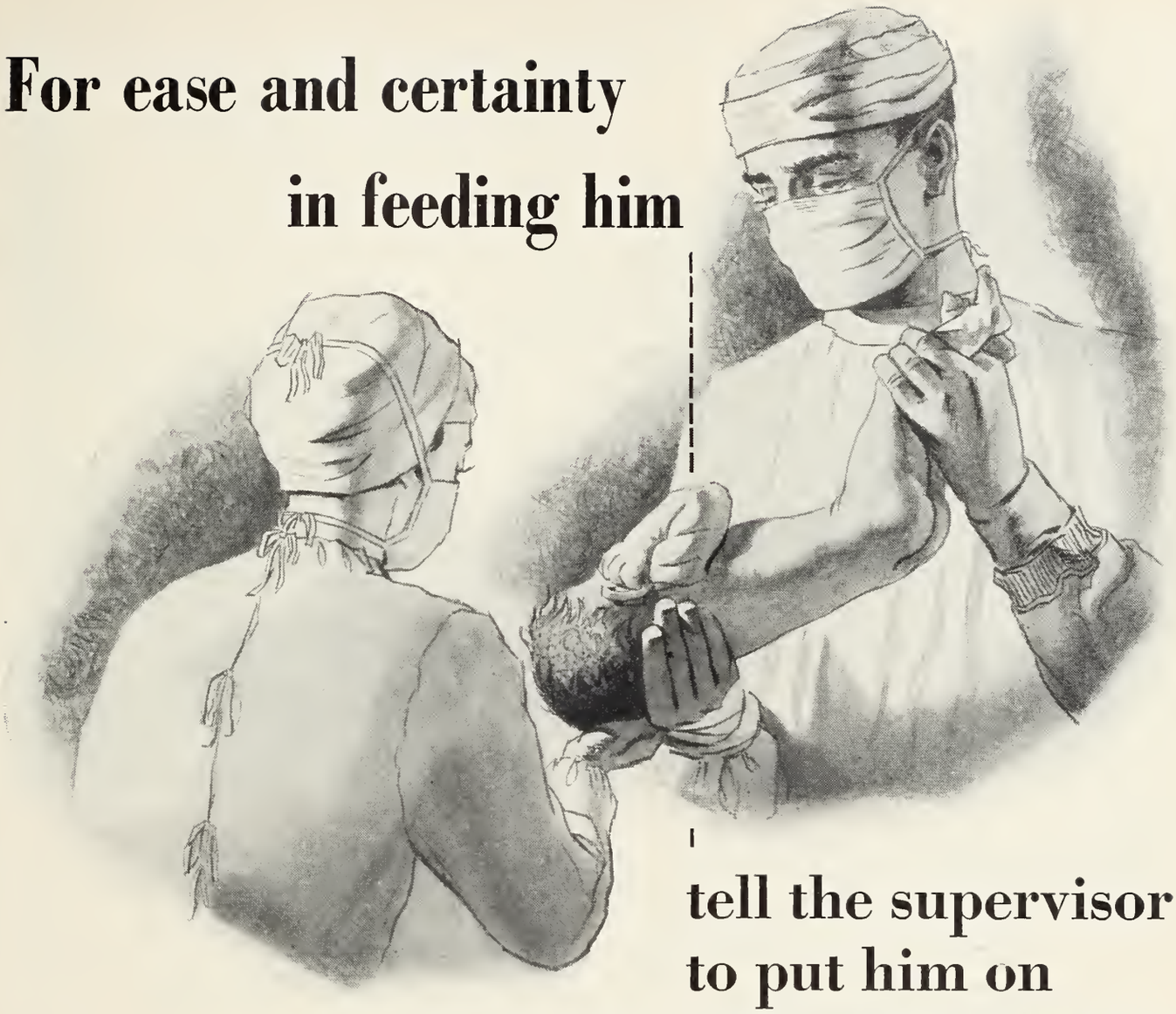
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General Otis O. Benson, Jr., of the U. S. Air Force Medical Service, and currently head of the Aero Medical Association, announces that this organization would hold its 26th Annual meeting at the Hotel Statler, Washington, D. C., from March 20 through 23, 1955.

Medical people from many countries throughout the world are expected to attend and participate in the presentation of scientific reports on aviation medicine. The

(Continued on Page 214)

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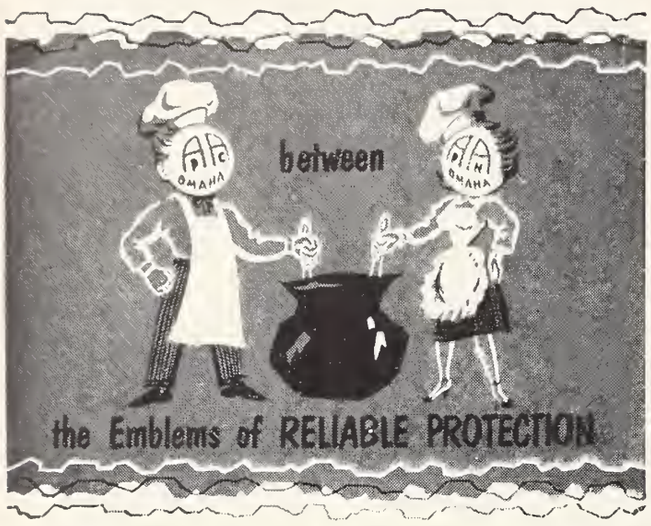
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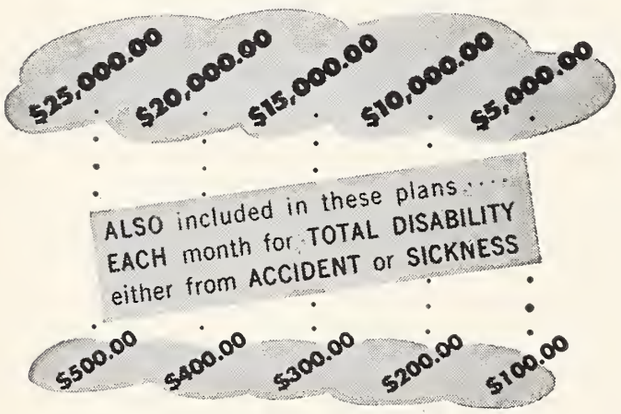
*FEEDING DIRECTIONS		
	Baker's	Boiled Water
First 5 days of life	1 part	2 parts
Second 5 days	1 part	1½ parts
After 10th day	1 part	1 part

Something NEW
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$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

(Continued from Page 212)

first meeting of the association was held October 7, 1929 during which it was established that one of the primary aims would be to promote safety in aviation. This aim has been fulfilled over the years until the organization now exercises international influences in stimulating the science and art of aviation medicine.

* * *

Harry R. Lipson, Detroit, recently was appointed Managing Director of WJBK-Radio. Mr. Lipson has served in the capacity of advertising representative for the Michigan State Medical Society for many years.

Congratulations, Harry!

* * *

The Foundation of the American Society of Plastic and Reconstructive Surgery, Inc., announces its 1955 Scholarship Contest. For detailed information, write to the Award Committee, c/o The Foundation, 30 Central Park South, New York 19, New York. Manuscripts will be accepted by the Award Committee up to June 30.

* * *

The Aero Medical Association announces its 26th Annual Meeting for March 21-23, 1955, at the Hotel Statler, Washington, D. C. For program, write R. J. Benford, M.D., General Chairman, P.O. Box 1607, Washington 13, D. C.

* * *

The Ninth Annual M.D. Anderson Symposium on Fundamental Cancer Research will be held March 10-11-12, 1955, at the University of Texas M. D. Anderson Hospital and Tumor Institute in the Texas Medical Center, Houston. For program, write The University of Texas M. D. Anderson Hospital and Tumor Institute, Houston, Texas.

* * *

James Barron, M.D., Detroit, was one of the guest speakers at a special Heparin Symposium held on December 16 by the Academy of Medicine of New Jersey at Newark. A film giving the view of the speakers was prepared for showing to medical groups. Physicians interested in viewing the film should write to the Academy at 91 Lincoln Park South, Newark, New Jersey.

* * *

The new 19th Edition, American Medical Directory, is now in galley form. A Directory information card has been mailed to you requesting information to be used in the new Directory. The AMA would appreciate your returning your filled-in card as promptly as possible.

* * *

Lawrence J. Linck, Chicago, has resigned as executive director of the National Society for Crippled Children and Adults. Mr. Linck will continue to serve the Society in his voluntary role as secretary and as consultant to the Board of Trustees. His resignation climaxes a ten-year record of achievement marked by phenomenal growth in the number of crippled children helped and the kinds of professional services made available to them. Under Mr. Linck's direction, the National So-

(Continued on Page 216)



NEW VICEROY GIVES SMOKERS

20,000 FILTERS

in every Viceroy Tip

Only Viceroy has this new-type filter. Made of a non-mineral cellulose acetate—it gives the greatest filtering action possible without impairing flavor or impeding the flow of smoke.

Smoke is also filtered through Viceroy's king-size length of rich costly tobaccos. Thus, Viceroy smokers get *double the filtering action* . . . for only a penny or two more than brands without filters.



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control of
salt retention
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- eliminates need for injections in certain cases, lengthens interval between injections in others
- basically **different** in chemical structure, extending the therapeutic choice in organic mercurials

DOSAGE: 1 to 3 tablets daily as required.

SUPPLIED: As orange tablets, in bottles of 100 and 1000. Also available—

CUMERTILIN Sodium Injection, 1- and 2-cc. ampuls, in boxes of 12, 25, and 100; and 10-cc. vials, individually and in boxes of 10 and 100.

1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

THE G. A. INGRAM COMPANY
4444 Woodward Avenue, Detroit 1, Mich.

(Continued from Page 214)

ciety is the largest voluntary organization in the world serving the crippled.

* * *

The Second Citizens Public Health Conference sponsored by the University of Michigan School of Public Health is scheduled for March 3-4-5, 1955, School of Public Health, University of Michigan, Ann Arbor. The program is designed to achieve a maximum of audience participation with brief non-technical presentations given by specially qualified persons, covering the subjects of Tuberculosis, Chronic Illness and Health Problems of Advancing Urbanization.

* * *

The Second Symposium on Office Procedures for the General Physician was held at the Sheraton-Cadillac Hotel, Detroit, on February 9. Kenneth W. Toothaker, M.D., Lansing, President of the Michigan Academy of General Practice; Edwin H. Fenton, M.D., Detroit, President of the Wayne County Medical Society; and F. P. Rhoades, M.D., Detroit, Chairman of the Education-Program Committee of the MAGP, served as Moderators. The Symposium was sponsored by the Wayne County Medical Society and the Wayne County Academy of General Practice.

* * *

President R. H. Baker, M.D., Pontiac, and Secretary L. Fernald Foster, M.D., of Bay City, were guest speakers at the February 1 meeting of the Livingston County Medical Society, in Howell. Dr. Baker's subject was "What MSMS Is Doing for You"; Dr. Foster spoke on "Take Your Pick from Twenty-Six"—referring to the new projects for county medical societies listed in the MSMS booklet, "Winning Friends for Medicine."

* * *

Thanks to "professional courtesy" and a sincere desire to provide better understanding of health and medicine, the Michigan Foundation for Medical and Health Education has received a contribution which, in time, may lead the way to a sizable sum if other Michigan doctors of medicine follow the example of Paul S. Sloan, M.D., of Houghton.

When Dr. Sloan recently provided medical care for the wife of Addison B. Aldrich, M.D., of Hancock, he had an idea which other Michigan doctors of medicine might adopt. Mrs. Aldrich is enrolled as a member of the Michigan Medical Service, but, following the tradition of "professional courtesy" care without cost among M.D.'s and their families, Dr. Sloan asked Blue Shield to make the $30 payment due him payable to the Michigan Foundation for Medical and Health Education.

Subsequently J. C. Ketchum, Executive Vice President of Michigan Medical Service, forwarded such a check to E. I. Carr, M.D., of Lansing, President of the Foundation.

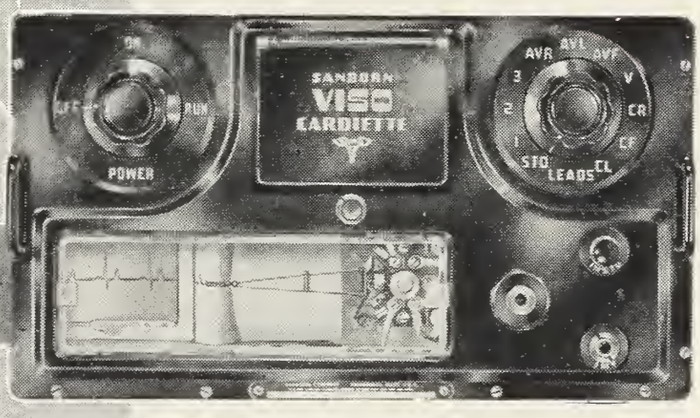
MSMS members who would like to see the great work of the Michigan Foundation for Medical and Health Education continue and expand, might do as

(Continued on Page 218)

IT'S AS EASY AS IT LOOKS...



NOTE the bare simplicity of the Viso-Cardiette operating panel below. Only two major controls are needed for routine testing — a power switch and a leads selector knob.



Because of the Viso's STABILITY, all adjustments — for sensitivity, baseline positioning, and stylus temperature — remain *faithfully set,* and their controls are so rarely needed that Viso designers placed them out of the way, yet readily accessible, under cover in the center of the operating panel above.

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Viso-Cardiette operators everywhere praise the speedy, precise performance of this instrument, and particularly enjoy the extreme simplicity of its operation.

For further information, or details of the Viso-Cardiette 15-day no-obligation trial plan, contact your local Sanborn Office:

1408 David Broderick Tower, Detroit, Mich.
Phone: Woodward 3-1283

SANBORN COMPANY
195 Massachusetts Avenue
Cambridge 39, Massachusetts

The inherent operating simplicity of Sanborn instruments is also found in the Sanborn Metabulator, a modern metabolism tester.

(Continued from Page 216)

Dr. Sloan did in cases where they treat M.D.'s or members of their families eligible under Blue Cross or other medical insurance plans. Contributions to the Foundation may be addressed to E. I. Carr, M.D., President, Michigan Foundation for Medical and Health Education, Inc., 606 Townsend St., Lansing 15, Michigan.

* * *

John W. Hedback recently joined the staff of the American Medical Education Foundation in the capacity of associate executive secretary. Through many years of hospital public and community relations work, Mr. Hedback has gained valuable experience which will assist him in the development of state and local committees. The son of a physician, the late Axel E. Hedback, M.D., of Minneapolis, he has a keen interest in the problems of medical education.

* * *

Voluntary major medical insurance has not developed as rapidly as anticipated "because there is no standard product and each company entering the competition will advance new ideas so that the prospective buyer becomes hopelessly confused."

Such was the opinion expressed recently by E. B. Whittaker, Vice President of the Prudential Insurance Company of America, before the Insurance Conference of the American Management Association.

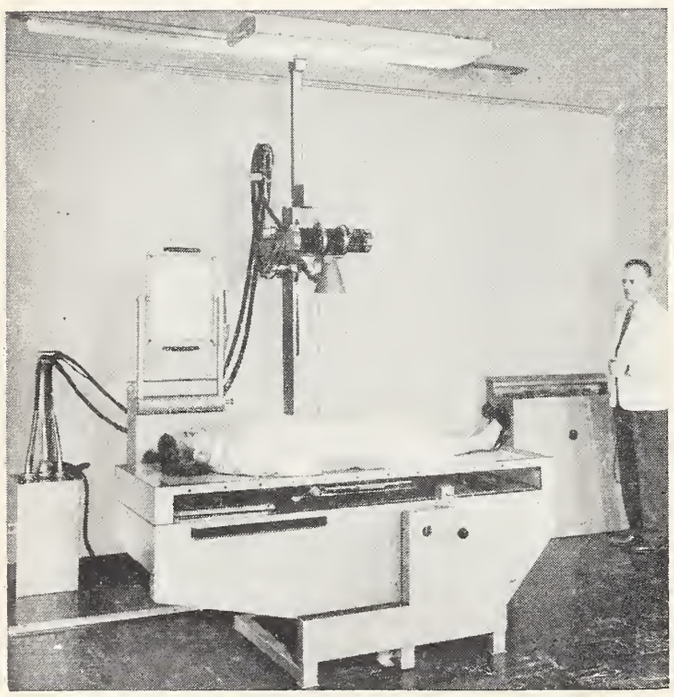
Outlining some of the problems faced by modern insurance companies in providing insurance for major medical expenses, Mr. Whittaker referred to an investigation conducted among Prudential employes earning $5,000 and more yearly, which led to four important conclusions. These conclusions, which he said are now pretty generally recognized as the mainstay of scientific rate making, were:

1. The cost of major medical expense varies directly with income.
2. It increases with age in pretty much the same way as the mortality curve does, with a cost *at age 65 being roughly ten times that at age 35.*
3. It varies with geographic area.
4. There is what we might call a 1-2-3 cost among members of the family. If the employe's claim cost is represented by two, his wife's is three, and his dependent children as a unit only one.

Mr. Whittaker pointed out that 90 million of the 150 million Americans are covered against hospitalization, and that of the remaining 60 million many are uninsurable or could not pay the premium. Likewise many (the farm population, for example) who could afford the premiums, cannot be insured under group policies, and "a company cannot afford to give retail service at wholesale prices." Still others do not need private insurance, because they are covered in some other way

(Continued on Page 220)

New 200-MA. X-Ray Unit Priced As Low As Comparable 100-MA. Units



Full-Wave Rectified
4 X-ray Valve Tubes in Transformer
100 KVP at Any Ma. Setting
Double-Focus Rotating Anode Tube
Fully Automatic Control

Many of the unusual and ingenious features of the control and transformer of this new X-ray Unit were originally in X-ray Generators designed and produced in large quantities by H. G. Fischer & Co. for the Armed Services—all of which were approved by the U. S. Bureau of Standards and performance—proven in service by the Armed Forces. These special features are now available to the Medical Profession in this new superior, 200-Milliampere X-ray machine at a price as low as many comparable 100-milliampere units.

The unit is available in either 100 or 200 milliampere rating and for single or two-tube operation. A full 100 kilovolts are available at ALL milliampere settings.

The tubestand is furnished in either of two types at the same price —mounted on floor rails or floor-to-ceiling mounted. The tube arm on both types swings laterally through 90° to clear the table for vertical positioning and for single-tube fluoroscopy in both vertical and horizontal positions. A manually operated stereoscopic shift provides a lateral shift of 6″ on both sides of center.

The table is precisely counterbalanced for finger-tip tilting. A motor drive of the quiet, but powerful, roller chain type is available. A full-size 12″ x 16″ fluoroscopic screen is mounted on the table. It can be equipped with a spot film device that functions for one central, two horizontal, two vertical, or four corner radiographs on an 8″ x 10″ film.

The control is fully automatic, with its devices aligned progressively from left to right for the setting of each exposure factor in consecutive steps.

The entire unit can be installed in an 8′ x 11′ room with an 8′ ceiling height.

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DETROIT

(Continued from Page 218)

(members of the armed forces, persons in public institutions, etc.).

Mr. Whittaker declared that the insurance industry is making great strides each year to bring the benefits of health insurance to all who might be covered.

He was strongly of the opinion that major medical must be a comprehensive coverage and that it must be liberal in its limitations upon care for pre-existing conditions.

In support of this, Mr. Whittaker said, "From all the experience we have had it is easier to enroll employes on liberal benefits than on limited benefits at a lower cost."

* * *

MEDICAL TELEVISION SHOWS OVER WJBK-TV

Sponsored by the Michigan Health Council

Dec. 5—Alcoholism—Ralph Daniel, Lansing; Hartman Lichtwardt, M.D., Detroit

Dec. 12—S. D. Day—Donald Slutz, Detroit; Lloyd Praedel, Detroit

Dec. 19—Home Accidents—John R. Brown, M.D., Detroit

Dec. 26—Living Insurance—A Film

* * *

Men are boys who do not grow up—they slow up.—Anonymous

Wayne University College of Medicine was featured in an article in the *Journal of the Student American Medical Association*, November, 1954, Number. The story, giving a historical account of Wayne's rise since its 1868 founding, was well illustrated with pictures of its new medical science building and the Lafayette Clinic.

The Grace Hospital of Detroit will hold a Grace Hospital Dinner during the Michigan Clinical Institute for all members of the staff and former staff members, residents, and interns. The dinner will be held at the Sheraton-Cadillac Hotel on Wednesday evening, March 9, 1955. Cocktails at 6:30 P.M., dinner at 7:30 P.M. The party will be stag, dress informal.

Invitations and reservation cards will be mailed soon to all known former staff members, residents and interns and these must be returned to Mr. Wm. Middleton, Assistant Director, The Grace Hospital, Detroit 1, Michigan, by February 28, 1955, if you wish to attend.

This will give former associates of the hospital an opportunity to renew old acquaintances and to meet the new Hospital Director, Dr. Roger DeBusk.

(Continued on Page 222)

MICHIGAN ALCOHOLIC
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A NON PROFIT ORGANIZATION OPERATING THE FINEST AND MOST UNUSUAL HOSPITAL FOR ALCOHOLICS IN AMERICA

Brighton Hospital



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The Michigan Alcoholic Rehabilitation Foundation is a non-profit organization devoted to the proper hospitalization of alcoholics seeking to stop drinking.

Contributions to the Foundation are deductible and should be sent to 2379 National Bank Bldg., Detroit 26, Michigan.

Say you saw it in the Journal of the Michigan State Medical Society

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The pathologist in direction is recognized by the Council on Medical Education and Hospitals of the A.M.A.

(Continued from Page 220)

GENESEE COUNTY MEDICAL SOCIETY TENTH ANNUAL CANCER DAY

Wednesday, April 13, 1955
Merliss Brown Auditorium
Hurley Hospital—Flint, Michigan

Morning Session

LAUREN V. ACKERMAN, M.D.
Department of Surgery, Washington University, St. Louis, Missouri
"The Prognosis of Cancer from the Viewpoint of the Surgical Pathologist"

JUAN A. DEL REGATO, M.D.
Director, Penrose Cancer Hospital, Colorado Springs, Colorado
"The Outstanding Indications and Possibilities of Radiotherapy in the Treatment of Cancer"

OSCAR V. BATSON, M.D.
Chairman, Department of Anatomy—Graduate School of Medicine, University of Pennsylvania, Philadelphia
"Venous Function and Its Role in the Spread of Cancer"

Afternoon Session

BRIAN BLADES, M.D.
Department of Surgery, George Washington University, Washington, D. C.
"The Present Status of the Treatment of Pulmonary Cancer"

FRANK H. BETHELL, M.D.
Department of Internal Medicine, University of Michigan, Ann Arbor
"Chemotherapy in the Management of Leukemia"

CORNELIUS P. RHOADS, M.D.
Medical Director of Memorial Hospital, New York City
"Ten Years of Progress with the Cancer Problem"

PANEL DISCUSSION
"Current Cancer Problems"

Presiding

Morning Session: ROBERT H. BAKER, M.D.—Pontiac — President, Michigan State Medical Society

Afternoon Session: GRANTLEY W. TAYLOR, M.D.—Department of Surgery, Harvard University—Boston

Moderator of Panel Discussion: GRANTLEY W. TAYLOR, M.D.

Durant Hotel

Social Hour—5:30 p.m.
Subscription Dinner—7:00 p.m.
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"sense of well-being."

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Communications

Dr. Wilfrid Haughey, Editor
THE JOURNAL
610 Post Building
Battle Creek, Michigan

Dear Doctor Haughey:

Your very courteous official letter has been forwarded to me at our cottage on Lake Michigan where we are spending the hot weather months.

The honor which has been planned for me comes as a complete surprise and I do not feel that I am worthy of such a distinction. My efforts would have been very futile in my capacity of Maternal Health Consultant had I not had the most sympathetic co-operation and valuable advice from the Maternal Health Committees and from the Michigan State Medical Society and the Michigan Department of Health.

My great regret is that because of a chronic cardiac condition I am forced to relinquish all professional activities and my interest in Maternal Health must be purely academic. I miss the very pleasant calls that I used to make on you and upon hundreds of other Michigan physicians who always made me feel very welcome.

As I rest on the shores of beautiful Lake Michigan and enjoy the marvelous sunsets, I will look forward with gratitude and satisfaction to the February edition of THE JOURNAL.

With all good wishes and thanks for the honor,

Sincerely,
ALEXANDER M. CAMPBELL, M.D.

Whitehall, Michigan
August 9, 1954

William M. LeFevre, M.D.
606 Hackley Bank Building
Muskegon, Michigan

My dear Bill:

Many thanks for THE JOURNAL of the Michigan State Medical Society. I feel that the cover is exceptionally good and certainly the articles devoted to the subject of diabetes are superlative. I think your organization has really gone over big for diabetes and I am sure that I express the feeling of the entire Council when I say many thanks for a job well done for diabetes and the diabetic.

Do hope that I see you in Atlantic City in June or in Philadelphia at the Post Graduate Course in January. Give my sincerest best regards to your good wife and trust that you are well.

With kindest personal regards, I am

Very cordially yours,
JOHN A. REED, M.D.
Secretary, American Diabetes Association

Washington, D. C.
December 27, 1954

FELLOWSHIP STIPENDS NOT TAXABLE

In a decision affecting 32,000 foundations and many thousands of physicians, scientists, and scholars, the Tax Court of the United States has held that research and study grants from philanthropic organizations are not taxable. The decision, which reverses a 1951 finding of the Commissioner of Internal Revenue, holds that fellowships are gifts, and therefore are not taxable as income. Previously, grants were regarded as income, and taxable as such. The Tax Court ruling came as the result of a test case brought by George Winchester Stone, Jr., a Washington (D. C.) professor, in regard to a Guggenheim Foundation literature grant.

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Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES
STARTING DATES, SPRING 1955

SURGERY—Surgical Technic, two weeks, February 21, March 7.
Surgical Technic, Surgical Anatomy and Clinical Surgery, four weeks, March 7
Surgical Anatomy and Clinical Surgery, two weeks, March 21
Surgery of Colon and Rectum, one week, February 28
Basic Principles in General Surgery, two weeks, March 28
General Surgery, two weeks, April 25; one week, May 23.
Gallbladder Surgery, ten hours, April 11
Fractures and Traumatic Surgery, two weeks, March 14
GYNECOLOGY—Office and Operative Gynecology, two weeks, March 14.
Vaginal Approach to Pelvic Surgery, one week, March 7.
OBSTETRICS—General and Surgical Obstetrics, two weeks, February 28
MEDICINE—Two-week Course, May 2.
Electrocardiography and Heart Disease, two weeks, March 14
Gastroenterology, two weeks, May 16
Gastroscopy, two weeks, March 21
Dermatology, two weeks, May 9—
RADIOLOGY—Diagnostic Course, two weeks, February 28
Clinical Uses of Radio Isotopes, two weeks, April 25
Radium Therapy, one week, May 23—
PEDIATRICS—Intensive Course, two weeks, April 4
Clinical Course, two weeks, by appointment
Cerebral Palsy, two weeks, June 20.
UROLOGY—Two-week Urology Course, April 18
Ten-day Practical Course in Cystoscopy every two weeks

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THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

SCIENCE AND MAN'S BEHAVIOR, the Contribution of Phylobiology. By Trigant Burrow, M.D., Ph.D. Edited by William E. Galt, Ph.D. Including the text of "The Neurosis of Man." New York: Philosophical Library, 1953. Price $6.00.

PEPTIC ULCER PATTERNS. Diagnosis and Medical Treatment by Lucian A. Smith, A.B., M.D., M.S. in medicine, F.A.C.P., Assisting Professor of Medicine, Mayo Foundation Head of Section, Division of Medicine, Mayo Clinic, and, Andrew B. Rivers, M.D., M.S. in medicine, F.A.C.P., Late Associate Professor of Medicine, Mayo Foundation Consultant, Division of Medicine, Mayo Clinic, Rochester, Minnesota. Forward by George B. Eusterman. New York: Appleton-Century Crofts, Inc., 1953.

MICROBIOLOGY AND PATHOLOGY. By Charles F. Carter, B.S., M.D., Director, Carter's Clinical Laboratory, Dallas, Texas; Consulting Pathologist, St. Louis Southwestern Railway Hospital, Texarkana, Arkansas; formerly instructor in Pathology and Applied Microbiology, Parkland Hospital School of Nursing, Dallas, Texas; formerly Director of Laboratories Parkland Hospital; and Alice L. Smith, A.B., M.D., Instructor in Microbiology and Pathology, Parkland Hospital School of Nursing, Dallas, Texas; Assistant Professor of Pathology, Southwestern Medical College of the University of Texas; Consulting Pathologist, Children's Medical Center, Dallas, Texas. 260 Illustrations, Fifth Edition. St. Louis: C. V. Mosby Co., 1953. Price $5.50.

ILLUSTRATED REVIEW OF FRACTURE TREATMENT by Frederick Lee Liebolt, A.B., M.D., Sc.D., LL.D., attending surgeon in charge of Orthopedics, the New York Hospital, attending Orthopedic Surgeon, Hospital for Special Surgery, Associate Professor of Clinical Surgery (Orthopedics), Cornell University Medical School. First Addition. Los Altos, California: Lange Medical Publications, 1954. Price $4.00.

LOW BACK PAIN AND SCIATICA. By Louis T. Palumbo, M.D., Des Moines, Iowa. 35 Illustrations. Philadelphia, London, Montreal: J. B. Lippincott Company, 1954. Price $3.00.

THOUGHTS ABOUT LIFE. By Felix Friedberg. New York: Philosophical Library, 1954. Price $2.50.

HUGH ROY CULLEN, A Story of American Opportunity. By Ed Kilman and Theon Wright, Illustrated by Nick Eggenhoffer. New York: Prentice-Hall, Inc. Price $4.00.

We have received a pre-publication copy of the biography of Hugh Roy Cullen. Had we lived in Texas, we undoubtedly would be very familiar with the name Cullen. He started life with very meagre education and little opportunity other than that he made himself. He pumped oil and accumulated enough money so that he has given away or established foundations for the expenditures of $160,000,000.

He has been interested in many things—at one time

he purchased a radio network. He has given to medical schools and hospitals, and in many ways has made himself very useful.

The book, 370 pages, is challenging reading, and puts before us a new personality.

FLUID AND ELECTROLYTE THERAPY. By Franklin L. Ashley, B.S., M.S., M.D., Assistant Professor of Surgery, University of California Medical Center, Los Angeles, and Horace G. Love, B.S., M.D., Dallas, Texas. Philadelphia, London, Montreal: J. B. Lippincott Company, 1954. Price, $3.00.

This pocket-sized volume contains nothing new as regards fluid and electrolyte therapy. It is a primer to be used in teaching medical students and hospital house officers. For this purpose, it is excellent. The physician who wants a brief reference will find it useful.

J.W.H.

HANDBOOK OF TREATMENT. By Harold Thomas Hyman, M.D., author of "Integrated Practice of Medicine, Handbook of Differential Diagnosis." Philadelphia and Montreal: J. B. Lippincott Company. Price $8.00.

Handbooks of treatment are most welcome as a ready reference. This one is strictly what it claims to be. It is an alphabetical reference, each topic divided into several paragraphs: First and most important—"General Principles"—that may be all but if needed "Immediate Care" will follow, then "Continuing Care" sometimes "Diagnosis," "Presentation," "Treatment" are given special consideration. The book is almost entirely outline in most cases, but when needed there is full discussion. Drugs are also included, for instance, penicillin gets three pages. This is a handy quick reference.

CIBA FOUNDATION SYMPOSIUM ON HYPERTENSION, Humoral and Neurogenic Factors. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch. and Margaret P. Cameron, M.A., A.B.L.S. Assisted by Joan Etherington. 73 Illustrations. Boston: Little, Brown and Company, 1954. Price $6.75.

This symposium is another sponsored by the CIBA Foundation and brings together leading investigators from many global points, all with a common interest in hypertensive vascular disease.

These investigators have approached this perplexing problem from the humoral and neurogenic standpoint, and have presented their most recent endeavors concerning hypertension. Presentation is followed by a round-table discussion which makes the compilation of this symposium even more important. The papers are presented in an informal manner with illustrations and many facets of the problem are probed. These include renin, angiotonin, hypertensinogen, cerebrotonin, serotonin, V.D.M., and V.E.M., and cross-circulation experiments concerning cerebrotonin. The role of electrolytes and the kidney in hypertension and the quantitative estimation of serotonin and drugs which are antagonistic to serotonin is well covered.

Although these papers offer new insight into the prob-

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lem, of even more importance they offer varied opinions of the various contributors regarding their views and the reader is afforded unpublished data.

The role of the adrenals and steroids are included as well as the approach to treatment by sympathectomy and/or adrenalectomy.

The index is small but of no handicap. The data included in this symposium are new, and the not so recent views, which have been re-explored, should be of interest to physiologists, pharmacologists, clinicians and research workers in the field of hypertension.

THIS PACE IS NOT KILLING US. By J. I. Rodale. Emmaus, Pennsylvania: Rodale Books, Inc. Price $1.00.

This is an extremely interesting and challenging little book, abundantly worth the price. The text is that we are being killed (heart disease, dropping dead, et cetera) not because of stress, but of poor nutrition, and insufficient and properly regulated exercise. It is not stress or worry—it is improper living. "Hardly an issue of a business magazine fails to remind the poor, tired, frantic businessman that the tempo of life is killing him." "Let us do away with this nonsense and take our vacations because we like vacations and time off—not because we're afraid we'll drop dead without them."

The conclusion and appendix tell how the author, a doctor and a "heart case," regulated his own pulse and blood pressure by regular exercise; also how he determined which foods were not good for him, and this reduced his pulse a few more beats saving an enormous amount of energy every day. Try opening and closing the fist and moving it two inches 21,000 times day. That was the energy saved.

We were intrigued by the book.

BLOOD COAGULATION. Collected Papers by Walter H. Seegers and associates from 1938-1953: N. Alkjaersig, E. B. Andrews, J. F. Braden, K. M. Brinkhous, B. M. Daly, E. L. DeGowin, L. Doub, J. L. Fahey, M. M. Guest, J. F. Johnson, P. D. Klein, E. R. Loew, E. C. Loomis, R. I. McClaughry, D. A. McGinty, E. T. Mertz, K. D. Miller, R. C. Murphy, M. L. Nieft, T. B. Patton, C. C. Pfeiffer, C. L. Schneider, W. H. Seegers, H. P. Smith, C. S. Stevenson, E. M. Sykes, Jr., R. T. Tidrick, J. M. Vanderbelt, A. G. Ware, and E. D. Warner.

This represents the collection of papers by an energetic worker in the field of blood coagulation.

The senior author and his associates have never failed to shed light on the perplexing problem of blood coagulation. The style of writing of the senior author is energetic and imparts to the reader an enthusiasm which is impelling and nutrient of a wealth of factual data. The research and study has covered a span of many years and the senior author has lost none of the zeal which characterizes his work.

This collection of papers affords the reader a voluminous bibliography and readily accessible reference. The data available is tremendous and can be recommended to the physiologist, pharmacologist, hematologist and clinician.

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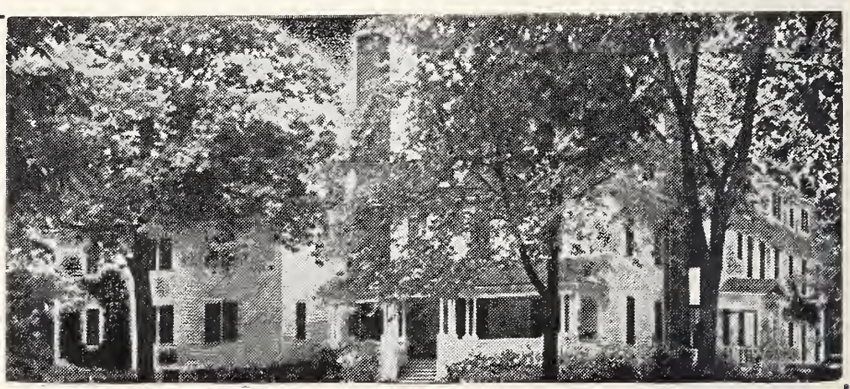
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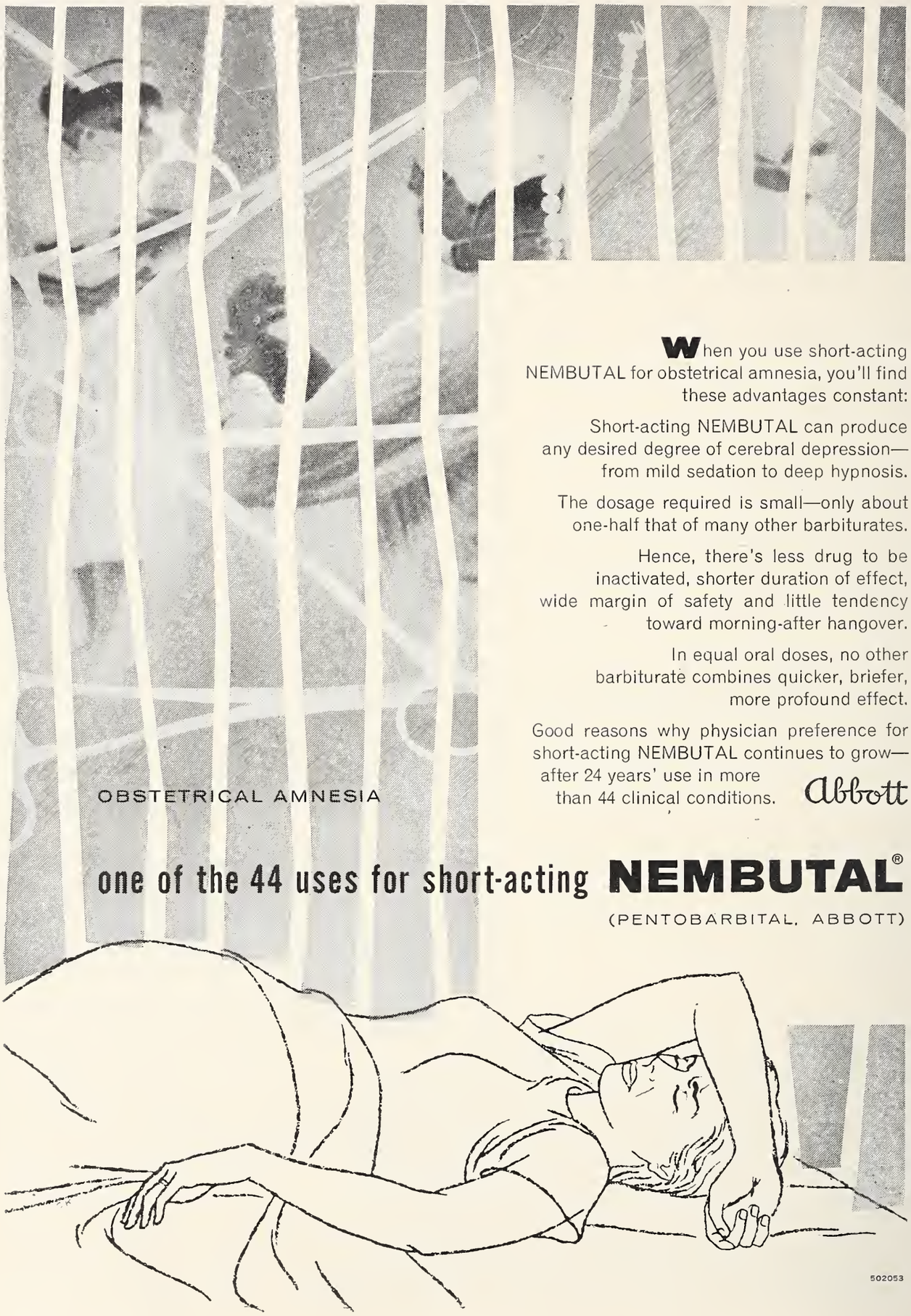
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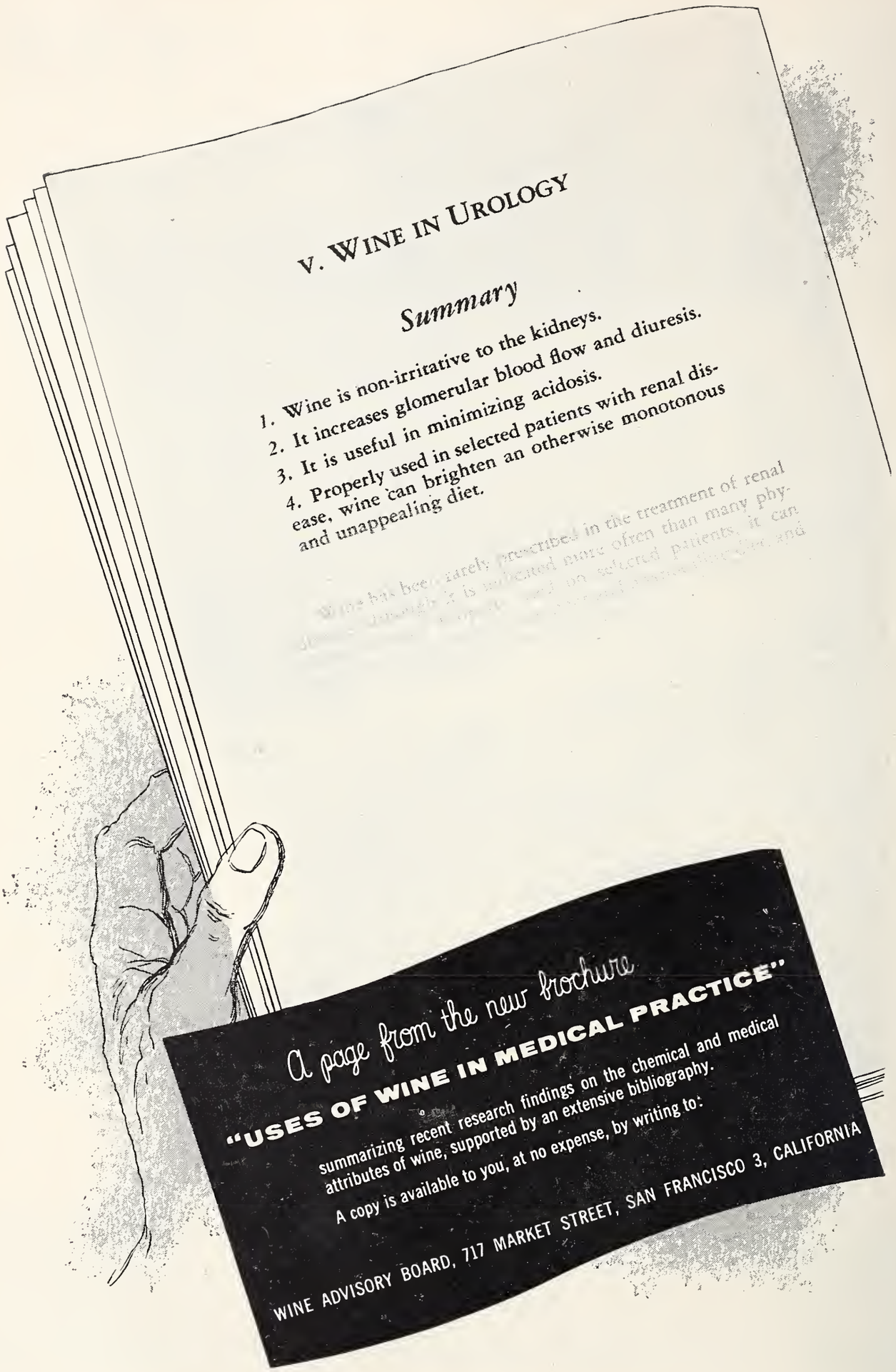
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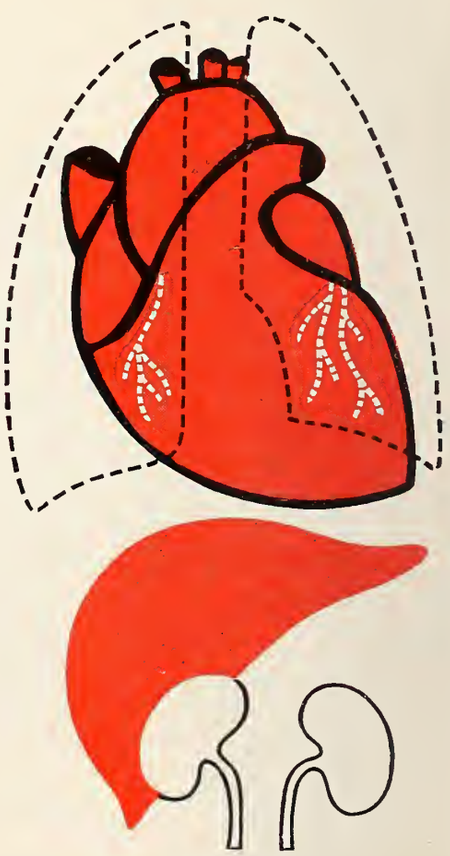
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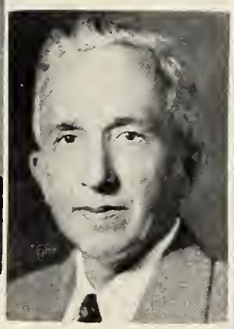
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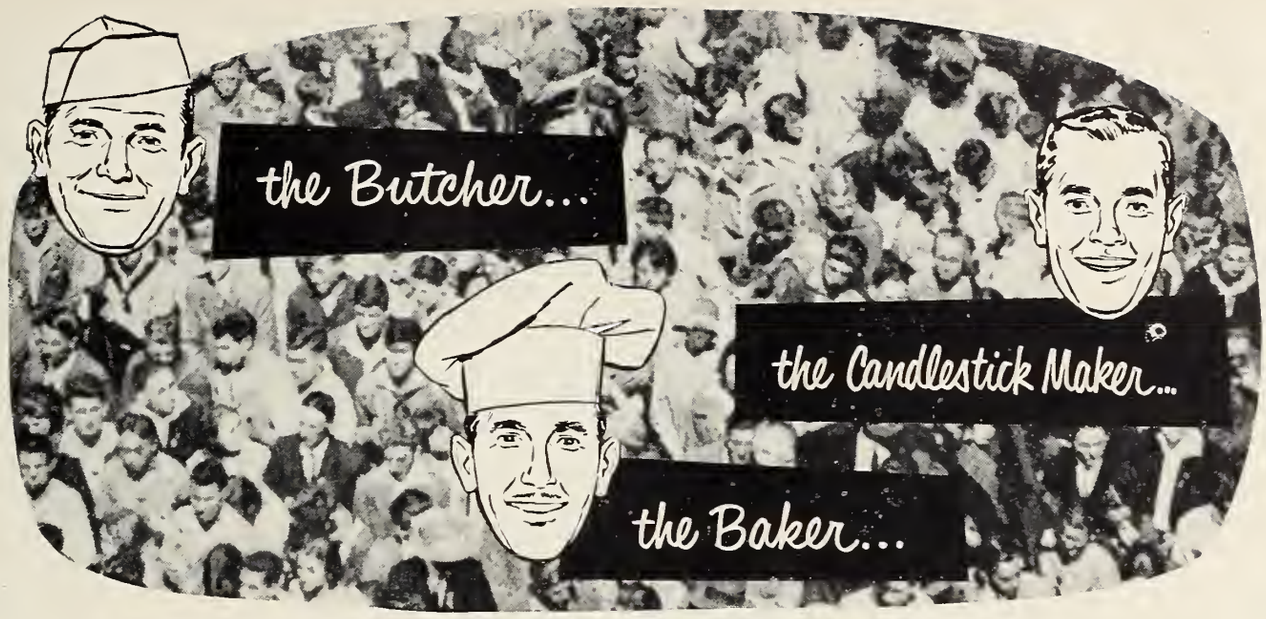
W. A. Hyland, M.D., *Chairman*.....1955
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W. H. Huron, M.D.....1956
R. A. Johnson, M.D.....1955
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Section Delegate

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What does Enriched Bread give him Nutritionally?

CONSERVATIVE industry estimates indicate that the per capita consumption of bread in the United States is 5 ounces daily. Since the bulk of this output is enriched white bread, the amounts of essential nutrients supplied by this quantity become significant from a standpoint of national health.

Contrary to widespread belief, enriched bread is considerably more than merely a source of caloric food energy. As the table indicates, 5 ounces of enriched bread supplies for a sedentary man, the following substantial proportions of his daily needs for these important nutrients: protein, 17%; thiamine, 28%; riboflavin, 12%; niacin, 26%; iron, 31%; calcium, 13%. Five ounces of bread also provides 16% of the daily caloric need.

This generous nutrient contribution is made at a cost of but a few cents, a fact which has led bread to be called a bargain in food.

Some twelve years ago, enriched bread came into widespread commercial production as a result of cooperation between industry and health authorities in the aim to improve the nutritional status of the American people. It has made a significant contribution to the improvement of national health and to the reduced incidence of severe and mild nutritional deficiency states.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



NUTRIENTS AND CALORIES CONTRIBUTED BY 5 OUNCES OF ENRICHED BREAD AND THEIR PERCENTAGES OF RECOMMENDED DAILY DIETARY ALLOWANCES*

Nutrients and Calories	Protein	Thiamine	Riboflavin	Niacin	Iron	Calcium†	Calories
Amounts	12. Gm.	0.34 mg.	0.21 mg.	3.1 mg.	3.7 mg.	125 mg.	391
Percentages of Allowances	17%	28%	12%	26%	31%	13%	16%

*Daily dietary allowances recommended by National Research Council for a sedentary man (154 lbs.)
†Estimated average

MICHIGAN BAKERS ASSOCIATION, INC.
IN CO-OPERATION WITH
THE AMERICAN BAKERS ASSOCIATION

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ANSOLYSEN®

TARTRATE

Pentolinium Tartrate

ALWAYS LOWERS BLOOD PRESSURE

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Philadelphia 2, Pa.



Eye ground changes after Keith-Wagener-Barker classification

You and Your Business

MEDICAL CARE PROGRAM FOR RECIPIENTS OF PUBLIC ASSISTANCE

More than 150 thousand Michigan residents receive financial assistance each month from the State Department of Social Welfare in the form of old-age assistance, aid to the blind, aid to the permanently and totally disabled, and aid to dependent children. The amount of assistance given varies in each instance, depending upon the expenses of the individual or family, and upon other income available for support. Seventy dollars is the maximum monthly allowance provided under the law for old-age assistance, the blind, or the disabled, unless receiving care in a hospital or convalescent home when an additional $10 maximum is possible. The maximum assistance granted to families with dependent children varies with the size of the family group, with the maximum grant $110 per month for a family with two children, which is the average number of children among families helped by the program.

Medical expenses of the elderly or disabled persons who receive these forms of assistance are just as essential as the food, clothing, and shelter expenses included in computing the amount of assistance granted. This is particularly true of old-age assistance recipients, whose average age is seventy-seven years, with 25 per cent of the group more than eighty years old. Recognizing these needs in the cash payment to the client required by law is complicated by several factors: (1) There is not much room left for medical requirements in the grant since the average old-age assistance allowance without medical care provision already totals $57; (2) the medical allowance must be computed in such a way that an average amount over a period of months is recognized rather than an amount changing each month, because the administrative cost of changing the amount of payment each month for over 76 thousand elderly clients would be prohibitive; (3) the recognition of medical needs must take into consideration other public medical care programs administered by local welfare agencies, who may also be giving aid for medical expenses to the same group of clients; and (4) the cost must not exceed the money available within existing appropriations. This last element is made more significant by the fact that a one dollar increase in the average grant for the old-age assistance case load alone would cost the state almost a million dollars per year.

Using the old-age assistance group as an example, the problems have been approached in the ways described below.

Non-Chronic Medical Needs.—For most old-age assistance clients, $2 per month is included in the grant for incidental medical care such as occasional visits to a physician, drug store supplies, and similar needs. This allowance does not require a physician's statement of need or the identification of a specific chronic condition. This $2 allowance is not granted a person receiving hospital or convalescent home care, or to a person granted a chronic medical allowance described below.

Chronic Medical Needs.—This type of medical care allowance is the one most familiar to the Michigan physicians whose patients receive assistance. It is given to recipients of old-age assistance, aid to the blind, aid to disabled and aid to dependent children, based upon a written statement from the doctor called "Verification of Need for Medical Care." This statement is intended to justify the cost of treatment for chronic medical conditions by determining for agency records (1) what diagnosis creates the need for care, (2) if the need for care will continue at least three months, (3) what the cost of care has been and will continue to be, and (4) when a new appraisal of medical need will be required. For purposes of discussion, this plan will be called "Plan A."

Misunderstanding has sometimes occurred because the county bureau of social aid which administers the old-age assistance program locally has been unable to meet all of this medical need within the maximum monthly grant provided by law. This also may happen when the recent cost of care has been less than the future estimate of cost, and further clearance between local office and the physician bcomes necessary to determine whether the patient has had a drastic change in health which requires additional medical care. Understandable caution on the part of the doctor to predict the duration of needed treatment has also led to some problems such as frequent requests by the bureau for new forms from the doctor to redetermine current need for medical expense.

The Department and physicians are agreed that any attempt to solve these problems by requiring additional detailed explanation on the forms by the doctor would be undesirable. Because of the recognized need for a simpler method, however, some county offices have been experimenting with an alternative procedure in conjunction with local medical societies who have approved the project.

This experimental plan will be called "Plan B." Under this plan the procedure for determining the amount to be included in the budget for medi-

(Continued on Page 242)

Meat...

and the Therapeutic Protein Dietary

For many years clinicians and surgeons have recognized the therapeutic value of the high protein dietary.

In more than normal amounts, protein is essential in the treatment of many diseases characterized by hypoproteinemia[1]—nephrosis,[2] sprue, pellagra, chronic colitis, certain liver afflictions,[3] anorexia of diverse etiologies. High protein intake helps to stabilize tissue protein in diseases in which protein catabolism is increased, such as hyperthyroidism and protracted high fever. Dietaries high in protein promote wound healing in the surgical patient and speed convalescence.[4] Sufficient protein ingestion constitutes a protective measure in the geriatric patient.[5] Large amounts of protein are required to satisfy the growth and other metabolic needs of the pediatric patient.

Meat provides large quantities of protein highly effective in the body economy—tissue growth and maintenance, formation of antibodies, enzymes, and protein hormones, and regulation of fluid balance. It also supplies valuable amounts of B vitamins and essential minerals including iron, phosphorus, and potassium. Appeal to the palate, easy digestibility, and its nutrient contribution make meat an important component of therapeutic diets.

---

1. Taggart, H. A.: Protein Metabolism in Relation to Nutritional Aspects of Medical Diseases, Pennsylvania M.J. *54*:339 (1951).
2. Marquardt, G. H.; Cummins, G. M., and Fisher, C. I.: Blood Protein Replenishment in Treatment of Nephritic Edema, Quart. Bull. Northwestern Univ. M. School *26*:140 (1952).
3. Kark, R. M.: Low Sodium and High Protein Diets in Laennec's Cirrhosis, M. Clin. North America *35*:73 (1951).
4. Kekwick, A.: Protein Deficiency in Surgical Patients, Ann. Roy. Coll. Surgeons England *7*:390 (1950).
5. Stieglitz, E. J.: Nutrition Problems of Geriatric Medicine, Report of Council on Foods and Nutrition, J.A.M.A. *142*:1070 (Apr. 8) 1950.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

American Meat Institute

Main Office, Chicago... Members Throughout the United States

MEDICAL CARE PROGRAM

(Continued from Page 240)

cal care is based on expense actually incurred instead of using (as under Plan A) the future cost as estimated by the medical practitioner. The method for establishing the original need for chronic medical care as well as cost for treatment is similar to Plan A. However, after the first three months during which the client receives an allowance based upon the doctor's estimate, the allowance is based upon actual expense. The client submits at the end of each month a form "Report of Medical Expenses" showing the amount he has spent for medical care. The information on this form is inserted by the doctor's office each time the patient is seen, and by the druggist when medicine is purchased. This informtion is used by the bureau in determining the amount to be included in the next three months' period for medical care.

There are problems in Plan B, such as the need for a more detailed statement from the doctor when there is a sudden drastic change in health greatly increasing medical costs beyond that justified by averaging past expenditures. The Michigan Social Welfare Commission is currently reviewing the results of these experiments to determine whether they can practically be extended for use throughout the state.

Special Medical Needs.—In addition to either of the types of medical care mentioned above, a patient may need glasses or a prosthetic device. To include an allowance for such purchases usually means prorating the expense over several months' payments because of maximum grants. Such an expense would usually require a separate medical verification of need and cost regardless of the procedures discussed above.

Special diet is sometimes recommended by physicians. It may only be considered in computing the amount of grant if (1) it is one of a few types of diets which have been found to actually increase the cost of food, and (2) the client is furnished with a diet list or daily menu from which the bureau may determine the diet cost.

The law does not permit the Department to restrict the manner in which a recipient spends his grant. Furthermore, the law prohibits the Department from interfering with the patient-physician relationship. For those reasons, although the physician is asked about the amount of cost, it does not mean that he can be assured payment from his patient, even when the money is included in the old-age assistance grant. And there are many conflicting viewpoints concerning desirability of state interference between the doctor and patient over payment of the medical bill.

From time to time, there has been discussion of the giving of medical information by a physician without violating the confidence of his patients. Usually, this does not become an issue because the patient frequently brings the proper form to the doctor's office with a request that the information be given to enable the patient to secure an allowance for medical care. Each applicant for assistance signs a form which states, "I empower the bureau to obtain such information from other sources as may be necessary to establish my eligibility for assistance." This has been interpreted by several attorneys as constituting a release for the securing of medical, as well as financial and social, information bearing upon eligibility. Some physicians may not be aware that both federal and state laws restrict the bureau's use of information secured in this manner to purposes connected with the administration of public assistance. The bureau has an obligation to protect confidential information concerning recipients as well as a responsibility to help them meet their medical needs.

HEALTH EXAMINATION

A committee of the Michigan State Medical Society is now preparing papers which are being presented in THE JOURNAL again calling attention to the need for more thorough periodic health appraisals of patients. The physician's own family should be included in those patients. Each medical family has been urged to select a family physician. Many items have appeared, but still physicians, like their patients, fail to secure the early diagnoses necessary to ward off preventable calamaties, malignancies and heart conditions, fields in which the record of medical families is not any better than the general public.

Herbert F. Dowling, M.D., Department of Medicine, College of Medicine, University of Illinois, has published a paper entitled "Physician, Heal Thyself" in G.P. for January, 1955. This is a very well-written paper and should be read by all. He says physicians do not neglect their own health because of too much familiarity with death. They mostly have a healthy respect for it and when some noted man or respected friend dies suddenly of a coronary condition, they rush in for a heart examination.

Dr. Dowling discusses many causes of medical men's ill health: infections, excess radiation, misuse of drugs, vascular disease (he reports a survey of 300 to 308 farmers, laborers, clergymen, lawyers, bankers and physicians with coronary sclerosis—relative percentage 2.5, 2.6, 4.6, 4.6, 5.3, and 10.7). Other conditions are mentioned: peptic ulcer, emotional tension, suicide being most frequent.

The physician has his professional hazards and also the hazards of his social and economic class. He says, "The finger of shame is pointed" at physicians. As the result of a survey on the interval

(Continued on Page 244)

"an effective antirheumatic agent"*

nonhormonal anti-arthritic

BUTAZOLIDIN®

(brand of phenylbutazone)

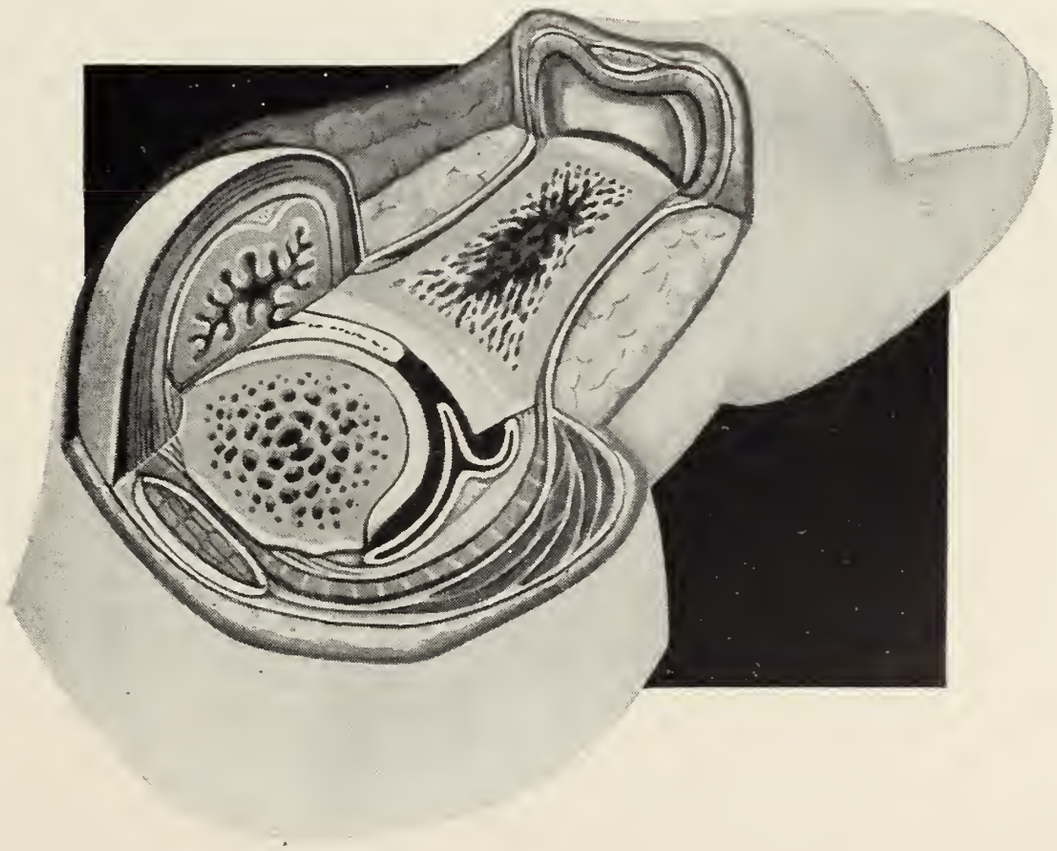
relieves pain · improves function · resolves inflammation

The standing of BUTAZOLIDIN among today's anti-arthritics is attested by more than 250 published reports. From this combined experience it is evident that BUTAZOLIDIN has achieved recognition as a potent agent capable of producing clinical results that compare favorably with those of the hormones.

Indications: Gouty Arthritis Rheumatoid Arthritis Psoriatic Arthritis
Rheumatoid Spondylitis Painful Shoulder Syndrome

BUTAZOLIDIN® (brand of phenylbutazone) red coated tablets of 100 mg.

*Bunim, J. J.: Research Activities in Rheumatic Diseases, Pub. Health Rep. *69*:437, 1954.



Geigy

GEIGY PHARMACEUTICALS

Division of Geigy Chemical Corporation, 220 Church Street, New York 13, N.Y.

48555

HEALTH EXAMINATION

(Continued from Page 242)

which elapsed from the onset of the first symptoms of a neoplasm until the patient presented himself for examination, seven months in carcinoma of the lung, nine months in malignancy of the gastro-intestinal tract and fourteen months between first symptoms of carcinoma of the prostate and the first examination. "Small wonder only five out of sixty had curative operations."

This one quotation should sufficiently emphasize the problem and the cure. Physicians should have themselves and their families examined as well as their patients. Many hospitals are providing or offering a method of rendering this service.

ARE YOU CERTIFIED TO PRACTICE?

Section 4 of the Medical Practice Law of Medicine—Act 237 of the Public Acts of 1899, as amended, specifically states:

"The person receiving a certificate of registration shall file the same or certified copy thereof, with the county clerk in the county where he resides, and said clerk shall file said certificate or the certified copy thereof and enter a proper memorandum thereof in a book to be provided and kept for that purpose, and may collect therefore a fee of fifty cents for each certificate or copy thus filed. And said county clerk shall, on the first day of each month, furnish to secretary of said board a list of all certificates filed in his office during the preceding month on a blank provided for that purpose, and upon notice to him of the change of location or death of a person granted a certificate, or upon the revocation of the certificate granted such person, such county clerk shall enter at the appropriate places in the record so kept by him a memorandum of such facts; so that the records so kept by said county clerk shall correspond with the records of said board, so kept by the secretary thereof.

"In case a person having thus filed a certificate shall move into another county of the State, he shall procure from said county clerk a certified copy of said certificate, and file the same with the said county clerk of the county to which he shall so remove. Said county clerk shall file and enter the same with like effect as if the same was the original certificate."

PORTABLE ATOMIC X-RAY MACHINE DEVELOPED

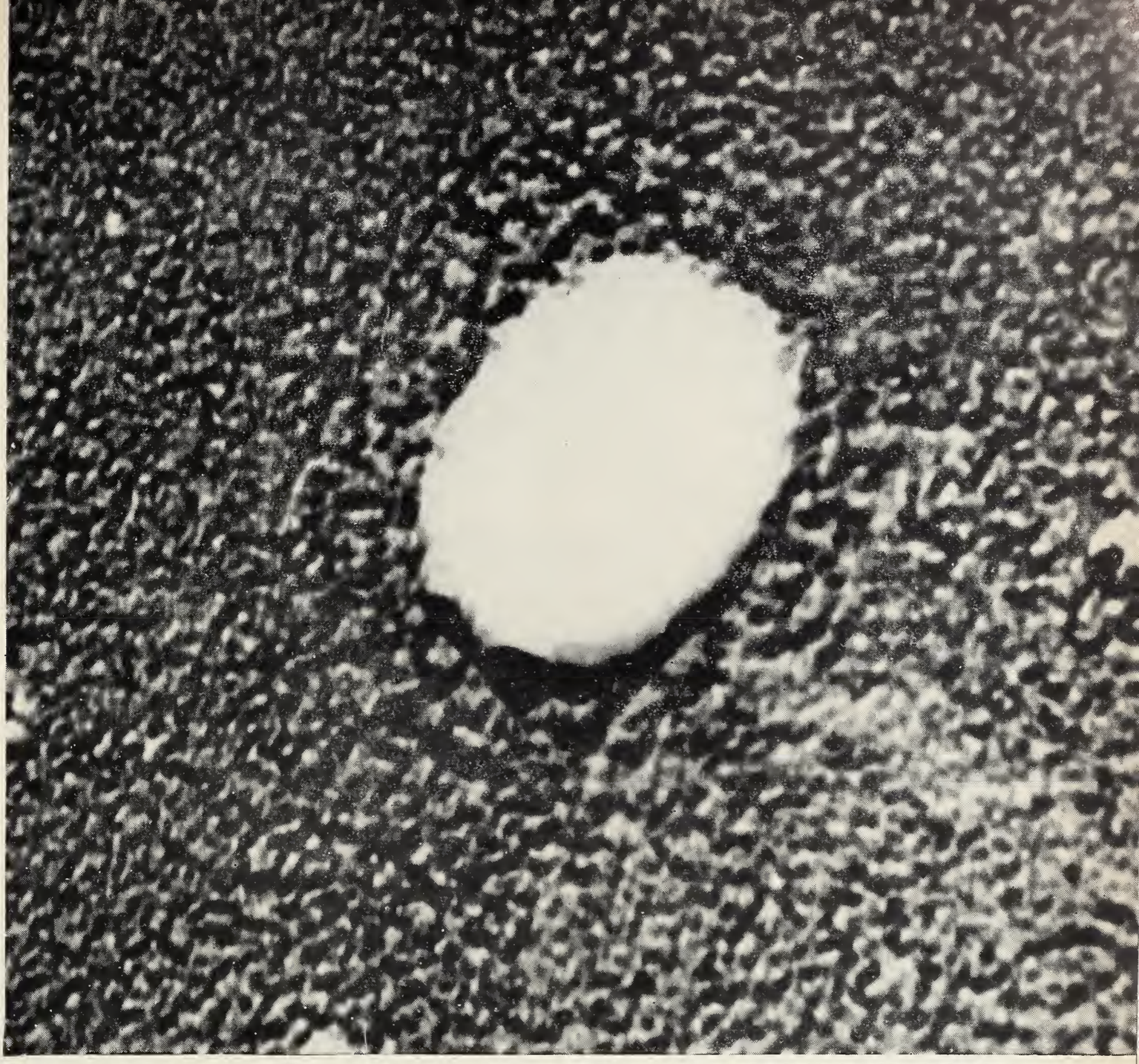
A recent television newscast disclosed the federal government is experimenting with a portable x-ray machine weighing only 48 pounds. It utilizes atomic energy and produces a direct print in a matter of seconds without resorting to the use of conventional darkroom and chemicals. A model was demonstrated on the newscast. Continued study is under way to develop the machine so that improved and more minutely defined x-ray pictures can be made.

MEDICAL MEETINGS AND CLINIC DAYS

A list of known medical meetings and clinic days, sponsored by county medical societies and other physician groups in Michigan, follows:

1955		
Spring	MSMS Postgraduate Extramural Courses	State-wide
April 5	82nd Annual Meeting, Northern Tri-State Medical Association	Fort Wayne, Ind.
April 13	Genesee County Medical Society's Tenth Annual Cancer Day	Flint
April 21-23	First Annual Conference on Anesthesiology, Wayne University	Detroit
May 5	Twenty-seventh Annual May Clinic, Ingham County Medical Society	Lansing
May 10-11	Annual Clinic Day and Alumni Reunion, Wayne University College of Medicine	Detroit
May 13	Eleventh Annual Clinic Day of the St. Clair County Medical Society	Port Huron
May 19	American College of Surgeons Annual Symposium on Trauma and Nutrition	Ann Arbor
June 6-10	Annual Session, American Medical Association	Atlantic City
June 7	Bon Secours Hospital Annual Clinic Day	Detroit
June 17-18	Upper Peninsula Medical Society	Gateway
June 27-30	Eighth Annual Conference on Aging	Ann Arbor
August	Fifth Annual Clinic, Central Michigan Committee, ACS Michigan Committee on Trauma, plus Michigan National Guard Medical Personnel, and Medical Society of North Central Counties	Grayling
August 25-26	Coller-Penberthy Clinic	Traverse City
September 26-27	Annual Session of the House of Delegates (MSMS)	Grand Rapids
September 28-30	MSMS Annual Session	Grand Rapids
October	Clara Elizabeth Fund for Maternal Health and Genesee County Medical Society	Flint
October 14	Michigan Cancer Conference	East Lansing
Autumn	MSMS Postgraduate Extramural Courses	State-wide

Additions to this list of meetings are invited by the Editor of JMSMS, in order to make this monthly announcement complete and accurate.



ELECTRON PHOTOMICROGRAPH

Shigella dysenteriae 42,000 X

Shigella dysenteriae (Shiga's bacillus) is a Gram-negative organism which causes **bacillary dysentery.**

It is another of the more than 30 organisms susceptible to

PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

Upjohn

*TRADEMARK, REG. U.S. PAT. OFF.

against staphylococci



This is an actual strain of *Staphylococcus aureus*, isolated from a five-week-old infant. Note extreme sensitivity of the organism to ERYTHROCIN—although it easily resists the four other antibiotics. This organism may be associated with *sinusitis* . . . *otitis media* . . . *tonsillitis* . . . *abscess* . . . *bronchopneumonia* . . . *empyema* . . . *carbuncle* . . . *pyoderma* . . . *bronchiectasis* . . . *furunculosis* . . . *pharyngitis* . . . *septicemia* . . . and *tracheobronchitis*.

for specific therapy against coccic infections...

Wide range activity against gram-positive pathogens—that's the story of ERYTHROCIN *Filmtab**. As you know, most bacterial respiratory infections are produced by staph-, strep- or pneumococci. *And that is the very range where* ERYTHROCIN *is most effective.* In fact, you'll find it more active against this group of organisms than many other antibiotics.

filmtab*

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE ABBOTT)

against common intestinal flora



This sensitivity test shows ERYTHROCIN and the same antibiotics against a typical strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect growth of the organism—while the other antibiotics show marked inhibitory action. Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to cause alteration in common intestinal flora—with an accompanying low incidence of side effects.

...with little risk of serious side effects

One reason is because the drug acts specifically. It destroys coccic invaders, yet doesn't materially change the normal intestinal flora. Thus, side effects are rarely encountered with ERYTHROCIN. Nor does it cause the allergic reactions occasionally seen with penicillin. Abbott

filmtab*

Erythrocin® STEARATE

(ERYTHROMYCIN STEARATE ABBOTT)

*TM FOR ABBOTT'S FILM SEALED TABLETS, PAT. APPLIED FOR

you can warm cold feet



with

ORAL **Priscoline®**

hydrochloride
(tolazoline hydrochloride CIBA)

a potent peripheral vasodilator

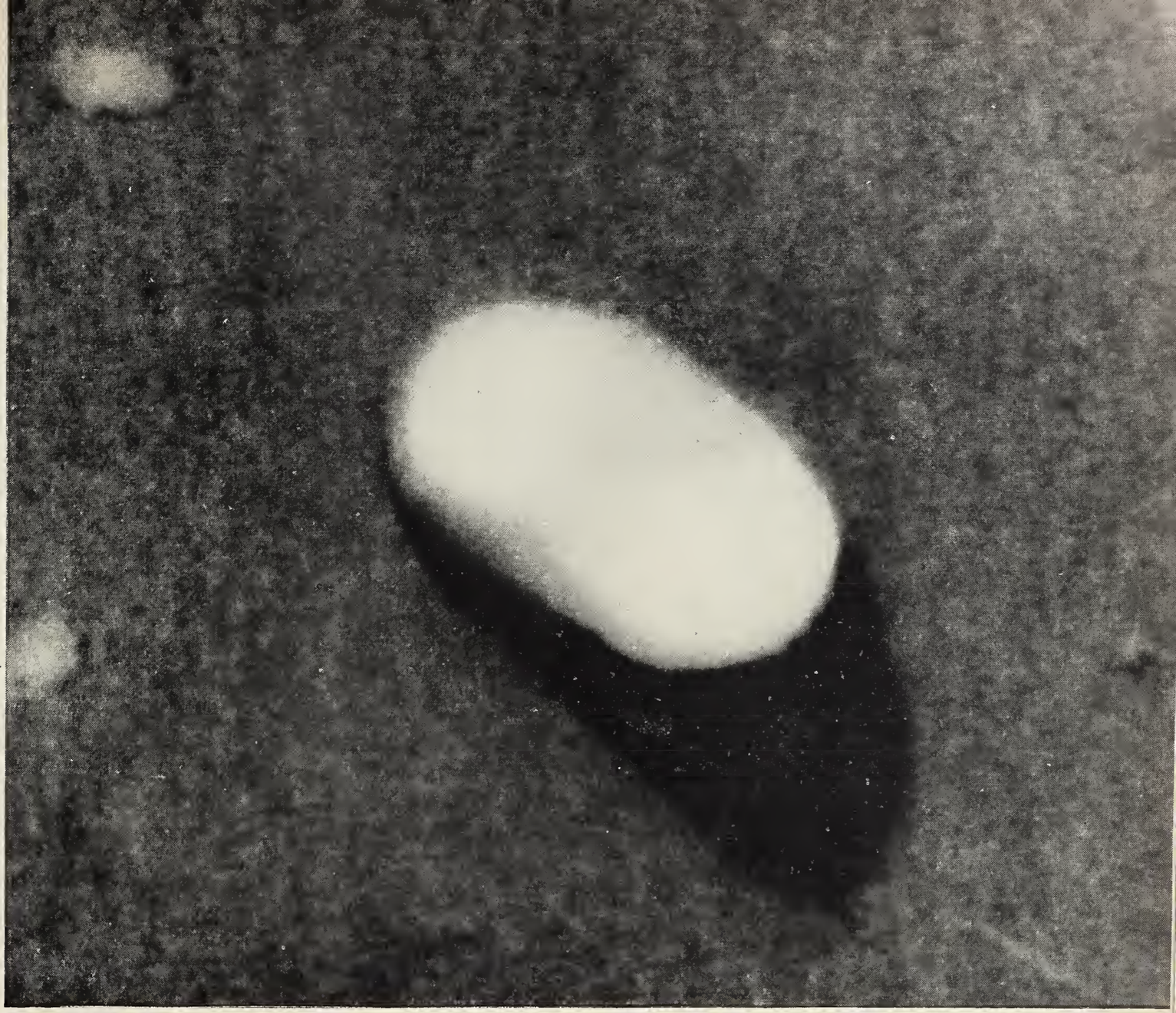
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Elixir, 25 mg. per 4-ml. teaspoonful
Multiple-dose Vials, 10 ml., 25 mg. per ml.

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ELECTRON PHOTOMICROGRAPH

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ACHROMYCIN, in its many forms, was accepted by the medical profession in an amazingly short time. Each day more and more prescriptions for ACHROMYCIN are being written when a broad-spectrum antibiotic is indicated.

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LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

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Heart Beats

"ATLAS OF CONGENITAL CARDIAC DISEASE" REPRINTED

In response to numerous requests from physicians, students, scientific workers and libraries throughout the world, the American Heart Association has reprinted the "Atlas of Congenital Cardiac Disease," by Maude F. Abbott, M.D. (1869-1940). This classic monograph, a critical analysis of 1,000 cases of congenital cardiac anomalies, was first published by the Association in 1936. Long since out of print, it has now been reprinted in a limited edition of 1,500 numbered copies exactly as it appeared originally.

The work of Dr. Maude Abbott, who died in 1940, served to bridge the gap between the previous unsystematic and largely descriptive knowledge of congenital cardiac defects and the present era of precise diagnosis and dramatic surgery. Her systematic study and classification opened the way for the practical developments of the past two decades.

Dr. Abbott published her first major report in 1908, as a section of volume four of Osler and McCrae's *Modern Medicine,* based on 412 cases of congenital cardiac defects gathered from her own material and from the world medical literature. Numerous additional articles appeared through the years. Then, in 1936, came *The Atlas,* a critical analysis of 1,000 cases of congenital cardiac anomalies.

The monograph was published largely at the suggestion of and with the encouragement of Dr. William W. Francis of the Osler Library, McGill University, Montreal, and with the permission of the executors of Dr. Abbott's estate.

The volume, printed by Peter F. Mallon, Inc., Long Island City, is available at a cost of $5.00. Copies may be obtained from the Michigan Heart Association, 4421 Woodward, Detroit 1, Michigan.

ANATOMICAL CARDIAC STAMPS AVAILABLE AS RECORDING AID

Sets of anatomical cardiac rubber stamps are now available at cost to interested physicians to assist them in keeping records of heart patients. The rubber stamps were devised from diagrams in the book "Congenital Malformations of the Heart," by Dr. Helen Taussig, and published by the Harvard University Press for the Commonwealth Fund.

The stamps are distributed nationally by the Stamford Heart Association, 190 West Broad Street, Stamford, Connecticut, at a cost of $3.00 for each category (three stamps), postpaid.

The stamps imprint an outline of the heart and chest which enables physicians to record fluoroscopic findings of disease conditions or abnormal changes in the heart shadow. They are available in three categories. 1. *Infant:* small size 1½" x 1¼"; large size, 2" x 1¾". 2. *Child:* small size, 1½" x 1¼", large size, 2" x 1¾". *Adult:* one size only, 2" x 1¾". Three views are available in each size, anterior, posterior, left anterior oblique and right anterior oblique.

"STANDARDS FOR CONVALESCENT HOMES CARING FOR CARDIAC CHILDREN" AVAILABLE

As active rheumatic fever abates, the physician is often confronted with the problem of deciding whether a child will do better during the convalescent stage in his own home or in a convalescent institution. In this situation, the family doctor or pediatrician may find it helpful to consult a newly-issued manual of the American Heart Association, "Standards for General Convalescent Homes Caring for Cardiac Children." Based on a statement originally prepared by the New York Heart Association, the manual outlines and provides a checklist of the services, facilities and personnel convalescent homes require if they are to meet adequately the special needs of children with rheumatic fever or congenital heart defects. Copies of the manual are available from the Michigan Heart Association, 4421 Woodward Avenue, Detroit 1, Michigan.

SECOND WORLD CONGRESS ON CARDIOLOGY

A total of over 3,100 registrants from fifty nations attended the Second World Congress of Cardiology which was combined with the Twenty-Seventh Scientific Sessions of the American Heart Association in Washington, D. C., last fall. About one-third were physicians from abroad.

Paul D. White, M.D., Boston, who served as President of the Congress, was elected President of the International Society of Cardiology which sponsors these Congresses. He succeeded Charles Laubry, M.D., of Paris, who has held the post for the past four years, and who presided over the first international cardiology congress in Paris in 1950. Other officers named at a meeting of the

(Continued on Page 260)

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PR REPORT

SO SUCCESSFUL were the pilot meetings held with county medical society Public Relations committees and officers during the fall and winter to strengthen activities in the local community that similar meetings will become a continuing part of the MSMS over-all PR program. The plan was given full backing of The Council following a recommendation of the MSMS Public Relations Committee at its most recent meeting.

President Robert H. Baker, M.D., a guest at the meeting, told the committee how he had been impressed with the value of the county PR sessions after visiting several of them in various parts of the state. President-elect W. S. Jones, M.D., further endorsed the meeting schedule as an activity to be carried out during his term of office in 1955-56.

Readers will recall that MSMS instigated the meetings in larger counties, inaugurating the program last November. In workshop sessions, representatives of MSMS and its Public Relations Committee sat around the table with county society committeemen and leaders to evaluate current local PR activities and determine what projects might be added to improve or round out the efforts of the county society. The end result sought: Greater co-ordination, unity, and stability on the PR program of the medical profession throughout Michigan.

"WINNING FRIENDS FOR MEDICINE," the MSMS Public Relations "bible" introduced last year, will remain as the foundation and guide for the statewide program. This 26-point PR handbook was approved for use in the coming year, to lend continuity to the effort.

To further stimulate Medical PR in the months ahead, an MSMS Public Relations Committee member is to be appointed within each Councilor District to aid the Councilor in promoting the adoption of well-rounded PR programs in county societies, or keeping in high gear those already under way.

This latter plan was recommended by Secretary L. Fernald Foster, M.D., in his annual report to The Council.

PERIODIC HEALTH APPRAISAL program plans, a major project for the future, have been given an added boost with the authorization of a motion picture dealing with the subject. According to the plan, the movie will be used as an educational tool among MSMS members in the preliminary phase of the program, already in motion. With a few alterations the film will later be adapted for use in acquainting the public with the purpose of the Periodic Health Appraisal and what it entails.

Now in production is still another MSMS color motion picture. This one deals with epilepsy, which traditionally has been one of the "hush-hush" afflictions from the public viewpoint. Among several reasons for selecting epilepsy were this need for public understanding, the dearth of educational material, and the fact that current methods of management dramatically demonstrate the steady progress of Medicine.

RADIO IS NOT DEAD. Studies continue to indicate that, in spite of the great popularity of television, radio continues to command a large listening audience not only in the more remote non-TV areas, but in metropolitan communities as well. A recent survey by the MSMS PR Department indicates that Michigan is completely blanketed by the 50-odd medical shows broadcast weekly by local radio stations through co-operation of MSMS and county medical societies. Many of the programs are recorded shows fed to the stations by the Detroit PR office, although a few are produced locally.

Still popular and in weekly use is the "Tell Me, Doctor" series produced by MSMS several years ago. It is carried now by at least two Michigan stations, and has been placed recently with several stations in the South and West by a New York agency which pays royalties to MSMS for its use.

UPCOMING IN THE FIELD of Public Relations are two items worthy of immediate mention. First is a news code which can be used as a guide for press relations by county societies. The need

(Continued on Page 260)



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Say you saw it in the Journal of the Michigan State Medical Society

AMA Washington Letter

THE MONTH IN WASHINGTON

A bill that is not a part of the official Eisenhower health program is causing a stir in Congress.

The bi-partisan measure would provide $90 million dollars to be spent over three years to help construct and equip non-federal medical research and laboratory facilities. Often in the past five years efforts have been made to get Congress to set up various huge new research programs pointed at one disease and calling for direct federal operation of the project. Without exception they have been turned down, Congress deciding that the existing National Institutes of Health are the proper vehicles for such all-federal research.

The bill that Congress now is interested in takes a different approach. It would have the federal government "get in and get out," a system used successfully in the Hill-Burton hospital construction program. Grants would go to nonprofit hospitals, medical schools, medical laboratories and like institutions, and the institution itself would have to match the federal money. Once the particular construction had been completed and equipped, the federal government would relinquish all control or influence over the project, as under Hill-Burton. Unlike the Hill-Burton plan, the grants would go directly from the U.S. to the project.

The Senate sponsors of this bill carry more than ordinary weight within their own parties. They are Senator Lister C. Hill (D., Ala.), who not only is chairman of the Labor and Public Welfare Committee, but also heads the subcommittee that passes on most health appropriations, and Senator Styles Bridges (R., N. H.). The latter has added prestige as chairman of the Senate Republican Policy Committee. The House sponsor is Rep. Percy Priest (D., Tenn.), chairman of the Interstate and Foreign Commerce Committee, which like Senator Hill's committee, is in charge of most health bills.

Introduction of specific bills to implement the President's own health program disclosed a few more details of what he wants from Congress, but generally the suggestions are the same as Mr. Eisenhower offered in his State of the Union Message, his Health Message and other earlier statements.

The reinsurance bill, again the center of controversy, is much the same as last year's bill, but singles out certain areas where the administration believes reinsurance would be particularly helpful. They are the coverage of rural families, greater protection for low-income families (including home and office calls), and the insurance of major medical costs. The new bill also makes some technical changes designed to assure that the federal government does not intend to regulate the insurance industry.

The bill for federal guarantee of private mortgages on health facilities follows the general lines of last year's Kaiser-Wolverton plan, but makes some concessions. For example, the new bill drops the requirement that a facility has to devote most of its services to prepayment plan patients.

As introduced, the Defense Department's bill for more medical care for military dependents had no surprises at all. It is exactly the same bill offered last year. Efforts had been made to write in some compromises, but these were given up for the time being. The major question, as it has been from the start, is whether most dependents are to get their medical care from an insurance plan such as is proposed for other U. S. employes and their dependents, or are to be cared for by uniformed physicians in military hospitals.

Other parts of the President's program, now up for action in Congress, propose more money for the medical care of public assistance recipients, grants to states for training practical nurses and for more advanced nurse training, and more research and training in mental health.

A surprise Eisenhower request is that this country lift its statutory restriction on the amount of money U. S. may contribute toward the World Health Organization. Under present law the U. S. may not pay more than $3 million annually. The administration wants this ceiling lifted to $5 million.

Congress currently is deciding how much money to allow for health programs for the next fiscal year, starting July 1. Although the administration requested for Mrs. Hobby's department only about what it is spending this year ($2 billion), the budget for Public Health Service was upped about $77 million. Most of the research institutes are scheduled for substantial increases.

A Michigan hospital reports that only 25 per cent of its income is from private pay patients; 75 per cent comes from insurance, Blue Cross and commercial, and about 5 per cent from other and government sources. The payroll this year will be 78 per cent of total cost.

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Editorial Opinion

CHAOS BY DECISION

"Article 33. The board of trustees reserves the right to remove any member of the medical staff or to deprive any physician or surgeon of the privilege of the hospital whenever . . . the good of the hospital or of the patient therein demand it . . . (or) as in its judgment may seem for the best interest of the hospital and those who are to become patients therein."

This text, or the principle stated by this text, will be found in the regulations of every hospital competent to be entrusted with the care of people in this state. Rules like these evolved to protect people. In many instances they were developed locally by the people who were given the responsibility of supervising hospitals through election to the trusteeship of hospital boards; in many instances they were the result of trial-and-error experience or of specific research and experimentation. Whatever the source of the rules the end result has been the development of protective measures which have made our good hospitals the best in the world and a goal to which our poorer hospitals may aspire. The broad theory of protective care to the occupant of the hospital bed has no limitation to public or private or church supported hospitals.

The Supreme Court of the State of Michigan takes a different view. In the case of Samuel Albert et al., versus the Board of Trustees of the Gogebic County Public Hospital et al., Justice Reid, for the entire bench, indicates that "all lawful power to discipline any duly licensed physician and surgeon, or to suspend or revoke his right to practice in any public hospital . . . is exclusively committed to the State Board of Registration in Medicine—and Article 33 is accordingly void as an attempted usurpation of powers . . . set forth in the Medical Practice Act."

This is a prime example of the complete absence of any social consciousness or understanding of the social structure of the times. The great jurists of all time have made their pleadings for the needs of the people when there has been conflict with written statute: and this understanding nowhere is apparent in the present decision. An extension of this cold legalism beyond the realm of the public hospital involved in the case at hand to every hospital which offers its multiple and obvious blessings to the sick people of this state would bring chaos to people.

Since there is no appeal from this rigid decision, all of us must turn to our representatives in the legislative chambers to ensure the protective measures which our citizens have reason to expect and demand. People are entitled to this.—*Detroit Medical News,* February 7, 1955.

IN DEFENSE OF DOCTORS

"Doctor, I'm sick!"

Too often for the doctor's comfort these days the lament is directed not at the cause of the ailment but the cost of the cure. No less a personage than the eminent columnist, Dorothy Thompson, recently chided the medics for their alleged shortcomings. Among these, she said, was the practice of referring to surgery a patient who does not need it merely so the doctor and the surgeon can split a few dollars.

Representative Walter Judd, the able Minnesota lawmaker who is himself a doctor, said not long ago that the high cost of medical care might force socialized medicine.

Doctors are becoming alarmed. The thoughtful ones I know—and I know quite a few, all thoughtful—are racking their brains for an answer to their poor public relations.

They took the Hippocratic oath to do their best in the service of mankind and, by and large, they do it.

But honor bound to keep out of controversy and let their name be used only in inescapable situations like their own too-early obituary notices, the doctors are stuck.

Honor bound myself by nothing except the facts, I'd like to strike a blow for the doctors.

Two young men of equal talent graduate from college at twenty-two. One is an engineer and starts right out at a good salary. The second turns to medical schools (four years) and interning and specializing (four years).

By the time both are thirty, the engineer has already earned $40,000 to $60,000. The medical student has spent $2,000 a year to get more education. They reach the age of thirty some $60,000 to $75,000 apart.

If the medical man then begins to earn excellent money is that fair?

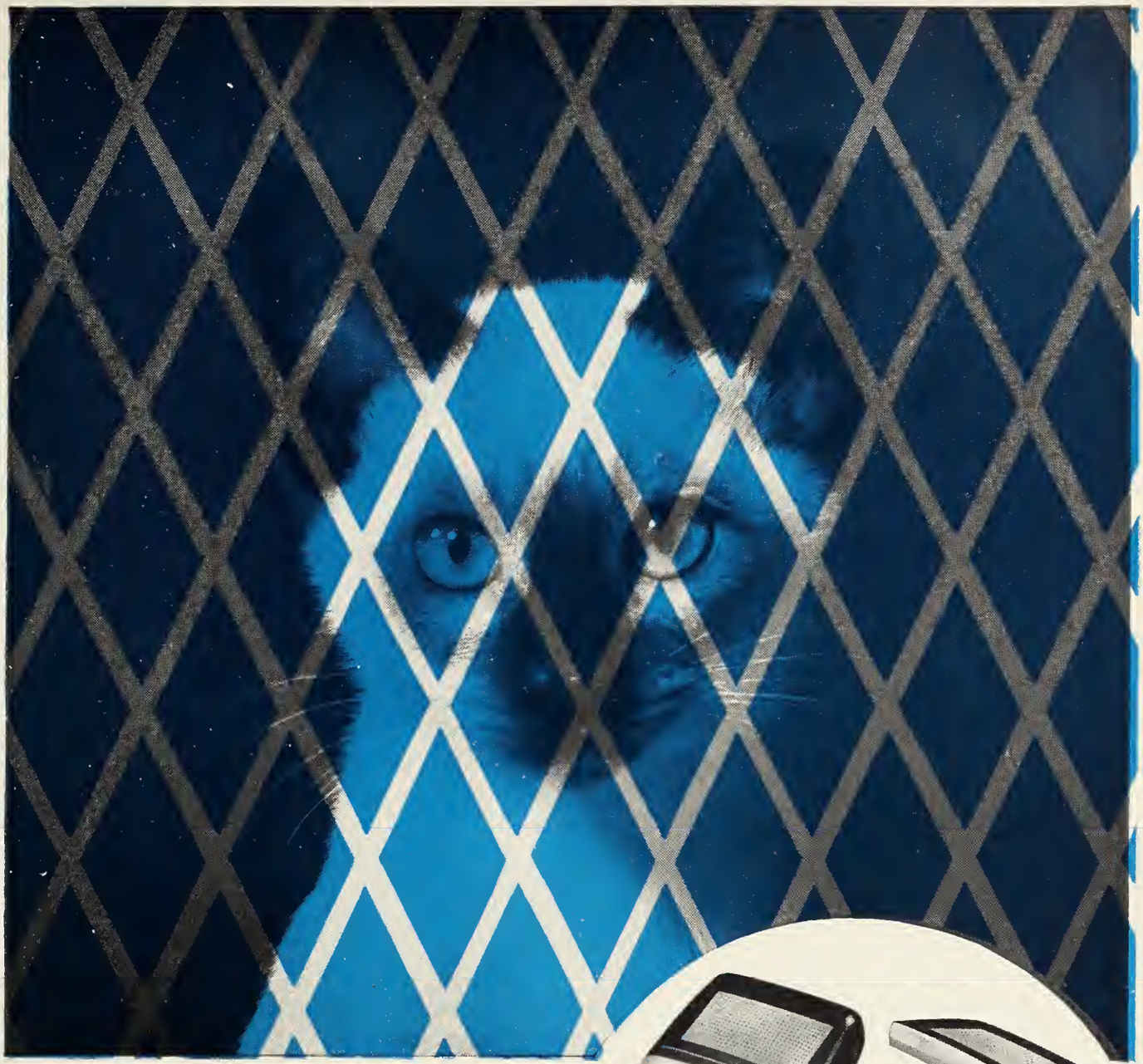
From personal observation I would have to give an unqualified and resounding yes.

No other practitioner of any art or science spends so much time in study as a fully qualified physician or surgeon. No other expends so much financially to achieve his goal. No other spends himself so freely.

We have just about given up trying to be sociable with the doctors we know. We tried to eat dinner at the pediatrician's house and I wound up making four house calls with him while the girls ate. They in turn tried to eat at our house and he was interrupted so often he finally just left.

We played bridge with a surgeon. He received

(Continued on Page 260)



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the blueblood of hearing aids

IN DEFENSE OF DOCTORS

(Continued from Page 258)

only one call, but a doctor present had three calls and left about 10 p.m., returning at midnight.

Two lawyers, a surgeon and I sat down one night to plan some program for our church group. The phone rang. A child possibly had appendicitis. The lawyers and I went right ahead. The surgeon operated at ten that night.

Was the operation necessary?

I thought about Dorothy Thompson's attack at length. Last March my own doctor and surgeon agreed I should have some minor surgery. They had me in the hospital and almost on the operating table when the surgeon called to send me home; my wife was going to have a baby two weeks ahead of schedule.

Since then, the need for the operation has apparently vanished, at least for the time being.

Were these men trying to make money, or perform a service?

It is patently impossible that they were trying to make money from me, a newsman. They are both warm personal friends trying to do what they thought best for a friend. At the time, an operation seemed best.

Should the surgeon have taken out that child's appendix that night or not? If it were my child, I'd tell him to operate. I know he feels that 25 useless operations are better than one child dying of peritonitis because some surgeon held back.

Don't you?

The problems of the medical men are, I think, beyond the grasp of ninety-five per cent of the people. I have learned them only slightly in a lifetime of acquaintance with doctors, in a bitter past year spent mostly in their hands.

People cry loud and long over the "good old days" when one family doctor did it all from cradle to grave. Bitterly they assail the specialization and high cost of medical service.

Then they turn right around and call the TV repairman, the plumber, the electrician, the plasterer, the fuel oil man, the gas man, the roofing and gutter man. . . .

But why go on. The jack-of-all-trades is no more. Our machinery is too complex.

The bodily machinery is complex, too. It is the most complex mechanism in the world. To keep it running takes the best men with the most infinite patience and the longest training.

Have you called a plumber lately? Or a TV repairman?

Pretty big bill, wasn't it?

Should your doctor get less?

—Editorial by KINSLEY MCWHORTER, Jr., in *Roanoke (Va.) World-News,* December 31, 1954.

HEART BEATS

(Continued from Page 252)

Society's Council include: First Vice President, Prof. Ignacio Chavez, Mexico City; Second Vice President, Prof. D. E. Bedford, London; Secretary-General, Prof. Pierne Duchosal, Geneva; Treasurer, Louis N. Katz, M.D., Chicago; Assistant Secretary, John Palmer, M.D., Montreal.

Brussels, Belgium, was chosen as the scene for the Third World Congress of Cardiology to be held in 1958. The Inter-European Congress of Cardiology will be held in Stockholm in 1956, and the Inter-American Congress of Cardiology will convene in Havana in the same year.

PR REPORT

(Continued from Page 254)

for such a guide was expressed in several of the county society PR meetings mentioned above. Relations between county societies and news media have, in general, been excellent but informal. The code would primarily be useful in pinpointing responsibilities and privileges of both the medical profession and the press in dealing with local medical news.

Second is a study of methods of co-operation available to Medicine in a suggested program with the other professions to promote public understanding of the meaning of professional status.

The health of the people of the United States in 1954 was the best in its history, according to the Metropolitan Life Insurance Company. The reported death rate of 9.2 for each 1,000 population is a record low. Among the reasons were an absence of major outbreaks of respiratory illness and the reduction of mortality from tuberculosis by 20 per cent. Developments in medical science. the growth of public health activities, and an increase in the general standard of living were other favorable factors.

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ELECTRON PHOTOMICROGRAPH

Hemophilus influenzae 64,000 X

Hemophilus influenzae ("influenza bacillus") is a Gram-negative organism which grows only in the presence of hemoglobin. Contrary to its name, it is not the causative agent in influenza, but rather is commonly involved in

meningitis • chronic bronchitis • bronchiolitis
tracheobronchitis • supraglottic laryngitis • bronchopneumonia

It is another of the more than 30 organisms susceptible to

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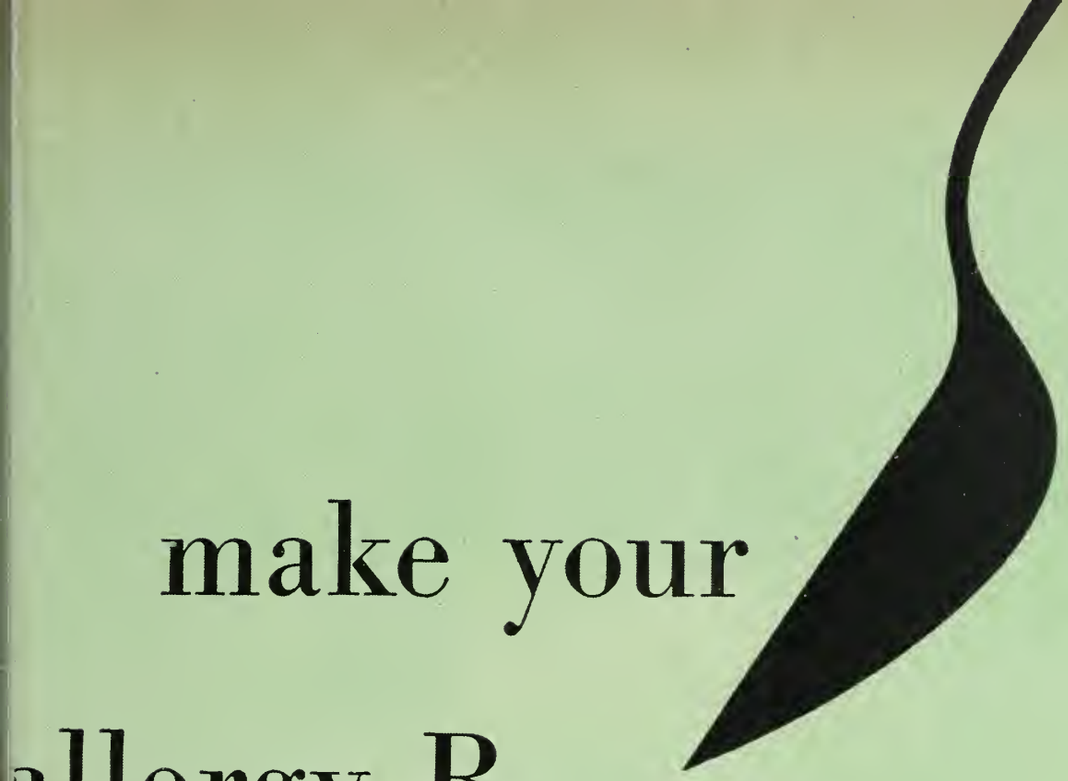
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Say you saw it in the Journal of the Michigan State Medical Society

The JOURNAL
of the Michigan State Medical Society
Issued Monthly Under the Direction of The Council
VOLUME 54 MARCH, 1955 NUMBER 3

Foundation Stimulates Research in Arthritis

By James J. Lightbody, M.D.
Detroit, Michigan

THE MICHIGAN Chapter of the Arthritis and Rheumatism Foundation was founded in 1948 through the interest of H. T. Ewald of Campbell-Ewald Company, Dr. Hugo Freund, H. J. McLaurin of the Aetna Life Insurance Company and W. A. Moffett of Campbell-Ewald Company.

During the first two years, the Michigan Chapter devoted its entire efforts to the field of research in the rheumatic diseases, and this interest has been maintained and its activities enlarged during the past two years. During the six years of the chapter's existence, $376,511.12 has been allocated to thirty-two specific basic and clinical research projects in various hospitals and clinics throughout the state.

Research groups which have received assistance during the past five years include University of Michigan, Wayne University, Detroit Receiving Hospital, Children's Research Center, Ford Hospital, Providence Hospital, Wayne County General Hospital and Harper Hospital. Most of these research groups have maintained a continuous program of investigation into the causes of certain types of joint disease and have frequently investigated new methods of treatment. There have been forty-three scientific articles submitted and published by these various groups which have been assisted financially in their investigative program by the Michigan Chapter of the Arthritis Foundation. Although most of the research centers are located in Detroit and Ann Arbor, the benefits derived from the results of these investigations can well be appreciated throughout the state.

Dr. Lightbody is Medical Director, Michigan Chapter, Arthritis and Rheumatism Foundation; Chief, Arthritis Clinic at Harper and Detroit Receiving Hospitals.

Rehabilitation Program Continues

For the past two years there has been a great interest in the subject of rehabilitation in the field of arthritis, and the Michigan Chapter has assisted groups at Harper Hospital, Ford Hospital and the University of Michigan in treating selected cases of arthritis which have potential possibilities for some degree of rehabilitation.

The rehabilitation group at Harper Hospital, particularly, has maintained an arthritis consultation committee in which candidates for rehabilitation are screened to determine the possibilities for treatment. This committee is made up of several internists who are members of the American Rheumatism Association and the Michigan Rheumatism Society, an orthopedic surgeon, a physical therapist and a social service worker. Problem cases have been referred to this group from Detroit and from many other places throughout the state, and it is hoped that similar groups acting as consultants in difficult arthritic cases may be found in other parts of the state to give a more complete service to those individuals whose problems are far beyond the abilities of any one physician. Rehabilitation, which includes a rather full program of therapy for the patient, is a relatively new field of endeavor, and since the treatment of one single patient may involve weeks of hospitalization and many more weeks of frequent physical therapy treatments following the period of hospitalization, there is a great financial responsibility associated with these cases.

The Foundation does not in any way interfere with previously established physician-patient re-

lationships. During the past several years there has been a certain amount of cortone donated to the National Foundation, which was subsequently distributed to the local chapters to be used by them and donated to certain needy patients who are under continuous steroid therapy and who have no funds available to pay for these drugs. The supply of these materials has been very limited, but there have been a considerable number of patients who have been assisted towards rehabilitation because of the fact that they were able to obtain a certain amount of these hormones from the Foundation to maintain their schedule of treatment.

A part of any program of rehabilitation would necessarily include the use of the visiting nurse who may give treatments to the home-bound arthritic patient, with general nursing care including necessary injectable material, and also the frequent use of physical therapy applied by a registered physical therapist. The Michigan Chapter of the Arthritis Foundation has maintained a cooperative program with the Visiting Nurse Associations in the following cities in Michigan: Detroit, Bay City, Flint, Lansing, Pontiac, Grand Rapids, Marquette, Muskegon, Saginaw, Port Huron, Ypsilanti and Holland.

There has been considerable controversy among members of the Medical Advisory Committee of the Michigan Chapter relative to the value of home physical therapy unless the patient has a chance for some degree of rehabilitation. There is, and will be for some time to come, a severe shortage of physical therapists in Michigan; and several of the VNA groups in the state do not have access to any trained physical therapist to treat arthritics at home.

Up to the present time, the Michigan Chapter has offered home-bound arthritic patients general nursing care and/or physical therapy, but there is a general feeling among physiatrists and practicing physicians that physical therapy will do very little good unless applied frequently and also applied only to those who are making an effort to help themselves. In this program of home care, the Michigan Chapter pays only the deficit cost of home visits by the visiting nurse or physical therapist.

The Board of Directors of the Michigan Chapter recently approved a full-time physical therapist for the Grand Rapids Rehabilitation League. This therapist will treat arthritic patients who have been referred to the league for treatments by practicing physicians, and it is hoped that the therapist may take part in a home treatment program which will be developed by the rehabilitation league. Dr. Noyes Avery, Jr., of Grand Rapids has been very instrumental in pointing out the advantages of rehabilitation of the arthritic patient in Grand Rapids, and it is mainly through his interest and efforts that Grand Rapids was approved for the full-time physical therapist.

During the past year the Visiting Nurse Associations throughout the state have made over 10,000 visits to home-bound arthritic patients, and there were more than 1,500 physical therapy treatments given. There has been an increased cooperation on the part of the physicians directing the treatment of home-bound arthritic patients, and this is shown by the fact that they are giving more complete orders to the visiting nurse and to the physical therapist for treatment of these disabled patients. The physicians who are professionally responsible for these patients have been criticized in the past because of the lack of supervision of treatment of these home-bound arthritic patients. It is the duty of the visiting nurse and the physical therapist to attempt to educate not only the patient but also members of the patient's family in the type of exercises which are indicated in certain types of joint and muscle disability. The patient and members of his family can do a great deal for themselves if properly educated by the visiting nurse or physical therapist. Many of the regular visiting nurses have been taught the general principles and application of physical therapy by registered physical therapists so that they will in some way make up for the terrific shortage of physical therapists.

The Central Rheumatism Association will hold its annual meeting in Detroit on October 17, 1955. This association is made up of physicians from Michigan, Pennsylvania, Ohio, Indiana and Kentucky, who are particularly interested in the field of rheumatic diseases. This meeting will be an all-day session at which national authorities on the subject of arthritis will discuss important aspects of diagnosis and treatment and give reports on new research projects. The meeting will be held at Henry Ford Hospital, and all physicians in Michigan are cordially invited to attend.

This meeting of the Central Rheumatism Asso-

ciation is being sponsored by the Michigan Chapter of the Arthritis and Rheumatism Foundation and the Michigan Rheumatism Society. Dr. E. C. Vonder Heide of the Clinical Investigation Department of Parke, Davis & Company, as president of the Michigan Rheumatism Society, has appointed Dr. John Sigler of the Arthritis Clinic of Ford Hospital as general chairman for the Central Rheumatism Association meeting.

Films on Arthritis Available

There are two 16 mm. sound movies available for use by physicians and nursing groups on the general subject of arthritis.

The first film is entitled "Problems of Rheumatoid Arthritis," and has a running time of twenty-eight minutes. The film brings out some of the economic and social factors associated with arthritis and details common difficulties involved in the early diagnosis of rheumatoid arthritis, graphically describes the pathology of the disease, and then shows actual photographs of patients under treatment with the various common drugs used in therapy, including ACTH and cortisone. This film also brings out the importance of physical medicine in the modern treatment of arthritis and is of particular value for teaching purposes.

The second film has a running time of twenty-four minutes and is entitled "March of Medicine —Progress Report on Arthritis." This is a Kinescope film of a television program which was presented by the Arthritis and Rheumatism Foundation in co-operation with Smith, Kline and French, pharmaceutical company. This film has an all-star cast of national authorities on the subject of arthritis and rheumatism, including Dr. Walter Bauer of Boston, Dr. Charles H. Slocum of the Mayo Clinic, Dr. Joseph Bunim, Chief of the National Institute of Arthritis and Metabolic Diseases, and Dr. Edward W. Lowman of the Institute of Physical Medicine and Rehabilitation.

Both of the above films are available at no charge to hospital staffs and nursing groups, and anyone wishing to use these films may apply for specific dates from the office of the Michigan Chapter, Arthritis and Rheumatism Foundation, 205 Basso Building, 7338 Woodward Avenue, Detroit 2, Michigan.

If there is no 16 mm. sound projector for the showing of these films in your community, the Arthritis Foundation will complete arrangements to make a projector available.

MICHIGAN CHAPTER
ARTHRITIS AND RHEUMATISM FOUNDATION

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Foundation President's Report

By H. J. McLaurin

Detroit, Michigan

DURING the six years of its existence, the Michigan Chapter of the Arthritis and Rheumatism Foundation has fairly well consolidated its program of work and service in the State of Michigan. We think we have achieved the pattern for doing the most good—both long range and short range—with the money we receive.

While this seems a very simple matter, it has been anything but simple. How far should we go in research—the primary field of a health agency—how far should we go in direct service to patients in as many communities as possible—how much should be spent in education of arthritic persons and their families to provide home care—how much should we spend in pamphlets, motion pictures, talks at luncheon clubs and before nursing and medical associations? Certainly, the answers to these questions have not been simple.

I have been in a sufficient number of money-raising campaigns to know that money does not come easily—and consequently not only I, but our Chapter's Board of Directors, guard zealously the money entrusted to us each year.

Probably a thumb-nail picture of our activities can be given by indicating the percentage of our money that went to our four divisions of expenditure during the fiscal year ending April 30, 1954: 47 per cent went for grants-in-aid for research; 20 per cent went for direct aid in our home service program; 21 per cent went to our National Foundation; and 12 per cent went for medical and general administrative expenses. I might also say that our last year was one of expansion in several departments so that we actually spent more than we received. The difference was made up by a surplus we had on hand.

Since we think our activities have stabilized, to a great extent, we are now working on interesting more prominent people in our work; increasing and strengthening our Board of Directors; attempting to do a better public relations job in explaining what we are doing and why we are doing it as we do; doing a more extensive job providing talks over the radio and television and before luncheon clubs, and in showing motion pictures before nursing groups and at state and regional medical gatherings; providing exhibits wherever possible.

These activities are "intangibles" because we have had to do first things first—but "intangibles" often turn out to be extremely important—to us, to the Michigan United Fund (U. H. & W. F. of Mich.) and the United Foundation of Detroit which supply our funds.

To illustrate, we gave a luncheon early last year to General Kenney, President of the National Foundation, to which were invited a number of prominent Detroiters, including Mr. Keller, Chairman of the Board of Chrysler Corporation. On this occasion, we invited a number of prominent businessmen in Detroit to hear General Kenney's message.

At our recent annual meeting, we increased our Board of Directors from ten to fourteen, electing as new members, C. C. Smythe, Vice President of the Wabeek State Bank of Detroit; Frank J. Brady, President, Frank J. Brady Co., Detroit; Harry W. Betteridge, President, Betteridge & Co., Detroit, and Maurice J. Mayer, Community Relations Counsel, Michigan Chain Stores Association, Lansing. Mr. Smythe was also elected to the post of treasurer of the chapter.

The Michigan Chapter was also instrumental in obtaining from the U. S. Public Health Service an increase in its appropriation from $7,000,000 to $8,000,000 for research in metabolic diseases. Our own Senator Ferguson of Michigan is a member of this Senate committee.

Our National Foundation, as well as the Michigan Chapter, was represented at the budget hearings. It might be of interest to note here that the Arthritis and Rheumatism Foundation has been able to get this appropriation increased threefold in the last five years.

The Michigan Chapter believes it has taken very important steps forward in the hiring of a physical therapist. Miss Eleanor Parmelee is supervising our service to all confined arthritic persons through the Visiting Nurses Association of Detroit and in ten other cities as follows: Grand Rapids, Pontiac, Flint, Bay City, Lansing, Muskegon, Port Huron, Saginaw, Marquette and Ypsilanti. This work is carried on through the Visiting Nurses Association in the above cities.

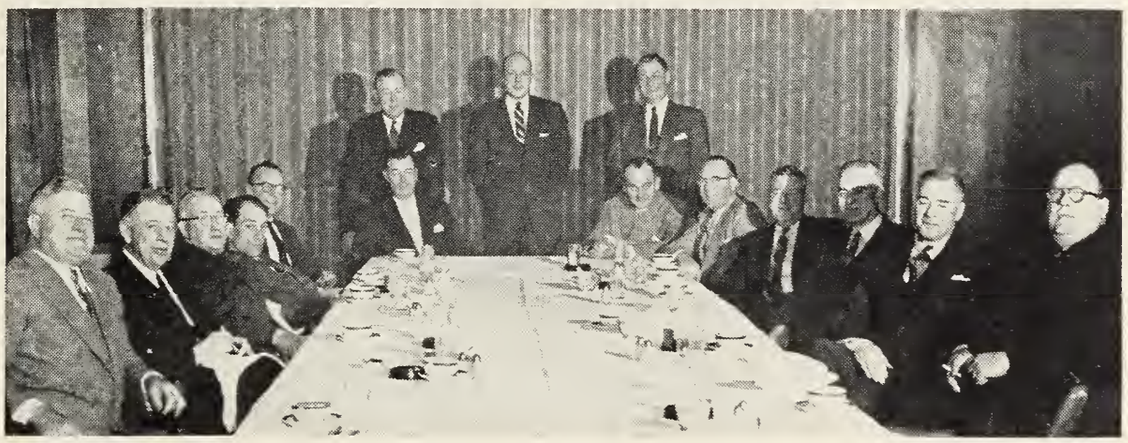
Mr. McLaurin is President of the Michigan Chapter, Arthritis and Rheumatism Foundation.

Therapy, as applied to arthritic persons, begins where other therapy stops. Visiting nurses are taught basic therapy first. It is at this point that Miss Parmelee teaches the application of therapy to arthritic patients. Families of confined arthritic persons, wherever possible, are taught the mechanics of this type of therapy so that they may take over as soon as possible. During the past year, the Michigan Chapter, throughout the entire state, provided approximately 14,000 of these treatments. This is six times as many treatments as was provided by any other of the thirty-six chapters of the Arthritis and Rheumatism Foundation.

However, we have run into a difficult problem in our treatments to home-bound arthritic patients. Since we have but approximately $40,000 to spend on this work annually and the calls for this service have been increasing so rapidly, the Board of Directors at the last annual meeting decided that in the future we limit our treatments to those arthritic persons who have possibilities of being rehabilitated.

While we disliked making such a decision—because other arthritic persons are in need of nursing type of treatments—we have to hold the line because of our financial limitations. After all, we are a health organization, and research must continue to be the cornerstone of our efforts.

As I have already stated, we are stepping up the educational end of our work—through more talks before medical, nursing and lay groups—through a greater showing of our motion pictures. Again this year an entire issue of THE JOURNAL of the Michigan State Medical Society is being devoted to articles on arthritis—which extends the use of our research findings through the medical profession—and to the State Medical Society we extend our sincere appreciation for this great help.



Luncheon given to General George C. Kenney, president of Arthritis and Rheumatism Foundation by President H. J. McLaurin of the Michigan Chapter in the Detroit Athletic Club in March, 1954, to introduce him to many Detroiters interested in arthritis work. General Kenney, at a dinner meeting later in the day at the Club, addressed the Board of Directors and Medical Advisory Committee members of the Michigan Chapter.

Seated (l. to r.) K. T. Keller, chairman of the Board, Chrysler Corporation; General Kenney; W. A. Moffett, V.P., Campbell-Ewald Co.; William Lutz, *Detroit News* reporter; Robert Hunter, National Automotive Fibres; Lyman Lewis; Dr. E. C. Vonder Heide; Robert Nulty; Dr. J. J. Lightbody; David Mitchelson, treasurer, Parke, Davis and Co.; James Beresford, Booth Newspapers; Sterling Eaton, publisher, *Plymouth Mail. Standing (l. to r.)* Mr. McLaurin, Richard Booth, campaign manager, Detroit United Foundation, and Louis Trombla.

Michigan could well be called the birthplace of the Arthritis and Rheumatism Foundation because of the activity in this work prior to its being put on a national scale. In recognition of this, the National Arthritis and Rheumatism Foundation has designated the Michigan Chapter as the Number 1 chapter of the United States. It is worthy of note that the Michigan Chapter provided more direct service to arthritic persons and more research into the cause and cures than any other chapter in the United States.

To the Michigan United Fund (U.H. & W.F. of Mich.), we extend grateful thanks for the money they grant to us yearly—and this goes, too, for the United Foundation of Detroit. The officers of the Michigan United Fund (U.H. & W.F. of Mich.) and the budget committee of this organization have both been most considerate, understanding and gracious in all our dealings with them.

To my fellow officers, and my colleagues on both the Board of Directors and the Medical Advisory Committee, I extend sincere thanks for their conscientious and willing help in all the chapter's undertakings.

Joint Fluid Changes in Rheumatoid Arthritis

By William D. Robinson, M.D., Ivan F. Duff, M.D., and Elizabeth M. Smith, A.B.
Ann Arbor, Michigan

PROFOUND alterations appear in both the cytologic and physical characteristics of the joint fluid in rheumatoid arthritis. In the first patient in whom we had the opportunity to observe the response of rheumatoid arthritis to ACTH or cortisone in September, 1949, rapid but temporary reversal of the joint fluid findings toward normal was noted. Such observations suggested a means of evaluating the effect of adrenocortical steroids injected directly into the joint cavity. The possibility that these steroids exerted their effects locally on connective tissue was first suggested to us by the work of Baker and Whitaker,[1] and studies on the effect of intra-articular injection of cortisone were initiated in March, 1950. When hydrocortisone became available, it was immediately evident that its local action was much more potent than that of cortisone. Not only were the changes produced in the joint fluid more consistent and of greater magnitude, but subjective and objective clinical improvement of several days duration was frequently produced. The studies here reported were carried out with the dual objectives of (1) elucidation of the mode of action of the adrenocortical steroids in rheumatoid arthritis, and (2) determination of the clinical usefulness of repeated intra-articular injections of hydrocortisone in the practical management of this disease.

Characteristics of Synovial Fluid

The most extensive study of synovial fluid, both from normal subjects and from patients with various types of joint disease, is that of Ropes and Bauer, recently reported in monograph form.[19] Studies on normal synovial fluid in man are based upon material obtained from the knee joint (often at the autopsy table) which, in a normal adult, seldom is in excess of 0.5 to 3 cubic centimeters. It characteristically is clear, pale yellow in color, and is free of visible particles; it is very viscous but does not clot. In contrast, in the exudative reaction which dominates joint pathology in rheumatoid arthritis the quantity of joint fluid is increased and it is often watery thin. Its color may vary through graduations of yellow to amber; it frequently is cloudy, opaque or turbid and often contains visible fibrin debris, or fibrin bodies; it often clots rapidly on standing.

There are relatively few cells in normal joint fluid; Ropes and Bauer reported an average of 63 nucleated cells per ml., with a range from 13 to 180. Most of the cells are mononuclear; polymorphonuclear cells averaged only 6.5 per cent in normal fluids, ranging from 0 to 25 per cent. In fluids from patients with rheumatoid arthritis, the total leukocyte count is increased, nearly always due to a great increase in polymorphonuclear cells. In 146 such fluids, Ropes and Bauer found the total leukocyte count to range from 450 to 66,000 per ml., with an average of 15,310; the average proportion of polymorphonuclear cells was 65 per cent, with a range from 0 to 96 per cent. In the present study, we have found the total white cell count in thirty-five untreated joints with active rheumatoid arthritis to range from 4,800 to 63,550 per ml., with an average of 21,730. Of these, polymorphonuclear cells have accounted for an average of 85 per cent, ranging from 29 to 91 per cent.

All available evidence supports the concept that joint fluid is a simple dialysate of blood plasma.[19] It differs from other plasma dialysates by virtue of containing an easily dissociable protein-polysaccharide complex known as mucin. This characteristic component accounts for the distinguishing properties of synovial fluid, and is presumably formed by the connective tissue surrounding the joint. Mucin is believed to be present in the synovialis and subsynovial tissue and is generally considered to be one of the constituents of the ground substance of connective tissue. The possible extent to which joint fluid mucin represents a conveniently accessible sample of connective tissue mucin is unknown.

The exact composition of mucin has not been determined. Little is known with respect to its protein components or the way in which the pro-

From the Rackham Arthritis Research Unit, University of Michigan, Ann Arbor. The Rackham Arthritis Research Unit is supported by a grant from the Horace H. Rackham School of Graduate Studies. The expenses of this study were defrayed in part by grants from the Michigan Chapter, Arthritis and Rheumatism Foundation, and from the United States Public Health Service, through the National Institute of Arthritis and Metabolic Diseases (A-24)

tein is bound to the polysaccharide. The polysaccharide component, however, has been identified as hyaluronic acid, a non-ramified polymer of D-glucuronic acid and N-acetyl-D-glucosamine in a tough fibrous grayish-yellow ropey clump which does not fragment on shaking, adheres firmly to a stirring rod and leaves a clear surrounding medium.[19]

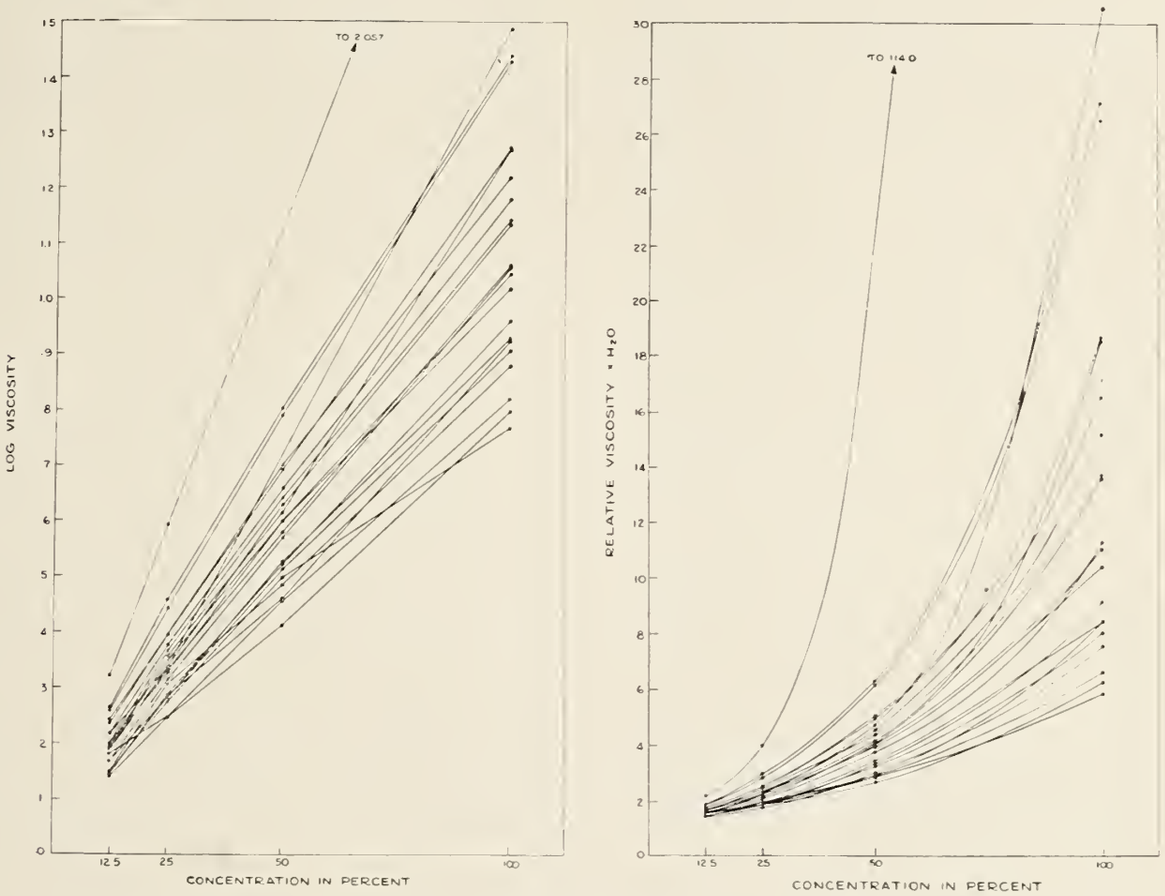


Fig. 1. The relative viscosity of twenty-one synovial fluids, noting changes produced by serial dilution with normal saline. Note that relationship of concentration to relative viscosity (right) is not linear. However, plotting the concentration against the logarithm of viscosity (left) results in a straight line. Similar curves are obtained with solutions of purified polysaccharide. It is evident that $\frac{\text{log. viscosity}}{\text{polysaccharide concentration}}$ will be constant for each fluid at any concentration.

equimolar amounts, connected through beta-glucosidic 1-3 linkages.[11,16] There is evidence that the long chain molecule of the polysaccharide component, hyaluronic acid, is responsible for certain physical properties of synovial fluid such as its viscosity.[18]

The viscosity of joint fluid is of especial interest and importance. It usually has been measured as relative viscosity in relation to the viscosity of water. In twenty-two normal fluids, Ropes and Bauer[19] found the relative viscosity at 38 degrees C. to average 235, with a range from 5.7 to 1160; in thirteen normal fluids, Ragan and Meyers[18] reported values ranging from 3 to 575. Another characteristic of synovial fluid dependent on mucin is the type of clot formed upon addition of dilute acetic acid. In normal fluids, this mucin clot is

Investigation of these properties in the synovial fluid of patients with rheumatoid arthritis indicates a significant alteration in the characteristics of the protein-polysaccharide complex in this disease. The mucin precipitated by addition of dilute acetic acid frequently takes the form of a soft friable mass in a cloudy solution or merely shreds of a flocculent precipitate. In our experience with this test in forty-nine fluids from patients with rheumatoid arthritis, the mucin clot formed was classified as good to excellent in twenty-seven (55 per cent), as fair to poor in eighteen (37 per cent), and no clot was produced in four (8 per cent). A distinct reduction in relative viscosity is also a feature of the joint exudate in rheumatoid arthritis; values approaching those of water are not uncommon. Ropes and Bauer[19] found an aver-

age viscosity at 38 degrees C. of 11, with values ranging from 2.7 to 59, in sixty-nine rheumatoid fluids; Ragan and Meyers[18] found the relative viscosity to be below 50 in thirty-seven of forty-one rheumatoid fluids tested. In our present study, the relative viscosity of thirty-five fluids at 20 degrees C. ranged from 5 to 48, with a median value of 10.6. Such a reduction in viscosity might be due to either a reduction in the concentration of hyaluronic acid in the joint fluid, or due to a decrease in the degree of polymerization of the hyaluronic acid. Ragan and Meyers[18] undertook to determine which of these changes was primarily responsible for the reduction of viscosity in rheumatoid arthritis. By serial dilutions of joint fluid and of isolated polysaccharides, they demonstrated a linear relationship between the concentration of polysaccharide and the logarithm of the viscosity obtained, a finding which we have confirmed (Fig. 1). Using a turbidometric method of determination, they found that the concentration of hyaluronic acid was not greatly altered in rheumatoid joint fluids as compared to normal fluids. The ratio of the logarithm of the viscosity divided by the concentration of polysaccharide was used as an index of the degree of polymerization of the hyaluronic acid; in forty-one fluids from patients with rheumatoid arthritis, this ratio was consistently lower than in thirteen normal fluids. They concluded that the joint fluid in rheumatoid arthritis contained an approximately normal concentration of poorly polymerized hyaluronic acid; since the volume of synovial fluid is greatly increased in this disease, the total amount of hyaluronic acid present is far in excess of that found in the normal joint.

Materials and Methods

The patients presented the characteristic features of rheumatoid arthritis—chronic, usually symmetrical, joint involvement with thickening of synovial tissues and synovial effusions, systemic manifestations of fatigability and weight loss, an elevated sedimentation rate and typical x-ray findings. Most of these patients have been under observation for months or years prior to and following the studies reported here. All patients were classified as to stage of disease progression and functional capacity according to the criteria adopted by the American Rheumatism Association (ARA).[20] In addition, we have attempted to grade the activity of the disease process arbitrarily as follows:

Grade III. Synovitis, with or without effusion, with definite increased heat, tender to touch and painful on motion (non-weight bearing); accompanied by fever or recent weight loss.

Grade II. Definite active synovitis, with or without effusion, with little or no increase in heat, tenderness or pain; no severe constitutional reaction.

Grade I. Low grade chronic synovitis, with or without effusion, lacking increased warmth and tenderness and with pain only at extremes of range of motion or upon weight bearing; no significant constitutional reaction.

Aseptic technique using rubber gloves was carefully followed in all aspirations from and injections into the joints. Careful preparation of the skin included shaving if necessary, preliminary scrubbing with phisoderm, followed by the application of tincture of iodine then washed away with 50 per cent propanol. Wrapping of the joint with an elastic bandage above and below the site of paracentesis was found to facilitate removal of fluid. Aspirations and intra-articular injections were preceded by procaine infiltration. Most of the fluids examined were obtained from the knees; the medial or lateral approach was used in aspirating. In most instances as much synovial fluid as could be conveniently obtained was removed prior to instillation of the steroid under investigation. Upon withdrawal of the needle, the site of puncture was covered with a sterile pledget of cotton covered with collodion.

Hormones employed included ACTH, cortisone acetate, a free alcohol preparation of cortisone, hydrocortisone acetate and a free alcohol preparation of hydrocortisone.* In two patients, control studies, utilizing isotonic solution of sodium chloride, were made in similarly anesthesized contralateral joints.

A minimum of 4 to 5 cc. of joint fluid are required to complete the examination as performed by us. If the Hess viscosemeter, or similar instrument, is available, a complete examination can be made upon smaller quantities of fluid. At the time of withdrawal the gross appearance of the fluid as to color, presence or absence of clots and probable degree of viscosity was noted; the total

*The ACTH used in this study was supplied to us by the Armour Laboratories, Chicago, Illinois. Generous supplies of the steroids investigated were made available to us by Merck and Co., Rahway, New Jersey, and the Upjohn Co., Kalamazoo, Michigan.

quantity obtained was measured. Cytological examinations were made without delay upon fluid which had been placed in containers with a small quantity of sodium oxalate to prevent clotting. Both red and white cell counts were made, using the same technique as for blood counts except that normal saline was used as diluting fluid; the usual diluents will cause precipitation of mucin in the pipettes and counting chambers. Films stained with Wright's stain were utilized for differential cell counts. No attempt was made, in counting the mononuclear cells, to differentiate between lymphocytes, monocytes, clasmatocytes and synovial cells. The remainder of the fluid was placed in containers with small amounts of sodium oxalate. The clear supernatant fluid obtained by centrifugation was utilized in all subsequent tests which included the formation of a mucin clot upon addition of acetic acid, determination of the relative viscosity (Ostwald viscosity pipette in constant temperature bath at 20 degrees C.) and of the polysaccharide concentration. It has been our practice to make these determinations the same day that the fluid was obtained. Re-centrifugation is desirable if studies are made on stored specimens.

The mucin clot test was carried out by the method of Ropes and Bauer,[19] with the addition of stirring 0.13 cc. of 7 N acetic acid into the joint fluid. An attempt was made to render this test semi-quantitative by testing serial dilutions of joint fluid with water from 1:5 through 1:40, but such dilutions yielded no additional information. The results reported in this paper were those obtained in the 1:5 dilution, graded as follows:

Excellent	(++++)	—large clot, clear background.
Good	(+++)	—smaller clot, clear background.
Fair	(++)	—small clot, cloudy background.
Poor	(+)	—any clot, flocculent precipitate.
Negative	(0)	—no clot on stirring rod.

The polysaccharide concentration was determined by the turbidometric method used by Ragan and Meyers,[17,18] with the following modifications: (1) formation of mucin clot was avoided, when necessary, by using a suitable dilution of joint fluid with citrate-phosphate buffer, rather than by using hyaluronidase; (2) horse serum albumin was used to develop turbidity, rather than horse serum; (3) the standard used was chondroitinsulfate, rather than hyaluronic acid: this was necessary because of our inability to obtain a purified preparation of hyaluronic acid with reproducible turbidogenic properties. Because we have used a different standard, our values for polysaccharide concentration, and indices calculated from these values, cannot be compared with those of other workers; however, the same standard was used throughout our study, so that the relative values are consistent throughout.

While the ratio of

$$\frac{\text{log. viscosity}}{\text{polysaccharide concentration}}$$

provides a first approximation of the degree of polymerization of the hyaluronic acid in synovial fluid, a really accurate polymerization index must await the development of more specific methods of determining the values which enter both the numerator and the denominator of the ratio. Current methods of determining viscosity are open to criticism, primarily because the rheologic characteristics of synovial fluid are those of a non-Newtonian fluid.[3] Both chemical and turbidometric methods of determining polysaccharide concentration are open to question on grounds of specificity and accuracy. For these reasons, quotation marks are used when the ratio

$$\frac{\text{log. viscosity}}{\text{polysaccharide concentration}}$$

is referred to as "polymerization index." In this report, this index is used primarily to indicate that observed changes in viscosity following hormone administration cannot be explained solely on the basis of change in polysaccharide concentration.

Correlation of Activity of the Rheumatoid Process with Joint Fluid Abnormalities

Upon the basis of extensive study of patients with rheumatoid arthritis, Ropes and Bauer[19] reported that, in general, variations in synovial fluid can be correlated grossly with clinical or laboratory evidence of the severity of the disease as a whole, with the degree of inflammation in the aspirated joint or the duration of the disease or the effusion. Usually, the fluids showing the least variation from normal were from early mild cases, although occasionally only slight abnormalities were found in effusions of many years duration. In the individual patient it was often difficult to correlate cytological findings with the sever-

TABLE I. COMPARISON OF CHARACTERISTICS OF SYNOVIAL FLUID REMOVED SIMULTANEOUSLY FROM TWO JOINTS IN UNTREATED ACTIVE RHEUMATOID ARTHRITIS

Patient	Joint Aspirated	Duration of Involvement	Activity Grade	Sed. Rate (Westergren) mm./hr.	Total WBC Count per ml.	Absolute PMN Count per ml.	Mucin Clot (1:5)	Relative Viscosity	Polysaccharide as Chondroitin-Sulphate mg./ml.	Log Viscosity / Polysacch. Conc.
D. K.	Rt. Knee	4 yrs.	II	24	8,300	830	+++	40.0	1.47	1.10
	Lt. Knee	4 yrs.	II		9,800	4,018	++	5.6	0.74	1.01
W. S.	Rt. Knee	8 yrs.	II	25	11,500	9,315	+++	8.9	0.80	1.19
	Lt. Knee	8 yrs.	II		10,500	8,715	++++	14.8	1.01	1.16
A. R.	Rt. Elbow	5 yrs.	II	27	53,000	48,321	+++	20.4	1.24	1.06
	Lt. Elbow	5 yrs.	II		51,700	44,462	++++	QNS	QNS	QNS
G. G.	Rt. Knee	6 yrs.	II	57	15,700	14,915	+	4.7	0.67	1.00
	Lt. Knee	6 yrs.	II		17,000	15,300	+++	7.8	0.85	1.05
A. C.	Rt. Knee	15 mos.	II	6	15,590	14,373	+++	5.4	0.64	1.15
	Lt. Knee	17 mos.	II		5,650	4,972	+++	6.0	0.64	1.21
C. T.	Rt. Knee	4 yrs.	III	*2.05	26,450	23,300	+	9.4	1.07	0.91
	Lt. Knee	4 yrs.	III		2,700	2,320	+	8.3	1.12	0.82
F. T.	Rt. Ankle	2 wks.	III	13	7,800	2,100	++++	37.6	1.23	1.29
	Rt. Wrist	2 wks.	III		6,550	4,524	++++	40.8	1.34	1.20
G. M.	Rt. Knee	9 yrs.	III	50	19,650	15,700	++	4.9	0.57	1.21
	Lt. Knee	10 yrs.	III		4,800	1,180	++++	20.0	0.94	1.39
F. K.	Rt. Knee	1 yr.	III	63	15,150	13,900	++	3.7	0.59	0.96
	Lt. Knee	1 yr.	III		12,800	7,950	0	3.6	0.66	0.83
F. J.	Rt. Knee	5-6 yrs.	III	84	40,550	30,818	++	11.6	1.04	1.02
	Lt. Knee	5-6 yrs.	III		21,150	11,421	++	16.4	1.00	1.21
J. H.	Rt. Knee	2 yrs.	III	*2.20	11,450	9,500	+	QNS	QNS	QNS
	Lt. Knee	2 yrs.	III		15,000	12,725	+++	5.6	QNS	QNS
B. G.	Rt. Knee	5 yrs.	III	29	26,500	22,500	++	QNS	QNS	QNS
	Lt. Knee	1 yr.	III		24,000	19,450	0	2.9	0.29	1.59
L. G.	Rt. Knee	3 yrs.	III	*1.80	9,450	7,844	++++	QNS	QNS	QNS
	Lt. Knee	3 yrs.	III		17,900	14,687	+++	QNS	QNS	QNS
E. G.	Lt. Knee	7 mos.	III	44	9,200	8,000	0	4.6	QNS	QNS
	Lt. Shoulder	7 mos.	III		19,950	18,200	+	4.8	QNS	QNS
K. E.	Rt. Knee	20 yrs.	IV	77	20,000	16,600	QNS	QNS	QNS	QNS
	Lt. Knee	2 yrs.	III		26,550	24,600	++	5.3	0.67	1.08
E. C.	Rt. Knee	10 yrs.	III	124	19,850	16,300	+++	10.6	0.74	1.37
	Lt. Knee	10 yrs.	IV		2,750	1,760	+++	8.6	0.62	1.49
A. B.	Rt. Knee	10 mos.	III	32	21,700	20,398	+++	6.5	0.85	0.95
	Lt. Knee	10 mos.	III		15,950	14,472	+++	6.5	0.85	0.95

*Rourke-Ernstein method, in m./min.

ity of the disease process in the joint. However, a low fluid glucose level, low viscosity, poor mucin precipitate and an electrophoretic distribution of fluid proteins similar to that in serum suggested severe rheumatoid arthritis. Our findings are in general agreement with these observations, although we have been unable in many instances to clearly correlate degree of severity of joint disease to changes in the synovial fluid. There was some correlation apparent between activity of the synovitis and the total cell count. Thus, of twenty-four specimens from joints classed as Grade II in activity, only six had a cell count in excess of 25,000; by contrast, in twenty-nine specimens from Grade III joints, fourteen had a cell count in excess of 25,000. There was no apparent correlation between the grade of activity and the viscosity and quality of mucin-clot formation. No correlation was usually apparent between the total cell count and viscosity of the specimen. In general, it appeared that if excellent mucin-clot formation was present, the absolute polymorphonuclear cell count tended to be under 10,000 (nine out of twelve specimens); there was no apparent correlation between the level of the cell count and less satisfactory mucin-clot formation. There appeared to be some correlation between the viscosity value of a joint fluid and the quality of mucin-clot formation. This is apparent in the scatter diagram (Fig. 2): of eight specimens with excellent mucin-clot formation, seven had a viscosity value of 20 or above, while four were over 30 units. Of sixteen specimens with good mucin-clot formation, ten had viscosity values of 10 or less while only three were over 20 units. Of eight specimens with fair mucin-clot formation, five had viscosity values over 5 units, only one had a value of 15 units. There was similar correlation between poor or negative mucin-clot formation and viscosity values: of nine such specimens, only three had viscosity values in excess of 5 units.

Synovial fluid specimens removed simultaneously from similarly affected but different joints often demonstrate strikingly parallel cytological and physical characteristics. These similarities in seventeen pairs of joints are apparent in Table I, from which it will also be seen that in individual cases close correlation may not be apparent between joint fluid characteristics and the clinical evaluation of severity of the disease process.

Joint Fluid Changes Following Systemic Administration of ACTH and Adrenocortical Steroids

The systemic administration of these hormones in large doses may be accompanied by visible reduction in the gross quantity of fluid contained in the inflamed rheumatoid joint. It may, indeed, become impossible upon repeated aspiration to obtain enough fluid for examination. The gross appearance of the fluid is often markedly altered; fibrin debris and clots, prominent in the control specimen, may disappear; the color may revert to normal. The viscosity of the specimen may have obviously increased, as evidenced by its increased stickiness and tendency to thread formation upon separation of the needle from the aspirating syringe. The magnitude and direction of the cytological changes seen with the short-term systemic administration of comparatively large doses of ACTH, hydrocortisone and cortisone are essentially the same with each agent. Striking reduction to normal or near normal may occur in the total number of cells and particularly in the proportion of polymorphonuclear cells. In general, the total number of mononuclear cells is not significantly or consistently altered. There is an associated improvement in quality of the protein-polysaccharide complex; the viscosity increases and the type of mucin clot improves. The actual concentration of the polysaccharide is not impressively altered; this results in an increase in the ratio of the $\frac{\text{log. viscosity}}{\text{polysaccharide concentration}}$

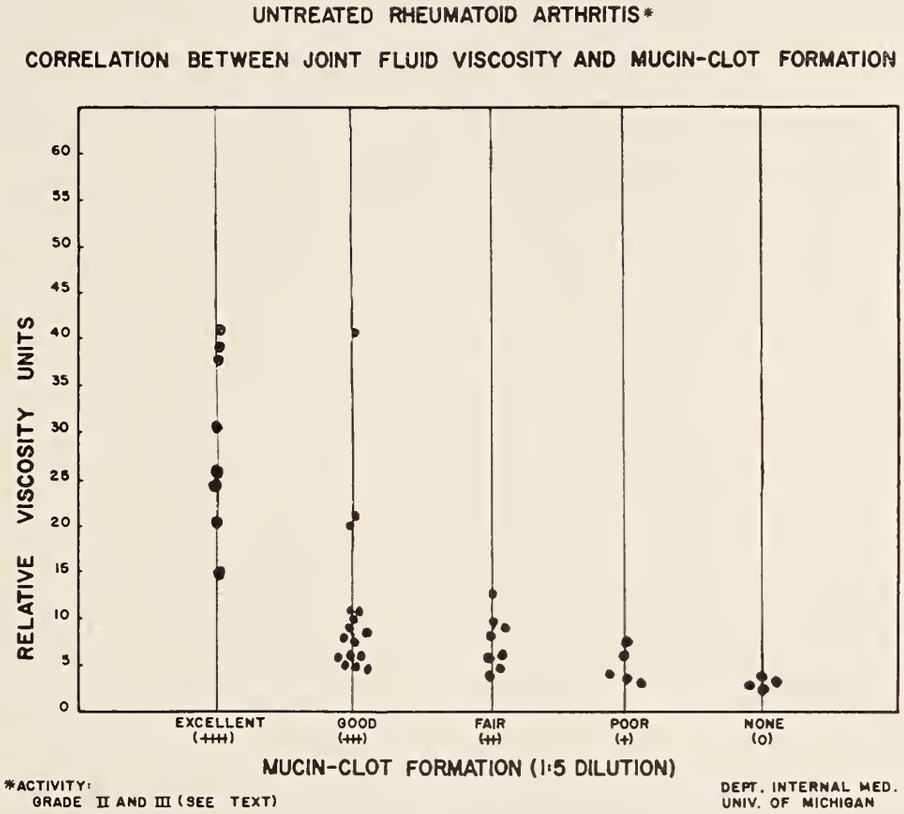


Fig. 2. Correlation between relative viscosity and mucin clot formation on addition of dilute acetic acid in synovial fluid from patients with rheumatoid arthritis prior to treatment.

Case 1. (Fig. 3).—L.G., a fifty-five-year-old man described the onset in 1947 of finger and shoulder pain. Because of progression into multiple joints, he was placed on gold salts which, within a short period, had to be discontinued because of stomatitis and dermatitis. Despite the employment of all known methods of treatment, his subsequent course was unfavorable and he became markedly incapacitated. He was admitted to the University Hospital on September 25, 1949, for a metabolic study with ACTH. At that time he was taking 8 to 10 aspirin tablets daily; crutches were required for stairs; at other times he used a wheelchair. Early morning and late afternoon stiffness was prominent. The fingers, wrists, elbows, shoulders, knees, and ankles were involved by an active synovitis characterized by swelling, tenderness, thickening of joint capsules and excessive effusions of joint fluid. The sedimentation rate (Rourke-Ernstein) was elevated to 1.5 mm./minute. X-ray examination demonstrated generalized osteoporosis with reduction of joint space and cystic de-

struction of subchondral bone. The fluid aspirated from the knees on September 30 contained numerous fibrin clots; the total cell count was 6,250, of which 4,875 were polymorphonuclear and 1,375 were mononuclear

Correlation of his clinical course with the sedimentation rate and joint fluid cytology is evident in Figure 3. At the height of his clinical response, on the fourth day of ACTH (October 7) the total cell count of the

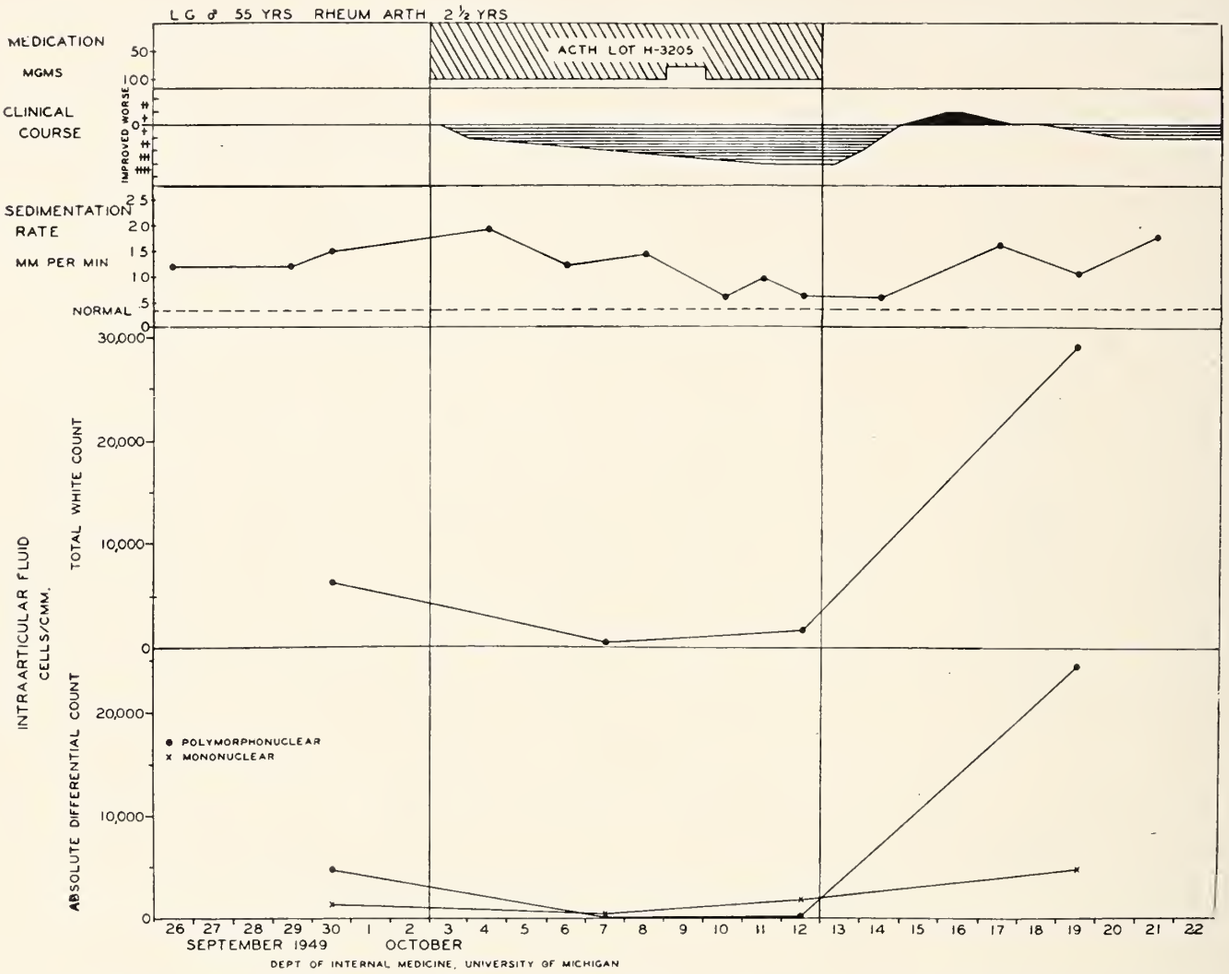


Fig. 3. Case 1, patient L. G. Changes in cytologic findings in synovial fluid during intramuscular administration of 100 mg. daily of ACTH to a patient with active rheumatoid arthritis, Stage III, Class IV; correlation with general clinical effect and sedimentation rate (Rourke-Ernstene).

cells. On the basis of the criteria of the ARA, progression was graded as Stage III and function as Class IV.

After one week in the hospital and five days of placebo medications, during which time his symptomatology did not particularly change, the patient received 100 mg. per day (25 mg. every six hours) of aqueous ACTH intramuscularly for a period of ten days. This was associated with dramatic improvement of appetite, lessening of fatigue, disappearance of stiffness and improved ability to move about. There was progressive decrease in joint fluid accumulation in the knees, which was believed to have become normal in amount on the eighth day of treatment. On October 13, 1949, placeboes were substituted for ACTH; within eight hours there began a dramatic relapse in all joints. Fluid reappeared in the right knee within four days, although it could not be obtained for examination until October 19.

fluid aspirated from the knee was only 375, of which 19 were polymorphonuclear cells while 356 were mononuclear cells; substantially the same findings were obtained upon aspiration on the ninth day of the study. The gross appearance of the joint fluid was not altered. Ten days after the last dose of ACTH, relapse in joint fluid cytology was well correlated with clinical relapse, since the total cell count had increased to 29,400 primarily due to an increase in inflammatory polymorphonuclear cells.

Within a period of four weeks the clinical status of the patient had reverted to essentially that existing prior to ACTH therapy. He was readmitted to the hospital on January 5, 1950, for parallel studies with cortisone acetate. This was given intramuscularly in a dosage of 200 mg. a day for ten days (January 12 to 22). Again, as is evident in Figure 4, dramatic improvement occurred coincident with the change from the placebo to cortisone; after discontinuation of the

hormone, relapse occurred and within a two or three weeks period the pretreatment status was recognizable.

The characteristics of the joint fluid aspirated during the placebo period of the study, on January 9, 1950, There was an acute synovitis present in the fingers, the wrists, elbows, knees, ankles and feet; excess fluid was especially apparent in the knees. X-rays of the affected joints demonstrated extensive juxta-articular osteoporosis

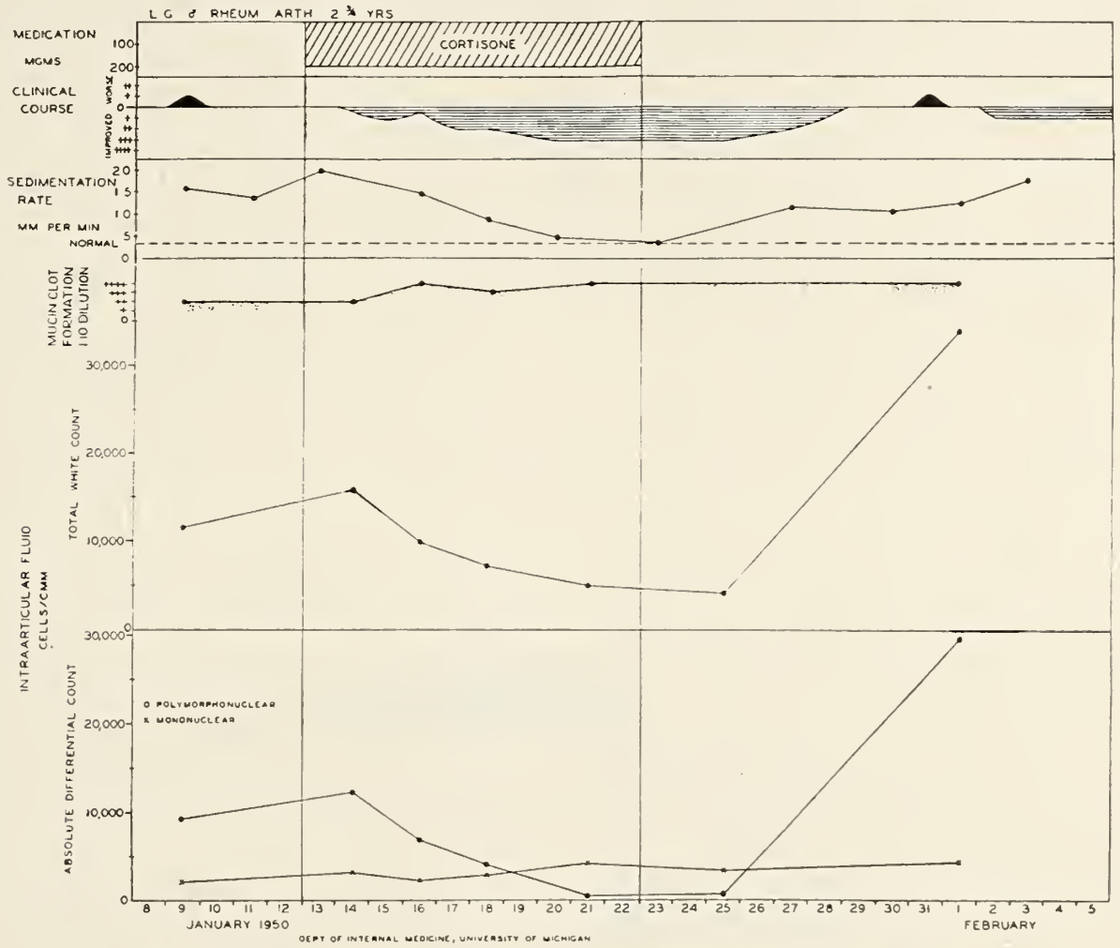


Fig. 4. Case 1, patient L. G. Changes in the findings in synovial fluid during intramuscular administration of 200 mg. cortisone acetate daily; correlation with general clinical effect and sedimentation rate (Rourke-Ernstene).

included a total white cell count of over 11,700 of which 8,890 were polymorphonuclear. The quality of mucin clot produced upon addition of dilute acetic acid was fair. In the period of systemic cortisone administration there was gradual but persistent fall in cell count to 4,250 on the sixth day, of which only 1,020 were inflammatory cells. This was accompanied by development of excellent mucin-clot formation. It is evident that these beneficial changes in joint fluid persisted for a few days after cortisone was discontinued. Within ten days, however, the cell count was again elevated (34,400) with the polymorphonuclear cell being again predominant. The excellent quality of mucin-clot formation was surprisingly well sustained.

Case 2. (Table II, Fig. 5)—L.R., a forty-eight-year-old Negro woman had been ill with rheumatoid arthritis for four years. In mid-December, 1952, subsequent to withdrawal of cortisone and ACTH, a severe relapse developed. When admitted to the University Hospital on December 24, 1952, she complained of pain, soreness and stiffness in multiple joints. It was very difficult for her to move about and take care of her personal needs. with cystic areas as well as moderate reduction of the joint spaces. The sedimentation rate (Westergren) was elevated to 135 mm. per hour. On the basis of the criteria of the ARA, progression was graded as Stage III and function as Class IV.

Beginning with the initial examination on January 9, 1953, serial aspirations were made from the left knee. The fluid was free of debris; the total polymorphonuclear cell count varied from 17,760 to almost 30,000. The relative viscosity was low, ranging from 5.59 to 18.9 units. Mucin-clot quality was good. Placeboes were given by mouth throughout this period without any obvious change in the sedimentation rate, symptomatic complaints or objective findings. During the course of her subsequent hospitalization she was allowed generous amounts of salicylates.

Through the period January 20 to 30, 1953, she received a free alcohol preparation of oral hydrocortisone in a dosage of 100 mg. per day; subsequent to this, gradual reduction in dosage was made to a level of 50 mg. per day. There was a dramatic response in her condition at the time the change was made from

TABLE II. EFFECT OF ORAL HYDROCORTISONE (FREE ALCOHOL) ON JOINT FLUID

Case 2. L. R. Reg. No. 742419 48-year old woman Rheumatoid arthritis 4 years' duration ARA Stage III, Class IV

Date	Dose Compound F mg./day	Sed. Rate (Westergren) mm./hr.	Total WBC Count per ml.	Absolute PMN Count per ml.	Mononuclear Cells per ml.	Relative Viscosity Units	Polysaccharide as Chondroitin-Sulphate mg./cc.	Log Viscosity Polysaccharide Conc.	Mucin Clot 1:5
			RIGHT KNEE						
1953									
Jan. 9	None	125	20,000	17,974	2,926	13.9	1.0	1.0	+++
13	None	126	21,100	18,568	2,532	10.6	1.0	1.0	+++
14	None	130	32,350	29,672	2,678	18.9	1.2	1.1	+++
16	None	127	21,900	20,586	1,332	7.9	0.9	1.0	+++
19	None	134	22,100	18,564	3,536	5.6	0.6	1.2	++
20	None	135	22,500	21,600	900	11.0	1.1	1.0	+++
21	100	Joint not aspirated							
22	100		18,500	17,760	740	29.2	1.2	1.3	+++
23	100	132	5,350	4,119	1,231	14.8	0.8	1.4	+++
26	100	65	3,750	525	3,225	65.0	1.2	1.5	++++
28	100	89	1,400	252	1,148	QNS	QNS	QNS	QNS
30	100	87	750	300	450	143.8	1.1	2.0	++++
31	90	Joint not aspirated							
Feb. 2	90	60	550	0	550	261.7	1.4	1.7	++++
3	80	Joint not aspirated							
4	80	63	850	0	850	157.6	QNS	QNS	QNS
6	70	Joint not aspirated							
9	60	34	4,150	332	3,818	80.2	1.1	1.7	+++
11	60	30	600	0	600	64.3	1.2	1.5	++++
12	50	Joint not aspirated							
16	50	41	7,700	3,619	4,081	52.8	1.3	1.3	++++
17	50	63	13,400	9,648	3,752	44.3	1.4	1.2	+++

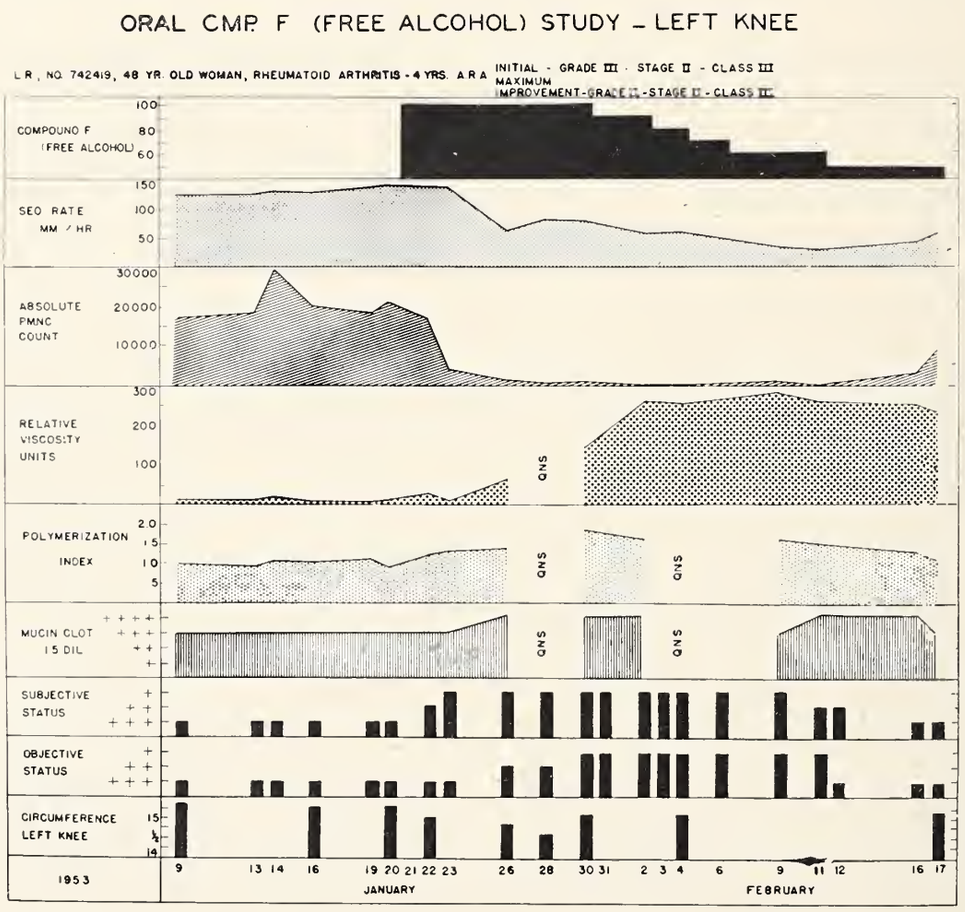


Fig. 5. Case 2, patient L. R. Changes in the joint fluid findings during oral administration of hydrocortisone (as free alcohol) to a forty-eight-year-old colored woman with active rheumatid arthritis, Stage II, Class III; correlation with clinical status and sedimentation rate (Westergren).

the placebo medication to 100 mg. of Compound F. At its height, improvement was graded as II; this was accompanied by a pronounced fall in sedimentation rate, which, however, never became normal. In association with these changes, there were marked alterations evident in the characteristics of the joint fluid. The absolute polymorphonuclear cell count dropped suddenly on the sixth day of treatment to 525; eventually it was reduced to zero. This was accompanied by marked improvement in relative viscosity and the de-

velopment of excellent mucin-clot formation. There was no convincing change in the mucopolysaccharide concentration; the "polymerization index," however, was almost doubled, coincident with disappearance of polymorphonuclear cells, rise in viscosity to over 150 units and development of excellent mucin-clot formation.

tenderness and pain on weight bearing; the range of motion was essentially normal. The Westergren sedimentation rate was elevated to 79 mm. per hour. X-ray examination of the knees was negative except for evidence of soft tissue swelling; the changes in the hands and feet consisted of cystic rarefaction and very slight

TABLE III. EFFECT OF ORAL HYDROCORTISONE (FREE ALCOHOL) AND CORTISONE ACETATE ON JOINT FLUID

Case 3. F. K. Reg. No. 718276 40-year old man Rheumatoid arthritis 2 years' duration ARA Stage II, Class III

Date	Joint	Total Cell Count per ml.	Absolute PMN per ml.	Absolute Mono. per ml.	Relative Viscosity Units	Relative Polysaccharide Concentration mg./cc.	Log Viscosity / Polysaccharide Conc.	Mucin Clot (1:5)
1951								
Dec. 19	Rt. Knee	15,150	13,938	1,212	3.71	0.59	0.96	++
Dec. 21	Hydrocort	isone starte	d, 50 mg. p	er day				
Dec. 31	Lt. Knee	12,800	7,936	4,864	3.57	0.66	0.83	0
1952								
Jan. 10	Rt. Knee	19,450	17,116	2,334	3.1	QNS	QNS	0
Jan. 15	Cortisone	acetate incr	eased to 10	0 mg. per d	ay			
Jan. 17	Rt. Knee	8,150	6,602	1,548	2.7	0.46	0.94	QNS

As was expected, partial clinical relapse became prominent when dosage of Compound F was reduced below 70 mg. per day. Deterioration in joint fluid characteristics was delayed somewhat longer. Ten days after the dose was reduced to 60 mg., the polymorphonuclear cell count of the synovial fluid had increased from zero to 3,618; this was accompanied by a fall in viscosity from 157 units to 52 units; the quality of the mucin clot remained excellent in this period.

While relatively large doses of these hormones produced prompt and convincing changes in the characteristics of the joint fluid, such alterations were not achieved with smaller dosages. In the above patient (Case 2), hydrocortisone in doses of 60 mg. per day was ineffective in sustaining the beneficial effect previously achieved by a dosage of 100 mg. per day. The failure of systemic cortisone and hydrocortisone in doses of 50 mg. daily to suppress the clinical manifestations in many patients with active rheumatoid arthritis is well recognized; in such a patient, the joint fluid changes were studied.

Case 3. (Table III)—F.K., a forty-year-old factory worker, described an episodic type of onset of rheumatoid arthritis which had remained confined to the hands for years until the knees became involved in 1949. Prior to admission to the University Hospital on December 13, 1951, he had been unable to work for one month because of spread of the disease into multiple joints. The general physical examination was negative with the exception of scatttered psoriatic lesions, generalized lymphoadenopathy and minimal splenomegaly. Multiple joints were involved by an active synovitis. Both knees were swollen by thickening of the periarticular structures and excess joint fluid; there was reduction of joint space. On December 19, 1951, 20 cc. of cloudy fluid, containing a moderate number of fibrin clots, were removed from the right knee; the cytological and physical characteristics of this specimen (Table III) were those expected in rheumatoid arthritis. According to the classification of the ARA, progression was placed in Stage II and function in Class III.

A short-term study was undertaken in this patient to contrast the effect of small doses of Compound F and cortisone. Accordingly, on December 21, 1951, he was started on 50 mg. (divided doses) of a free alcohol preparation of hydrocortisone; this was continued for twenty-one days; on January 10, 1952, he was changed to the same dosage of oral cortisone acetate, which was increased to 100 mg. per day on January 15. At the time of the last joint aspiration on January 17, he had been on cortisone for seven days. The effect of the steroids at the dosage level employed was disappointing in this patient. During the twenty-one days that the 50 mg. daily of the free alcohol preparation of hydrocortisone was administered and in the four day period that cortisone acetate was given in the same dosage, there was no evidence of symptomatic or objective benefit; the sedimentation rate was unchanged, the eosinophil count of the peripheral blood remained high. Definite symptomatic and objective evidence of response was evident within thirty-six hours after the dosage of cortisone acetate was increased to 100 mg. per day. Since aspiration of joint fluid was possible only at infrequent intervals during the study, it is possible that favorable but transient alteration in synovial fluid may have gone unrecognized. On those days, however, when fluid was removed, it is evident that the cytological and physical characteristics were unchanged at the end of eleven and twenty-one days, respectively, on 50 mg. daily doses of hydrocortisone. On the third day at the 100 mg. dosage there was some evidence of reduction in the total cell count; the physical features, however, remained unchanged.

Occasional observations on the joint fluid have been made on eight other patients receiving these hormones over long periods of time. The incidence and persistence of normal or nearly normal joint fluid characteristics in these patients has been disappointing and inconsistent. In two patients (L.K. and D.W.), treatment of one week's duration with a total of 560 mg. of ACTH in one and 850 mg. of oral cortisone acetate in another were associated with increasingly abnormal synovial fluid cytological features. In a third patient (E.G.), receiving 100 mg. daily doses of intramuscular cortisone acetate, very favorable changes were demonstrated in fluid removed from the left knee during first two weeks of treatment; these were not maintained, however, after seven months of treatment. In the fourth individual (E.W.) joint fluid was obtained from a knee, in which the rheumatoid process had become increasingly worse, despite three and one-half years of maintenance ACTH dosage; the cytological and physical features of this specimen were, in all respects, compatable with those observed in active and non-steroid treated disease. In a fifth patient (A.S.) receiving large doses of ACTH over a three months period, cytological improvement was well maintained; however the expected favorable alteration in physical characteristics did not develop despite the fact that the joint was clinically in a state of remission. In the sixth patient (R.E.), after thirty months of continuous oral cortisone acetate at a level of 62.5 mg. or more per day, moderate exacerbation of the rheumatoid process developed in the knees. Specimens from both joints had a relatively high cell count; the principal cell, however, was mononuclear; the physical features of the fluid were remarkably satisfactory. A similar situation was seen in the seventh patient (D.K.), who had received maintenance doses of oral cortisone for several months, despite which the knees became clinically more active. Fluid from both joints demonstrated a higher than normal cell count; in the specimen from the right knee, in which there were only mononuclear cells, the physical characteristics were very satisfactory; although the predominant cell in the fluid from the opposite knee was also mononuclear, this specimen had otherwise the characteristics of untreated rheumatoid arthritis. In the eighth patient (C.T.), despite the intra-articular injection of hydrocortisone acetate at intervals of four to seven days for a six months period, inconsistent synovial fluid changes had been achieved. With the addition of 100 mg. of oral cortisone to the regime, marked improvement in the cytological and physical characteristics was obtained over a period of two months. Despite continuation of intra-articular treatment, these changes were not maintained when the dosage of supplementary oral steroids was reduced to 40 mg. per day.

Joint Fluid Changes Observed in Association with Intra-Articular Steroids

The demonstration that local application of adrenocortical steroids was capable of suppressing wound healing[1] and inflammation[13] suggested that such local action might underly their effect on synovial inflammation in rheumatoid arthritis. We at first attempted to find a solvent for cortisone or cortisone acetate suitable for intra-articular injection, but were unable to inject ethanol or propylene glycol into rabbit joints without producing tissue damage. Therefore, studies were undertaken using the usual suspension available for intramuscular injection. In our experience, such preparations have been well tolerated when injected into the joint cavity.

Case 4. (Table IV)—J. H., a forty-one-year-old laborer, presented a two-year history of generalized joint pain and swelling which grew progressively worse, eventually requiring crutches for ambulation. Constitutional symptoms were marked. At the time of admission to the University Hospital on February 14, 1950, the wrists, and elbows were the site of active synovitis. Both knees were greatly swollen by excessive joint fluid and periarticular thickening; they were somewhat warm and very tender. Weight bearing and motion against resistance was very painful. There was a 20-degree flexion contracture with prominent quadriceps atrophy and weakness. X-ray examination of the knees demonstrated almost complete loss of cartilage and cystic osteoporosis. The sedimentation rate was elevated to 102 mm. per hour (Westergren); there was a moderate anemia. Eighteen and 45 cc. of cloudy fluid were removed from right and left knees, respectively. Increase in absolute polymorphonuclear cells largely accounted for the elevated total cell count; the quality of mucin-clot formation was inferior. On the basis of the criteria of the ARA, progression was regarded as Stage III and function as Class III. Throughout the period of hospitalization, the routine measures of conservative therapy, including adequate salicylate dosage and intensive physical therapy, were employed.

Following aspiration of fluid for examination 10 mg. of cortisone (free alcohol) in suspension was injected into the joint cavity of the left knee; this procedure was repeated daily for a total of eight injections. A convincing decrease in total cell count was not apparent

TABLE IV. EFFECT OF INTRA-ARTICULAR CORTISONE (FREE ALCOHOL) ON JOINT FLUID

Case 4. J. H. Reg. No. 676622 41-year old man Rheumatoid arthritis 2 years' duration ARA Stage III, Class III

Date 1950	Right Knee—Control							Left Knee						
	Days Since Last Injection	Dosage mg.	Total WBC per ml.	Absolute PMN per ml.	Absolute Mono-Nuclear per ml.	Mucin Clot 1:5	Relative Viscosity	Days Since Last Injection	Dosage mg.	Total WBC per ml.	Absolute PMN per ml.	Absolute Mono-Nuclear per ml.	Mucin Clot 1:5	Relative Viscosity
Mar. 1			16,800	14,952	1,848	++				14,250	11,400	2,850	+	
6			No aspiration						10 E	10,200	8,670	1,530	+	
7			No aspiration					1	10 E	12,200	9,516	2,684	+	
8			No aspiration					1	10 E	10,000	7,000	3,000	+	
9			No aspiration					1	10 E	10,200	7,140	3,060	0	
10			No aspiration					1	10 E	6,100	3,355	2,745	+	
11			No aspiration					1	10 E	6,450	4,063	2,387	++	
12			No aspiration					1	10 E	No aspiration				
13		Saline	22,500	19,575	2,925	+		1	10 E	11,350	5,788	5,562	+++	
14	1	Saline	25,750	23,175	2,575	+++		1	None	9,900	7,326	2,574	+++	
17	3	Saline	11,450	9,504	1,946	+	QNS	4	None	15,000	12,750	2,250	+++	5.6
22	5	Saline	9,700	7,663	2,037	+++	4.2	9	None	12,450	8,964	3,486	+	3.7
27	5	Saline	3,550	1,740	1,810	+++	2.7	14	25 E	12,650	10,625	2,025	+++	4.2
28			No aspiration					1	25 E	20,300	14,616	5,684	+	4.8
29			No aspiration					1	25 E	8,950	5,459	3,491	+++	5.1
30			No aspiration					1	25 E	7,850	3,689	4,161	+++	6.1
31	4	Saline	5,650	4,294	1,356	++	2.9	1	None	6,600	3,234	3,366	+++	7.8

until the fifth day of this procedure, after which the polymorphonuclear cells averaged about one-half of their base line value until twenty-four hours after the last injection. There was comparatively little change in the number of mononuclear cells. The quality of the mucin clot showed more gradual but more sustained improvement. At the end of the study at this dosage level, joint fluid from the control right knee showed no substantial change from the base line values.

During the next two weeks, normal saline was injected into the right knee on five occasions immediately following aspiration. The rather surprising fall in total cell count and polymorphonuclear cells seen was greater than we have observed in other control studies; it may be an effect of repeated aspirations, or an indication of the spontaneous variability of cell counts in the synovial fluid. There was also fluctuation in the mucin-clot test, but the relative viscosity remained low. During this period the left knee, previously injected with cortisone, showed gradual deterioration of joint fluid characteristics.

On March 27, two weeks after the last 10 mg. dose, cortisone injections into the left knee were resumed. For four consecutive days, 25 mg. of cortisone suspension was injected into the left knee; the opposite joint again served as a control. After two such injections there was a substantial drop in total nucleated cell count and in polymorphonuclear cells. The quality of the mucin clot appeared to improve, and the viscosity twenty-four hours after the last injection was slightly higher than any previous value.

During this study there was moderate symptomatic improvement in all joints and an increased sense of well being, commensurate with that frequently seen with hospitalization, nursing care, adequate dosage of salicylates and energetic physical therapy. There was no change in the sedimentation rate. Eosinophil counts were done on the peripheral blood prior to and four hours after the injections; no significant change followed either cortisone or saline injections.

Case 5. (Fig. 6, Table V)—H. W., a forty-four-year-old laborer, in 1938 developed generalized joint swelling and pain which continued with partial remissions and exacerbations characteristic of rheumatoid arthritis. For one month prior to admission to the University Hospital on December 14, 1950, crutches had been required because of pain and disability in the left knee. Objectively this joint was moderately swollen by excess fluid and thickening of the joint capsule; it was slightly tender but not excessively warm. Weight bearing and extension against resistance was moderately painful. Crepitus was present. There was moderate quadriceps weakness and a 15 degree flexion contracture. A low-grade chronic active synovitis was also present in the finger joints. The sedimentation rate was elevated to 48 mm. per hour (Westergren). X-ray examination of the left knee demonstrated marked decrease in joint space. On December 19, 1950, about 30 cc. of cloudy yellow fluid, containing a moderate quantity of fibrin debris, was removed from the left knee. The absolute polymorphonuclear cell count was 28,350; the relative viscosity was reduced to 7. By the criteria of the ARA, progression was graded as Stage III and function as Class III.

During his hospitalization, this patient received thirteen injections of 25 mg. each of cortisone acetate suspension into the left knee over a period of nineteen days. Fluid was aspirated for examination prior to each injection. Although there was a suggestive drop in polymorphonuclear cells after the first two injections, convincing decrease in the cell count did not appear until the seventh day, after a total of 150 mg. of cortisone acetate had been injected. Definite improvement in viscosity was not seen until the twelfth day, after a total of 225 mg. had been injected, and the highest viscosity value was obtained on the nineteenth day. The quality of the mucin clot also showed improvement. The improvement in cell count and viscosity were not maintained four days after the last injection. After discharge from the hospital on January 26, 1951, injections of cortisone acetate in doses of 50 to 62.5 mg. produced no significant changes in the joint fluid aspirated seven to eleven days later.

Throughout the study, the routine principles of con-

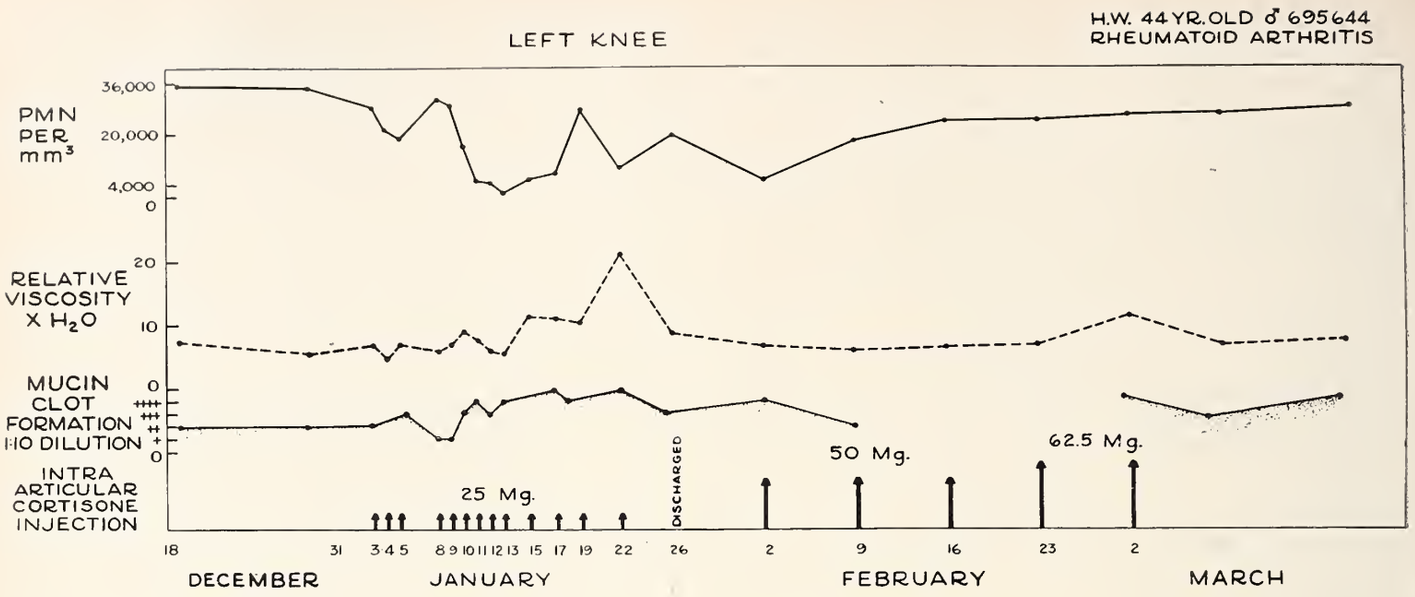


Fig. 6. Case 5, patient H. W. Changes in joint fluid following frequent injections of 25 mg. of cortisone acetate suspension into left knee of patient with active rheumatoid arthritis of twelve years' duration, Stage III, Class III. Note absence of significant changes with subsequent larger doses at weekly intervals.

TABLE V. EFFECT OF INTRA-ARTICULAR CORTISONE ACETATE ON JOINT FLUID

Case 5. H. W. Reg. No. 695644 44-year old man Rheumatoid arthritis 12 years' duration ARA Stage III, Class III

			LEFT KNEE				
Date	Day Since Last Injection	Dosage mg.	Total WBC per ml.	Absolute PMN per ml.	Absolute Mono-nuclear per ml.	Mucin Clot 1:5	Relative Viscosity
1950							
Dec. 19			35,000	28,350	6,650	+++	7.0
29			34,350	30,572	3,778	++	5.0
1951							
Jan. 3		25 E	28,400	26,412	1,988	++	6.5
4	1	25 E	21,400	19,046	2,354	QNS	4.3
5	1	25 E	18,550	15,582	2,968	+++	6.6
8	3	25 E	30,100	25,886	4,214	0	5.4
9	1	25 E	28,500	26,505	1,995	+	6.3
10	1	25 E	15,650	14,555	1,095	+++	8.7
11	1	25 E	4,750	3,563	1,187	+++	7.0
12	1	25 E	4,150	1,992	2,158	+++	5.6
13	1	25 E	1,650	Differential	not done	++++	5.1
15	2	25 E	5,400	2,160	3,240	QNS	11.0
17	2	25 E	7,000	5,250	1,750	++++	10.7
19	2	25 E	27,100	21,951	5,149	++++	10.0
22	3	25 E	9,150	5,216	3,934	++++	20.8
26	4	None	19,200	17,472	1,728	++	8.2
Feb. 2	11	50 E	4,150	3,818	332	++++	6.6
9	7	50 E	16,150	14,212	1,938	++	5.6
16	7	50 E	23,550	21,902	1,648	QNS	QNS
23	7	62.5 E	23,100	20,790	2,310	+++	6.3
Mar. 2	7	62.5 E	25,100	19,578	5,522	++++	10.8
9	7	None	25,150	20,623	4,527	+++	6.0
17	8	None	27,600	24,012	3,588	++++	6.8

servative therapy, including generous dosages of salicylates and appropriate measures of physical therapy were employed. There was moderate subjective and objective improvement in his general status. At no time, however, was there convincing objective evidence of improvement in the left knee beyond that expected from hospitalization and conservative treatment, and which could be specifically attributed to intra-articular cortisone. In particular, the striking symptomatic and objective improvement often associated with a single dose of intra-articular compound F was not observed. The study was finally terminated at the request of the patient.

When hydrocortisone became available, it was possible to make a critical comparison of the relative effectiveness of cortisone and hydrocortisone by intra-articular injection.

Case 6. (Fig. 7, Tables VI and VII)—E. C., a forty-four-year-old white laborer, had first developed symptoms of rheumatoid arthritis twenty years before. He had presented multiple joint involvement at the time of his first admission to University Hospital in 1941, and was seen on infrequent occasions for the next ten years.

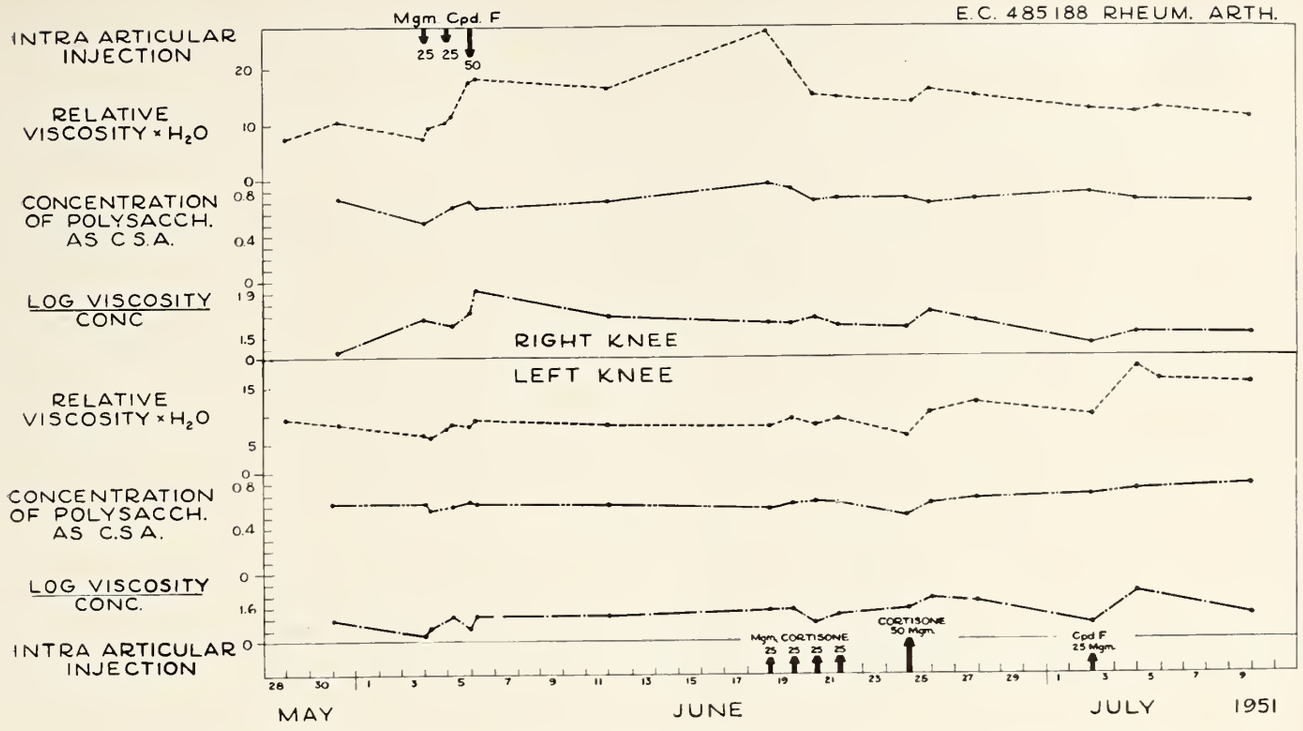


Fig. 7. Case 6, patient E. C. Comparative effects of hydrocortisone acetate (Cpd. F) and cortisone acetate (Cpd. E) on physical characteristics of the joint fluid in a forty-four-year-old man with rheumatoid arthritis of twenty years' duration, Stage III, Class III.

TABLE VI. COMPARATIVE EFFECT UPON JOINT FLUID OF HYDROCORTISONE ACETATE AND CORTISONE ACETATE

Case 6. E. C. Reg. No. 485188 44-year old man Rheumatoid arthritis ARA Stage III, Class III

Date 1951	Left Knee							Right Knee						
	Interval Since Last Injection	Comp. E and F mg.	Absolute PMN per ml.	Relative Viscosity	Polysaccharide as Chondroitin-Sulphate mg./ml.	Log. Viscosity / Polysacch. Conc.	Mucin Clot 1:5	Interval Since Last Injection	Comp. E and F mg.	Absolute PMN per ml.	Relative Viscosity	Polysaccharide as Chondroitin-Sulphate mg./ml.	Log. Viscosity / Polysacch. Conc.	Mucin Clot 1:5
May 29			2,800	9.4	QNS	QNS	++			13,573	7.6	QNS	QNS	++
31			1,760	8.6	.62	1.48	+++			16,277	10.6	.74	1.37	+++
June 4 10 AM			10,080	6.8	.61	1.35	++		25 F	6,063	8.3	.53	1.65	++
4 4 PM			6,232	6.8	.56	1.42	++	6 hrs.		3,686	9.3	QNS	QNS	++
5 10 AM			9,642	7.8	QNS	QNS	++	24 hrs.	25 F	5,428	10.5	QNS	QNS	+++
5 3 PM			6,142	8.1	.60	1.51	++	5 hrs.		5,106	12.6	.66	1.60	+++
6 10 AM			7,743	8.0	.64	1.41	++	24 hrs.	50 F	5,180	17.8	.72	1.72	+++
6 4 PM			3,395	8.8	.63	1.52	++	6 hrs.		1,622	15.5	.65	1.92	+++
12			7,087	7.2	.60	1.53	+++	6 days		6,012	16.0	.72	1.70	+++
19		25 E	4,293	8.3	.58	1.57	++	13 days		8,077	23.4	.87	1.64	+++
20	1 day	25 E	4,428	8.5	.62	1.57	+++	14 days		7,047	20.8	.82	1.62	+++
21	1 day	25 E	1,392	8.4	.63	1.46	++	15 days		2,092	15.0	.71	1.66	+++
22	1 day	25 E	3,696	9.2	.63	1.54	+++	16 days		8,502	14.8	.73	1.60	+++
25	3 days	50 E	6,460	6.6	.51	1.60	++	19 days		9,360	13.6	.72	1.58	+++
26	1 day		2,814	9.6	.61	1.68	+++	20 days		4,800	16.9	.70	1.73	+++
28	3 days		1,397	12.1	.65	1.65	+++	22 days		3,030	14.7	.72	1.63	+++
July 3	8 days	25 F	5,210	9.9	.70	1.50	++	27 days		6,582	12.1	.76	1.42	+++
July 5	2 days		2,380	17.0	.73	1.73	+++	29 days		4,544	11.9	.70	1.53	+++
6	3 days		3,036	16.3	QNS	QNS	+++	30 days		2,993	12.8	QNS	QNS	+++
10	7 days		9,504	15.0	.77	1.53	+++	34 days		4,959	10.7	.69	1.51	+++

His course had been one of gradual progressive incapacitation, with numerous exacerbations and partial remissions. A major exacerbation in the winter of 1950 had been controlled temporarily by systemic cortisone administration elsewhere, with partial relapse when it was discontinued. He was admitted to University Hospital on May 23, 1951, three months after discontinuation of cortisone. At this time, constitutional symptoms were prominent. Morning stiffness and weight bearing pain, especially in the knees, was very troublesome. Details of significance in the general physical examination included moderate hypertension, unilateral gynecomastia, and a palpable spleen. Multiple joints were involved by an active synovitis distinguished by excessive joint fluid, of which there was a tremendous collection in the knees; there was a bilateral flexion contracture. There was a moderate anemia; the sedimentation rate was elevated to 124 mm. per hour (Westergren). All joints, including

the knees, demonstrated considerable damage by x-ray, with resorption of sub-articular bone, narrowing of joint space and osteoporosis. On May 29, 1951, 50 cc. of straw-colored fluid, free of fibrin debris, were removed from each knee. Aside from the initial unusually low produced equivocal changes in the cell count and viscosity. However, the single 50 mg. was followed by a sharp fall in polymorphonuclear cells, a definite increase in viscosity and in the $\frac{\text{log. viscosity}}{\text{polysaccharide concentration}}$. These

TABLE VII. EFFECT OF INTRA-ARTICULAR HYDROCORTISONE ACETATE AND CORTISONE ACETATE UPON PERIPHERAL BLOOD EOSINOPHIL COUNT

Case 6. E. C. Reg. No. 485188 Rheumatoid arthritis

Date	Site of Injection	Hormone Injected	Peripheral Blood Eosinophil Count		Percent of Fall
			Control	4 Hour	
1951					
May 28	Intramuscular	0.3 cc. Epinephrine	288	113	60.7
29	Intravenous	50 mg. E I.V.	188	16	91.4
31	Intramuscular	25 mg. ACTH I.M.	309	150	51.4
June 1	Left knee	Aspiration only	200	250	
4	Right knee	25 mg. F	363	97	73.2
5	Right knee	25 mg. F	300	200	33⅓
6	Right knee	50 mg. F	493	225	54.4
19	Left knee	25 mg. E	231	178	22.9
20	Left knee	25 mg. E	203	122	39.8
22	Left knee	25 mg. E	403	259	35.7
25	Left knee	50 mg. E	303	150	50.4
July 3	Left knee	25 mg. F	259	72	72.2

absolute polymorphonuclear cell counts in specimens from the left knee, the expected characteristics of rheumatoid arthritis were apparent. On the basis of the criteria of the ARA, progression was regarded as Stage III and function as Class III.

From June 4 to 19, the effects of injection of hydrocortisone acetate in the right knee were evaluated, with the left knee serving as a control. Injections of 25 mg. were made on two successive days, and 50 mg. were injected on the third day; aspirations were made twice daily in an attempt to obtain information as to the rapidity with which joint fluid changes developed. Convincing change in the relative viscosity developed twenty-four hours after the second injection of hydrocortisone, associated with a definite increase in the $\frac{\text{log. viscosity}}{\text{polysaccharide concentration}}$ The highest value for this index was obtained six hours after the injection of 50 mg. of hydrocortisone, although the highest viscosity reading occurred on the thirteenth and fourteenth days after the last injection into the right knee. The viscosity values fell gradually to approach base-line levels in three to four weeks. The changes in cell count were due chiefly to changes in polymorphonuclear cells. The drop in these cells six hours after the 50 mg. injection on June 6 is probably significant; other fluctuations were not clearly greater than seen in the frequent aspirations from the uninjected left knee. It should be noted that while there was considerable fluctuation in the cytologic findings in the control knee, values for relative viscosity, polysaccharide concentration and the index derived from them remained relatively constant.

The effect of cortisone acetate was then determined in the left knee, which had previously served as a control. Beginning on June 19, 25 mg. of this steroid were injected daily for four days; then after a lapse of three days, a single dose of 50 mg. of cortisone acetate was injected. The serial injection at the lower dosage level changes were well sustained for three days after the 50 mg. injection, but had disappeared eight days after injection. It was then demonstrated that the left knee was capable of responding to hydrocortisone. A single injection of 25 mg. of hydrocortisone acetate was followed by the highest values for viscosity and "polymerization index" obtained from the left knee during the study. The improved viscosity was well maintained seven days later. No steroid was injected into the right knee after June 6. The joint fluid findings on the right showed gradual deterioration to approximate pre-treatment levels at the end of one month and reflected no fluctuations related to the injections of either steroid into the left knee.

In general, the absence of change in joint fluid characteristics in the uninjected contralateral joint is the best evidence that these steroids exert their effect locally. In addition, the drop in absolute eosinophil count in peripheral blood was determined to check the possibility of a temporary systemic effect of these steroids after intra-articular injection. In Table VII, it is evident from control observations that this patient responded normally to ACTH and intravenous cortisone, and that no eosinophil drop followed simple aspiration. After injection of hydrocortisone into the joint, the decline in eosinophils sometimes exceeded 50 per cent. Such an effect was not consistently obtained with hydrocortisone, and was less frequent after cortisone. Aside from this suggestion that at times steroids injected into an inflamed joint may be quite rapidly absorbed into the blood stream, we have seen no other evidence of a systemic effect from intra-articular steroids as we have used them. In this particular patient, there was never any convincing clinical improvement in either knee in excess of that which might have resulted from hospitalization, analgesics and physical therapy. The sedimentation rate was not significantly altered.

TABLE VIII. EFFECT UPON SYNOVIAL FLUID OF SERIAL INJECTIONS OF HYDROCORTISONE ACETATE IN 35 JOINTS IN 24 PATIENTS WITH RHEUMATOID ARTHRITIS

	Pre-treatment Characteristics			Characteristics Upon Achievement of Maximum Viscosity			Difference**
	Range	Median	Mean±S.E.*	Range	Median	Mean±S.E.*	S.E. of Difference
Total Nucleated Cells per ml.	4,800-63,500	16,800	21,700±2,566	250-73,400	4,750	10,160±2,608	3.07
Polymorphonuclear Cells per ml.	1,390-57,800	14,900	18,500±2,432	0-69,770	1,275	7,700±2,448	3.14
Mononuclear Cells per ml.	278- 9,730	2,900	3,260± 376	247-8,630	2,180	2,440± 282	1.72
Relative Viscosity at 20° C	4.7-47.6	10.7	14.8±1.73	11.0-2,228	71.8	204± 68	2.79
Polysaccharide Concentration as chondroitin sulfate, mgm per ml.	0.57-1.14	0.94	0.89±.026	0.61-1.78	1.12	1.17±.044	5.38
Log. Viscosity / Polysaccharide Concentration	0.79-1.62	1.21	1.21±.037	0.89-2.34	1.58	1.62±.060	5.85
Mucin-Clot Test Excellent to Good in 1:5 dilution	74 per cent			97 per cent			2.89

*S.E. equals standard error.
**Difference between means divided by standard error of difference

In a three-year period since December, 1950, we have had the opportunity to critically evaluate the effects of repeated injections of hydrocortisone into 105 joints of sixty patients with rheumatoid arthritis. In thirty-five of these joints in twenty-four patients, serial observations on the joint fluid were made over a period of one month or longer. In many of the remaining patients failure of joint fluid to reaccumulate after a few injections precluded such observations; in some, further aspirations and injections were not justified because of lack of clinical benefit from the procedure. In these patients, the dosage at each injection was 25 or 37.5 mg.; on a few occasions 50 mg. was injected. Most of the patients received hydrocortisone acetate, but in some patients hydrocortisone as the free alcohol was used. In our experience there has been no apparent difference in the effect of these chemical forms of hydrocortisone, either on the joint fluid characteristics or the clinical benefit obtained. The intervals between injections ranged from two to thirty-two days, but in twenty-seven of the thirty-five joints was not more than eight days.

The essential information obtained from analysis of the characteristics of the several hundred joint fluids examined is summarized in Table VIII. Here the findings before treatment in each joint fluid are contrasted with the findings at the time that the maximum relative viscosity was obtained in the fluid from that joint. The median time required to achieve this maximum viscosity was thirty days, after a median total dosage of 112 mg. of hydrocortisone. In thirteen joints (37 per cent) this maximum alteration in viscosity was achieved after one to three injections, a total dose of 25 to 75 mg. of the steroid. Prior to treatment, the relative viscosity ranged from 4.7 to 47.6, with a median value of 10.7. The maximum viscosities attained during treatment ranged from 11.0 to 2,228, with a median of 71.8. At this time, there was also usually a distinct decrease in total nucleated cell count and in the absolute and relative numbers of polymorphonuclear cells. Prior to treatment, the median polymorphonuclear count was 14,915 per ml., and accounted for 89 per cent of the total nucleated cells; at time of maximum viscosity, the median was 1,275, which was 27 per cent of the median total cell count. Despite the "skewed" distribution of values for polymorphonuclear cells and relative viscosity due to a few very high values, the differences observed from the pretreatment levels are statistically significant, the likelihood of their occurring by chance being in the range of 1 to 100. The difference in number of mononuclear cells is not statistically significant.

The improvement in viscosity was associated with some increase in concentration of synovial fluid polysaccharide, which averaged 0.89 mg. per ml. before treatment and 1.17 mg. per ml. at time of maximum viscosity. Evidence that the increase in polysaccharide concentration can account for only a fraction of the increase in viscosity is furnished by the ratio $\frac{\text{log. viscosity}}{\text{polysaccharide concentration}}$. This value ranged from 0.79 to 1.62 prior to treatment, with a median of 1.21; at the time of maximum viscosity, the values for this ratio ranged from 0.89 to 2.34, with a median of 1.58. These differences are highly significant when subjected to statistical analysis. The possibility that the improved viscosity reflects a change in the characteristics of the protein-polysaccharide complex of the synovial fluid is supported by change in the quality of the

TABLE IX. CLINICAL EFFECTIVENESS OF SERIAL INJECTIONS OF HYDROCORTISONE ACETATE IN 105 RHEUMATOID JOINTS (60 PATIENTS)

No Response	No Sustained or Advanced Response	Sustained, Worthwhile Benefit
19% (20)	31% (32)	50% (53)

Average Dose:.....25-37.5 mg.
Average Duration of Benefit:.....7-10 days
Maximum Duration of Benefit:.....4-6 weeks

mucin clot formed on addition of dilute acetic acid. Prior to treatment, good to excellent mucin-clot formation was present in 74 per cent of samples; at time of maximum viscosity, this figure had increased to 97 per cent.

Clinical Effectiveness of Intra-Articular Hydrocortisone

Our clinical experience with intra-articular hydrocortisone from December, 1950, to December 1, 1953, is based upon careful study of the effect produced by 1,020 injections into 105 joints of sixty patients with rheumatoid arthritis. In the course of these observations, more than 32 grams of the steroid has been administered into the joints. All patients were observed at regular intervals, with careful recording of subjective and objective manifestations of their disease. In almost every patient, the joints treated represented the site of persistent active synovitis which had not responded satisfactorily to other forms of treatment, or joints contributing the major functional disability in patients with active but not incapacitating disease elsewhere. The accepted measures of treatment of rheumatoid arthritis as indicated for each individual patient were not withheld; these included hospitalization when necessary, adequate doses of salicylates, appropriate measures of physical therapy, orthopedic measures when indicated, and, in some patients, injection of gold salts. Of the sixty patients, only six were receiving systemic ACTH or adrenocortical steroids at the time of intra-articular treatment. Of the 105 joints treated, eighty-six were knees (82 per cent); the remainder were seven elbows, seven ankles, three wrists and two hip joints. Thirty-two of the patients were men, twenty-eight were women.

Intra-articular injections did not produce favorable subjective or objective clinical effect in twenty joints (19 per cent) in fifteen patients (Table IX). Sixteen were knee joints; two elbows, one ankle and one hip were also treated without success. All of these were injected at least three times at intervals of three to four days; the average dose per injection was 34 mg. In these instances there was no response to the initial and subsequent injections. In this group, four patients refused to continue treatment because of associated pain or because of discouragement by the lack of appreciable improvement.

In thirty-two joints (31 per cent) and eighteen patients, some degree of initial clinical improvement was obtained, but with continued treatment there was not significant progressive improvement or the benefits achieved during the first few weeks of treatment could not be maintained. In these patients, injections were eventually discontinued because the benefits were not regarded as worthwhile by the patients, by the physician, or by both. The joints in this group included twenty-five knees, four ankles, two wrists, and one hip. Thirteen joints (all knees) were injected only a few times; the initial response in each instance was encouraging, but was not significantly increased by second or subsequent injections. Six of the seven patients involved refused further injections. The remaining nineteen joints in eleven patients were injected over longer periods of time. Ten knees and three smaller joints received ten or more injections, with an average dose of 36 mg. per injection. Initially these joints showed a moderate degree of subjective and objective improvement, but in a relatively short time they had reached a plateau beyond which it was impossible to advance them despite protracted treatment.

In the remaining fifty-three joints (50 per cent) in twenty-seven patients, worth-while and sustained benefit appears to have been achieved. In this group there were forty-five knees, five elbows, two ankles and one wrist. In four of the smaller joints, sustained subjective and objective improvement followed one or two injections, and repeated injections were not required. Intra-articular injections into ten knees was successfully combined with orthopedic and physical medicine measures to correct flexion contractures, an average of six injections being required in each knee at two to fourteen-day intervals. In these patients the noteworthy effect of the injections was relief of pain. After the flexion contractures were corrected, it was possible to discontinue the injections without relapse.

We have been able to maintain personal super-

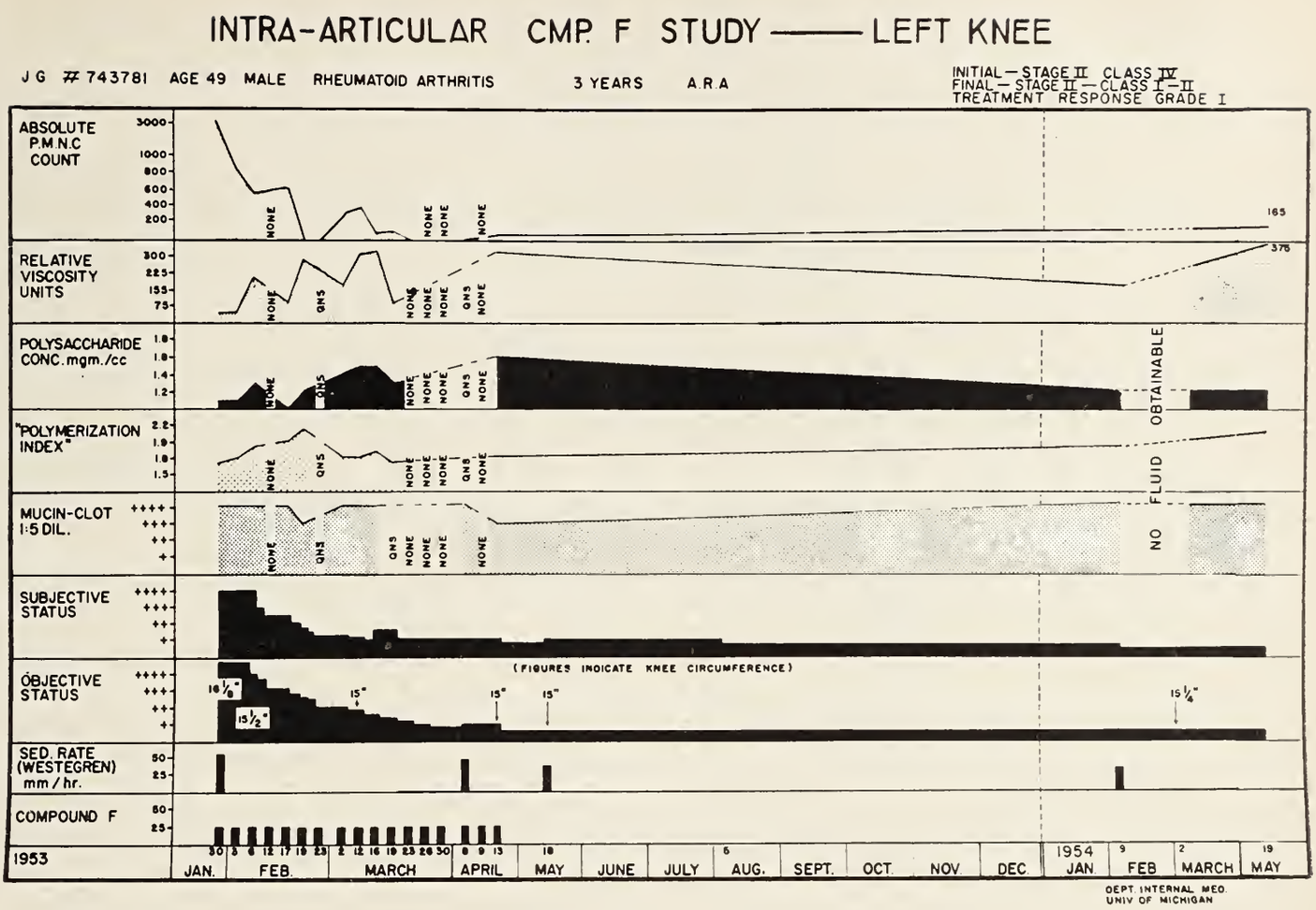


Fig. 8. Case 7, patient J. G. Joint fluid findings in left knee and clinical course over a seventeen-month period in a forty-nine-year-old man with rheumatoid arthritis of three years' duration, initially classed as Stage II, Class IV. After three months of repeated injections of hydrocortisone into the knees, combined with general medical treatment and intensive physical therapy, this patient experienced a clinical remission which has persisted to date. On February 9 and March 2, 1954, 50 mg. of hydrocortisone were injected into each knee: these were inadvertently omitted from the figure.

vision for many months over sixteen patients in this group, in whom repeated injections have been made into twenty-seven joints. In fifteen of these joints, all knees, clinical benefit has been prolonged for at least two weeks after each injection. The injections were originally given at intervals of two to ten days, but after three to thirteen such injections (average seven) over a period of fourteen to seventy-five days (average thirty-eight), sustained benefit was prolonged for from fourteen to fifty-two days. The average dose of hydrocortisone was 30 mg. per injection. The total duration of treatment has ranged from five to eighteen months, with an average number of twenty injections into each joint. It must be emphasized that these patients still require repeated injections to maintain their comfort. At some time during the period of study, three patients have required more frequent injections into five joints because of relapse. In the remaining ten joints, once sustained benefit was achieved it has been maintained by injections no more often than every fourteen days.

The remaining twelve joints were in seven patients who appear to have undergone a remission of their disease while receiving intra-articular hydrocortisone. The initial pattern of treatment and response was similar to the preceding group, but after an average of five months they experienced subsidence of subjective and objective evidence of their arthritis, not only in the injected joints, but also in other involved joints which had not been injected. The knees were the site of injection in all of this group. The clinical remissions have persisted from five to sixteen months after the cessation of intra-articular injections. In four of these patients remission coincided with gold therapy, which is being maintained. None were receiving systemic hormone therapy. As yet, none of these patients has relapsed.

TABLE X. INTRA-ARTICULAR HYDROCORTISONE ACETATE AS AN ADJUNCT TO REHABILITATION

Case 7. J. G. Reg. No. 743781 49-year old man Rheumatoid arthritis 3 years' duration ARA Stage II, Class IV

Date	Left Knee								Right Knee							
	Interval Since Last Injection	Comp. F mg.	Total WBC per ml.	Absolute PMN per ml.	Relative Viscosity	Polysaccharide as chondroitin-sulphate mg./cc.	Log. Viscosity / Polysacch. Conc.	Mucin Clot 1:5	Interval Since Last Injection	Comp. F mg.	Total WBC per ml.	Absolute PMN per ml.	Relative Viscosity	Polysaccharide as chondroitin-sulphate mg./cc.	Log. Viscosity / Polysacch. Conc.	Mucin Clot 1:5
1953																
Jan. 30		25	6,400	3,776	47.6	1.1	1.5	++++		25	6,550	4,454	41.3	1.1	1.5	++++
Feb. 3	4 days	25	2,700	810	51.1	1.1	1.6	++++	4 days	25	6,750	6,075	108.1	1.1	1.9	++++
6	3 days	25	2,150	599	193.3	1.3	1.8	++++	3 days	25	300	36	1,682.6	clots	clots	++++
12	6 days	25		No fluid obtained					6 days	25	1,300	0	252.0	1.2	2.0	++++
17	5 days	25	4,300	602	87.6	1.0	1.9	++++	5 days	25	700	420	436.3	1.5	1.5	++++
19	2 days	25	350	0	279.5	1.2	2.1	+++	2 days	25	1,000	0	QNS	QNS	QNS	++++
23	4 days	25	1,250	0	QNS	QNS	QNS	QNS	4 days	25	725	0	QNS	QNS	QNS	QNS
Mar. 2	7 days	25	1,450	275	170.5	1.4	1.6	++++	7 days	25	2,050	184	QNS	QNS	QNS	++++
12	10 days	25	1,300	390	303.0	1.5	1.6	++++	10 days	25	1,700	680	223.6	1.6	1.5	++++
16	6 days	25	450	72	312.7	1.5	1.7	++++	6 days	25	550	55	261.6	1.4	1.7	QNS
19	3 days	25	900	90	76.4	1.3	1.5	QNS	3 days	25	650	117	QNS	QNS	QNS	++++
23	4 days	25		No fluid obtained					4 days	25		No fluid obtained				
26	3 days	25		No fluid obtained					3 days	25	300	60	QNS	QNS	QNS	++++
30	4 days	25		No fluid obtained					4 days	25	100	0	QNS	QNS	QNS	QNS
Apr. 6	7 days	25	450	0	QNS	QNS	QNS	++++	7 days	25		No fluid obtained				
9	3 days	25		No fluid obtained					3 days	25	450	36	613.6	1.3	2.1	++++
13	4 days	25	850	68	323.2	1.6	1.6	+++	4 days	25	350	14	QNS	QNS	QNS	QNS
1954																
Feb. 9	10 months	50	700	100	158.0	1.2	1.8	++++	10 months	50	850	680	QNS	QNS	QNS	QNS
Mar. 2	3 weeks	50		No fluid obtained					3 weeks	50		No fluid obtained				
May 20	9 weeks	None	600	0	616.0	QNS	QNS	++++	9 weeks	None	500	165	375	1.2	2.1	++++

The value of intra-articular hydrocortisone as part of a well planned rehabilitation program is well illustrated by the course of one of the patients in this group.

Case, 7. (Fig. 8, Table X)—J. G., a forty-nine-year-old man, experienced the onset of rheumatoid arthritis in January, 1950, initially in the wrists but followed by rapid progression to involve both knees, feet, hands, and elbows. He had been unable to work for three years; a wheel-chair had been required for two years. At the time of admission to the University Hospital, January 23, 1953, although minimal synovial thickening and moderate deformity was present in other joints, the knees were involved by an active synovitis. Both knees were definitely swollen, with moderate thickening of the joint capsules and excess joint fluid; crepitus was absent. There was a flexion contracture of 10 degrees on the right and 20 degrees on the left. Quadriceps atrophy was marked while quadriceps strength was unable to support extension of the knees against gravity. He could pull himself to his feet but pain on attempted weight bearing was moderately severe. The sedimentation rate was elevated to 54 mm. per hour (Westergren). X-ray examination of the knees demonstrated marked spotty osteoporosis, in addition to severe reduction of the joint space, more marked on the left. The cytological and physical characteristics of the joint fluid, first aspirated on January 30, 1953, included a moderate increase in inflammatory cells, relatively good viscosity values (over 40 units) and excellent mucin-clot formation. By the criteria of the ARA, progression of the disease was placed in Stage II, function as Class IV.

Several factors were present in this patient to favor rehabilitation. The activity of disease process was moderate. Normal hip joints, preservation of function in the shoulders, feet, and ankles with a good hand grip allowed satisfactory use of crutches. His work record prior to the present illness had been excellent. And perhaps most important, he had an indomitable will to avail himself of all opportunities for rehabilitation. The intensive program undertaken drew heavily upon the available talents of this institution. Physical therapy was carried out daily, with attention directed at reducing the contractures of the knees and increasing quadriceps strength. During a period of hospitalization for one month, large doses of salicylates were administered. Intra-articular injections of hydrocortisone acetate were made into both knees, at a dosage level of 25 mg., at intervals of two to ten days over a period of two and one-half months. A total of 425 mg. was injected into each knee.

Changes in the synovial fluid characteristics were prompt and impressive. Suppression of polymorphonuclear cells and improvement in viscosity were seen after the first or second injection. A definite clinical response was not seen until after the fourth injection, and was evidenced by an increased range of motion and decrease in pain on attempted weight bearing. Thereafter the course was one of slow but progressive improvement. At the end of one month he was able to walk a few steps with the aid of braces and crutches. Objectively at this time the circumference of the knees had been reduced

by 1 inch, and quadriceps strength had increased to three plus (normal 4 plus). The flexion contracture of the right knee had been eliminated; on the left it persisted to an extent of 10 degrees. The improvement permitted his transfer to a convalescent unit, but intensive physical therapy and frequent injections of hydrocortisone acetate into the joints was continued.

Six weeks after beginning this program, the joint fluid characteristics had become virtually normal. The cytologic abnormalities were completely reversed, and consistently high values for viscosity were obtained. After this, it was frequently impossible to obtain sufficient fluid for complete examination.

After two months of this combined treatment, the patient was able to get about with the aid of two canes. The flexion contracture in each knee had been completely corrected, and quadriceps strength was normal. Objectively, the knees appeared normal except for slight synovial thickening. Pain on weight bearing was absent on the right, but persisted to a moderate degree on the left. After this the patient continued with physical therapy and salicylates at home.

The last intra-articular injections in this series were made on April 13, 1953. Six weeks later he reported progressive improvement in activity, although salicylates were required to control pain in the left knee on weight bearing. He was walking well with one cane. Objectively the improvement had been maintained in all respects. By August 5, 1953, he was walking without a cane and had been working full-time at a sedentary occupation. There was still some pain on weight bearing in the left knee controlled by frequent doses of aspirin. Objectively, there was no active synovitis in any joint, the knees showing only residual synovial thickening. The improvement, both in function and in objective findings has subsequently been well maintained. Ten months after the last injection of hydrocortisone, the essentially normal characteristics of the joint fluid were well maintained.

In February and March, 1954, 50 mg. of hydrocortisone acetate was injected on two occasions into each knee without convincing further effect. A flare-up in the right elbow in April, 1954, responded promptly to one injection of 50 mg. of the same preparation and did not require further injections.

Further details of our experience with the long-term use of intra-articular hydrocortisone are being reported elsewhere.[6a]

Discussion

The joint fluid alterations observed under the influence of adrenocortical steroids were reversal of abnormalities characteristic of rheumatoid arthritis, with changes in the direction toward a more normal pattern. It must be appreciated that as reversal toward normal became more nearly complete, inability to obtain sufficient fluid for study prevented observations when maximum effect of the steroids was most likely.

With systemic therapy, either resulting from adrenocortical stimulation or oral or intramuscular administration of cortisone or hydrocortisone, the joint fluid changes were evident only at high levels of dosage for short periods of time. Doses in the range considered safe for indefinite maintenance treatment did not result in convincing reversal of joint fluid abnormalities in those patients in whom excessive joint fluid persisted and could be obtained for study. With respect to dosage, there appeared to be definite association between the general clinical improvement and the degree of reversal of synovial fluid abnormalities.

Other workers have found inconsistent and variable changes in joint fluid characteristics following the intra-articular injection of cortisone or cortisone acetate.[2,6,7,8,14,21] Clinical effects also were unpredictable, and when they occurred were of short duration. In carefully controlled studies, Dixon and Bywaters[6] observed that at times intra-articular cortisone produced unequivocal improvement in the physical characteristics of synovial fluid such as we have observed. The impressive superiority of hydrocortisone and hydrocortisone acetate in its effect on both joint fluid abnormalities and clinical manifestations has been a uniform observation.[6,8,21] Recent studies on the fate of cortisone and hydrocortisone injected into the joint cavity suggests a difference in the way in which these two steroids are metabolized by the synovial cells.[9,15]

There is also general agreement that the results of intra-articular injection of these steroids can be disassociated from any resulting systemic effects. Evidence for this has been the fact that both clinical improvement and reversal of synovial fluid abnormalities are restricted to or predominate in the joints which were injected. The influence of these steroids presumably is exerted on the connective tissue cells which constitute the synovials.[12] Such an action at the connective tissue level may explain, at least in part, the favorable response in rheumatoid arthritis to systemically administered cortisone and hydrocortisone, and to adrenocortical stimulation.

Suppression of the inflammatory reaction in the synovial tissue by the local action of hydrocortisone is indicated by the drop in number of polymorphonuclear cells in the joint fluid, by the decrease in intra-articular temperature[10] and in tripeptidase activity[22] which have been observed to follow intra-articular injection, although decrease in the

inflammatory reaction has not always been observed in synovial biopsies.[2] The improvement in the physical characteristics of the joint fluid has usually been considered to result from suppression of synovial inflammation.[6,12] It is apparent that the increase in viscosity observed in these studies must reflect a change in the physical-chemical properties of the protein-polysaccharide component of synovial fluid. Assumption of such a change is required to explain the increase in ratio of $\frac{\text{log. viscosity}}{\text{polysaccharide concentration}}$ and the improvement in the quality of the mucin clot, observations which have been confirmed by others.[6,12] The findings are in accord with the explanation proposed by Ragan and co-workers[12,18] that in rheumatoid arthritis the connective tissue cells of the synovial membrane produce a poorly polymerized hyaluronic acid, and that the action of hydrocorticone permits them to produce a more normal (i.e., a more highly polymerized) product. Actually, present methods for determining the degree of polysaccharide polymerization are not sufficiently well developed to permit adequate testing of this hypothesis.

The fact that adrenocortical steroids can influence the characteristics of a connective tissue product has seemed important to us, even though the precise nature of the change induced cannot yet be accurately defined. It is possible that the changes observed are not entirely the result of suppression of the inflammatory process. The possibility of a more fundamental effect on connective tissue is suggested by the demonstration that the ground substance of connective tissue which is not inflamed can be altered by the local application of adrenocortical steroids.[5] Present knowledge regarding both the chemistry of connective tissue and the fundamental nature of the inflammatory process is insufficient to permit testing of this possibility.

Our experience with respect to the clinical usefulness of intra-articular hydrocortisone in the practical management of rheumatoid arthritis is in general agreement with the numerous reports of others.[2,4,8,14,21] Repeated injections, in some patients over long periods of time, have proved a worth-while addition to the treatment program in 50 per cent of selected patients in whom we have used them. Intra-articular therapy eliminates some of the dangers of long-term systemic administration of ACTH, cortisone or hydrocortisone because of the much smaller total dosage involved. It apparently does not interfere with spontaneous remissions, or with remissions which may be induced by other therapeutic agents.

The limitations of practical usefulness of intra-articular hydrocortisone stem from the facts that it is local therapy, and that the action is suppressive rather than curative. Because it is local treatment, its use is not practical in patients with extensive and multiple joint involvement. There is usually no direct effect on the constitutional manifestations of the disease. Control of activity of the rheumatoid process in treated joints can be associated with progression of the disease in other joints. In three of our patients, the maintenance of physical activity permitted by intra-articular injections of hydrocortisone into the knees for more than a year appears to have contributed to rapid progression of pre-existing disease in the hips.

In view of these limitations, it is obvious that intra-articular hydrocortisone should not be used as the sole therapeutic measure in rheumatoid arthritis. It represents an addition to and not a subsitute for sound management with emphasis on adequate rest, analgesics, maintenance of joint function and attention to the factors bearing on the general health of each individual patient. It has proved most useful in patients in whom one or a few large joints have been the major cause of disability. In such patients, suppression of the inflammatory activity by intra-articular hydrocortisone can often be combined with intensive physical therapy and orthopedic procedures. With such combined therapy, the improvement in functional ability is the most impressive result.

Summary

The abnormal characteristics of the synovial fluid in rheumatoid arthritis were found to revert toward a more normal pattern under the influence of adrenal-cortical steroids. With systemic therapy, by adrenocortical stimulation or oral or intramuscular administration of cortisone or hydrocortisone, these effects were most definite at high dosage levels. Following intra-articular cortisone, these effects were not obtained consistently and lasted only a few days. Following intra-articular hydrocortisone, such effects were more consistently obtained with small doses, and were better sustained. It appears that this effect of the steroids is exerted on the synovial membrane, and may account, at least in part, for the

favorable clinical effect of these agents in rheumatoid arthritis.

In addition to a decrease in polymorphonuclear cells, this reversion toward normal includes an increase in joint fluid viscosity attributable to an improvement in the physical chemical properties of the polysaccharide characteristic of synovial fluid, hyaluronic acid. Such changes indicate an effect of the steroids on connective tissue cells, where hyaluronic acid is presumably formed. These studies do not indicate whether the effect of the steroids at the connective tissue level is direct or secondary to suppression of inflammation.

Certain conclusions appear justified concerning the clinical usefulness of long-term intra-articular hydrocortisone acetate in rheumatoid arthritis. The procedure is not suitable as a single form of treatment in this disease; it must be combined with other accepted forms of therapy. When this was done in selected individuals with one or two joints which were refractory to other forms of treatment, intra-articular hydrocortisone injections were associated with sustained, worthwhile benefit in 50 per cent of the joints treated. When combined with special orthopedic and physical therapy measures, this procedure has proven a definite asset in the rehabilitation of selected individuals. In some joints worthwhile symptomatic and objective relief was eventually achieved for a period of four to six weeks before repeat injections were required. Upon discontinuing therapy, symptomatic benefit has persisted from four to eighteen months in 19 per cent of all treated joints. In the remaining instances the injections were eventually discontinued because of lack of benefit or inadequate response.

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Unusual Manifestations of Rheumatoid Nodules

Report of Three Cases

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ONE OF THE hallmarks of rheumatoid arthritis is the subcutaneous nodule. Such nodules are found in 5 to 25 per cent of cases of rheumatoid arthritis. They appear most commonly over the extensor surface of the forearm several inches below the elbow joint, but are also found over other bony prominences such as the patella, sacrum, spinous processes, and scapulae. Not uncommonly they are found along the tendons of the fingers and toes. They have been observed in the eye where they may perforate the sclera (sclero malacia perforans). Histologically similar lesions have been described in the pericardium, myocardium, in the rings and leaflets of the mitral and aortic valves. and in the splenic capsule, larynx, pleura and peritoneum.

Recently we have been privileged to observe three patients whose rheumatoid nodules present rather unusual features.

Case 1.—This thirty-six-year-old housewife* was in good health until the spring of 1952 when she slipped in the bathtub, "spraining" her right index finger. Within a week there appeared a puffiness of the flexor aspect of the remaining fingers of both hands. This was associated with stiffness so that she experienced difficulty in making a tight fist. At about this same time she became aware of an increase in palmar perspiration. Within a month of the onset there developed a mild migratory polyarthralgia involving the wrists, elbows, and shoulders but without objective manifestations. These symptoms persisted until November, 1952. At that time, while the patient was making a bed, there was an audible snap heard by the patient's husband across the room. The patient simultaneously experienced a sensation "like an electric shock" in the right thumb and wrist. She immediately noted that the right thumb was limp and that she was unable to voluntarily move it. Her physician was called and a splint was applied for a period of twenty-four hours. On its removal it was still not possible for the patient to extend the right thumb actively. Pain gradually disappeared over a period of several weeks and there was a more gradual partial return of strength and mobility.

About one week after this episode the patient became aware of a pea-sized nodule in the right mid-palm. Her physician felt that this was attached to the flexor tendon leading to the third digit. In May, 1953, there developed swelling, tenderness, and pain on motion in the right wrist. This represented the first appearance of objective joint manifestations. In June she began to have pain and tenderness in relation to the Achilles tendons. In August an oval, slightly elevated swelling, approximately 2 by 4 inches in size, appeared over the medial aspect of the lower third of the right leg.

When admitted to University Hospital on August 21, 1953, her complaints were of stiffness, which was generalized although most marked in the hands, pain on motion in the right wrist, and pain and tenderness in the Achilles tendons and across the metatarso-phalangeal joints of the toes. There was malaise and ease of fatigue, but other constitutional symptoms were absent.

Physical examination on admission revealed a well-developed, rather thin young white lady. Vital signs were normal as was examination of the eyes, ears, nose, pharynx, lungs, heart and abdomen. There were scattered telangiectases over the upper chest and erythema of the thenar and hypothenar eminences. Examination of the joints revealed moderate tenderness of the metatarso-phalangeal joints of all toes. There was slight swelling and tenderness in the proximal interphalangeal joints of the second and third fingers of both hands. A flexion contracture of about 15 degrees was present in the right third proximal interphalangeal joint. The metacarpo-phalangeal joints of both second and third fingers likewise showed slight swelling, tenderness, and pain on motion. The right wrist was moderately swollen and painful on motion, and was limited to ten degrees of palmar flexion and dorsiflexion. Over the medial aspect of the lower third of the right leg there was a poorly demarcated area of swelling roughly 4 by 8 cm. in size. Examination of the right thumb revealed inability to extend the distal phalanx actively, although there was a full range of passive motion. The usual subcutaneous bowstring formed by the extensor pollicis longus tendon on full extension of the thumb was absent. The tendon could be palpated distal to the wrist but was thought to be unattached.

Laboratory studies were as follows: urine examination normal, hemoglobin 12.2 gm. or 78 per cent, hematocrit 40, white blood count 7,700 with a normal differential. Sedimentation rate (Westergren) was 27 mm. per hour, corrected. L. E. cells could not be demonstrated. Serum Kahn reaction was negative. Basal metabolic rate was plus 9 per cent. Total serum cholesterol was 113 mg. per cent. Bromsulfalein test revealed 0.8 per cent retention after forty-five minutes. Other liver function

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During the period of these observations, Dr. Mikkelsen was a trainee of the National Institute of Arthritis and Metabolic Diseases.

*This patient was seen through the courtesy of Dr. Gordon Balyeat of Grand Rapids, Michigan.

tests were normal except for a 4-plus cephalin flocculation at twenty-four and forty-eight hours. X-ray examination revealed only juxta-articular osteoporosis of fingers and wrists.

On admission the patient was started on aspirin 0.65 gm. four times daily. This produced moderate relief of her tenderness and aching pain. When she awakened on the morning of August 28, the patient noted that she could not flex the left second finger at the proximal interphalangeal joint although it could be passively flexed without pain. She was seen by an orthopedic consultant who felt that the flexor digitorum profundus tendon had ruptured. Surgical repair, undertaken on September 3 by Dr. Carl Badgley, was technically difficult and it was recognized that prognosis for return of function should be guarded. At the time of the operation a section of the tendon approximately 1 cm. in length was found to be friable and gray in color, and was excised. Histologic examination of this material revealed small rheumatoid nodules in and adjacent to tendinous connective tissue. Fibrous bits from the operative site were reported as showing fibrinoid necrosis with palisading epithelioid cells at the periphery and an outer zone of lymphocytes and histiocytes (Fig. 1). A lymphocytic infiltration was present around one small blood vessel. A biopsy of the swelling on the right lower leg revealed an obliterating arteritis of small vessels in the adipose tissue and fascia. These changes were considered typical of active chronic rheumatoid arthritis.

The patient was discharged from the hospital September 8 on a conservative program of aspirin 0.65 gm. four times daily, paraffin baths to the hands, and exercise. On September 15 cortisone, 50 mg. daily, was started. There was prompt relief of aching and stiffness, and the swelling in the fingers and right wrist subsided. Examination on October 14 revealed approximately 50 per cent function of the superficial tendon without definite evidence of function of the deep tendon. On December 8 the patient was switched to hydrocortisone, 40 mg. daily. After one week dosage was decreased to 20 mg. per day where it has been maintained. Her general course has been excellent, and to date no new nodules or evidence of tendon involvement has appeared.



Fig. 1. Case 1. Tissue removed from site of tendon rupture at time of surgical repair. At the bottom is tendinous connective tissue and peritenon with a moderate degree of lymphocytic infiltration. Above is a nodule arising from peritenon demonstrating the typical histologic structure of a rheumatoid nodule. There is a central basophilic area of fibrinoid necrosis surrounded by a lighter zone of radially arranged epithelioid cells and an outer capsule of fibrous connective tissue containing lymphocytes and histiocytes.

Case 2.—This sixty-three-year-old housewife had a history of gradually progressive rheumatoid arthritis of twenty-one years duration. In spite of multiple joint deformities she had been able to care for herself until three months before her admission to University Hospital on August 11, 1953. From August, 1952, until three weeks before admission she had received cortisone therapy; it was not possible to obtain details regarding dosage or the manner in which it was withdrawn.

Physical examination revealed a pale, chronically ill elderly female. The temperature was 97.8 degrees and blood pressure 90/70. Examination of the eyes revealed severe scleromalacia perforans bilaterally with a corneal ulcer approximately 1 mm. in diameter in the right eye. In the right eye superiorly there was an actual protrusion of the choroid. The upper jaw was edentulous. Examination of the lungs was normal. The left border of cardiac dullness was outside the mid-clavicular line. Cardiac rhythm was grossly irregular and a pulse deficit was readily demonstrable. No murmurs were heard. Abdominal examination was not remarkable. There was a necrotic ulcerating decubitus measuring 8 by 8 cm. over the sacrum. The hands showed typical rheumatoid deformity with extension at the proximal interphalangeal joints and flexion and ulnar deviation at the metacarpophalangeal joints. There was evidence of an active synovitis involving the ankles, knees and elbows. Subcutaneous rheumatoid nodules were present over the flexor surfaces of both forearms just distal to the elbow and over the extensor surfaces of the legs just below the knee joints. There was a pitting edema of the lower extremities and posterior trunk. Vibratory sense was impaired in the lower extremities.

Laboratory studies revealed a hemoglobin of 9.7 gm., red cells 4,050,000, white cells 10,000 with 94 per cent polymorphonuclear cells and 6 per cent lymphocytes. Urinary specific gravity was 1.019, albumin and sugar were absent, microscopic examination revealed 3 to 4 red cells per high power field and an occasional granular cast. Total serum proteins were 5 per cent with al-

bumin 2.7 per cent and globulin 2.3 per cent. Chest x-ray confirmed the cardiomegaly and revealed three spherical pulmonary lesions in the right lung. The uppermost of these appeared to be excavated and one of the remaining lesions was thought to show definite



Fig. 2. Case 2. Dura mater, showing central fibrinoid necrosis, surroundings palisade of epithelioid cells and outer zone of fibrous connective tissue containing polymorphonuclear leukocytes, lymphocytes, histiocytes, plasma cells, and giant cells of the Touton type. The dura grossly was studded with nodules averaging 2 mm. in diameter, but in areas forming coalescent plaques as large as 5 cm. in diameter.

cavitation. There was roentgen evidence of advanced destructive changes, characteristic of rheumatoid arthritis, involving all of the peripheral joints.

The patient's hospital course was steadily downhill. She was digitalized and given ammonium chloride and mercurial diuretics. Culture of material from the decubital ulcer revealed E. coli, B. alkaligenes, coagulase-positive staphylococci, gamma-hemalytic streptococci, and clostridium species; tubercle bacilli could not be demonstrated. These organisms were found to be relatively sensitive to terramycin, and on August 15 terramycin, 500 mg. every six hours, was started. The patient was placed on a Stryker frame and turned frequently. Alternate moist saline and dry dressings were applied to the ulcer. On August 17 a friction rub was heard along the left sternal border. An electrocardiogram revealed very small QRS complexes and flat T waves in all limb leads. A pericardial effusion was suspected and on August 18 75 cc. of a serosanguinous fluid was aspirated. On August 19 an additional 250 cc. of similar fluid was obtained, which proved to be sterile on bacteriologic examination, including culture for tubercle bacilli. The blood pressure remained low and the possibility of adrenal insufficiency was suspected. On August 19 50 cc. of whole adrenal cortical extract was administered intravenously without apparent benefit. Respiration ceased the following morning.

The gross and microscopic post-mortem observations on this patient are the subject of a separate report by Dr. J. A. Maher,[10] department of pathology, to whom we are indebted for the following descriptions and illustrations. On examination of the cranial contents, firm white nodules each measuring about 2 mm. in diameter were present in the dura. The distribution was generalized and did not appear to have a relationship to blood vessels. In some areas the nodules coalesced to form granulomatous plaques as large as 5 cm. in diameter. No lesions were found in the brain.

Fibrinous pericarditis with 100 cc. of cloudy pericardial fluid was found. The heart weighed 280 grams. The base of the aortic valve cusps was thickened, and brown atrophy of the myocardium was noted. There was also fibrinous pleuritis. Parenchymal pulmonary nodules approximately 1 cm. in diameter were present and some of them had necrotic centers. Similar foci were noted in the bronchial lymph nodes. Nodules were present in the capsule but not in the parenchyma of the spleen. No lesions were noted in the liver, pancreas, or gastrointestinal tract. Additional findings included gall stones, arteriosclerotic nephropathy with papillary necrosis, depletion of adrenal cortical lipids, and polypoid hyperplasia of the endometrium. Tissue was obtained from the synovia of the right knee joint and from the subcutaneous nodule over the left ulna. Permission to remove the eyes was granted.

On microscopic examination, the dural rheumatoid nodules showed central fibrinoid necrosis surrounded by a zone of palisading epithelioid cells (Fig. 2). Peripheral to the epithelioid zone there was a third zone composed of polymorphonuclear leukocytes, lymphocytes, plasma cells, histiocytes, and giant cells of the Touton type. In some areas the necrotic foci became confluent. No inflammatory process was present in the inner meninges or brain. In the heart, rheumatoid nodules were found in the annulus fibrosa near the base of the valves, adjacent to a coronary artery, and in the thickened pericardium. These were similar in all respects to the dural nodules (Fig. 3). Fibrinous pericarditis, moderate coronary atherosclerosis, a marked increase in the Abnutzungspigment at the poles of the myocardial nuclei and degenerative fatty infiltration were also present.

In the lungs two large nodules, which were considered rheumatoid, were present in addition to an area of old caseation necrosis which appeared to have eroded into a small bronchus. However, no typical active tubercles were noted and acid-fast stains revealed no tubercle bacilli. Hyalinized areas of anthracosilicosis and necrotic rheumatoid nodules were found in the bronchial lymph nodes. Rheumatoid nodules were present in the thickened splenic capsule. No hepatic parenchymal nodules were present. The subcutaneous nodule from the left ulna consisted chiefly of hyalinized scar tissue with giant cells, and areas of necrosis with cholesterol clefts. This presumably was originally a subcutaneous rheumatoid nodule; such cholesterol clefts have been noted in previous reports.[6]

The entire sclera of both eyes was the site of extensive involvement with typical rheumatoid nodules which frequently became confluent (Fig. 4). The inflammatory process did not involve the cornea or uveal tract but began abruptly at the limbus and extended to the margins of the optic nerve. A rheumatoid nodule was also present in a small nerve near the optic nerve, probably a ciliary nerve, and a nodule was present in an extraocular muscle.

Synovial tissue from the knee joint consisted of hyalinized scar tissue covering the articular surface,

containing a few epithelioid and giant cells with scattered wandering cells.

Case 3.—This fifty-one-year-old welder was in good health until 1942 when he developed episodic migratory polyarthritis. This was characterised by the sudden appearance of severe pain and inflammation in one or several joints with complete return to normal in a period of two to five days. This course, which was considered compatible with gout, continued until July, 1948, when the ankles, wrists and finger joints became swollen, red, warm and tender. Involvement of these joints persisted and the patient was seen at University Hospital in August, 1948. Physical examination was not remarkable except for the presence of active synovitis in the proximal interphalangeal and metacarpophalangeal joints, wrists and ankles. Rheumatoid nodules were present on the right tibia, lower sternum and in both olecranon bursae. Serum urate level was 2.9 mg. per cent. Sedimentation rate (Westergren) was 32 mm. per hour, corrected. X-ray examination revealed early rheumatoid changes in hands and feet. Therapy consisted of salicylates, physiotherapy and increased rest. Gold was administered from October, 1948, to March, 1950, when it was discontinued because of the appearance of a pruritic erythematous skin eruption. A second course of gold (May to September, 1950) was stopped because of a recurrence of the dermatitis. Adrenocorticotrophic hormone, 20 to 80 mg. daily, was given from February, 1951, to August, 1952, with only partial suppression of the rheumatoid process. Because of failure to do well on conservative measures a third course of gold was started in August, 1952. This has been continued, in combination with adrenal steroid hormones in doses of 30 to 50 mg. daily, to the present without complication.

During this period of observation it was noted that the rheumatoid nodules, which also appeared over the patellae and extensor aspect of both forearms, fluctuated in size and intensity of inflammation as the activity of the rheumatoid process elsewhere varied. Examination of a nodule removed from the left forearm in March, 1952, revealed a typical rheumatoid nodule with moderate basophilism of the central necrotic zone suggesting lime salt deposition.

Early in 1952 the patient developed hoarseness attributed to inhalation of metal fumes in his employment as a welder. These symptoms persisted, however, and became progressively more severe. In August, 1954, a consultant from the department of otolaryngology observed a small cystic nodular lesion, 1 to 2 mm. in diameter, in the substance of each vocal cord at the junction of the anterior and middle thirds. These were thought to be atypical "speaker's nodes." On October 11 the lesion of the right vocal cord was removed under direct laryngoscopy by Dr. J. R. Chandler. Histologic examination of the material thus obtained revealed a hyperplastic stratified squamous mucosa. In the submucosa there were focal areas of necrosis and lime salt deposition surrounded by an epithelioid zone and an outer area of fibrous connective tissue and inflammatory cells (Fig. 5). The appearance was remarkably similar to that of the subcutaneous nodule removed previously. Postoperatively the patient's voice has been improved and stronger although still hoarse in character. When examined on December 1, 1954, both vocal cords had a smooth free margin and normal motility. There was a barely perceptible scar on the superior surface of the right cord and the previously described nodule on the left cord. No further operative procedure was recommended.

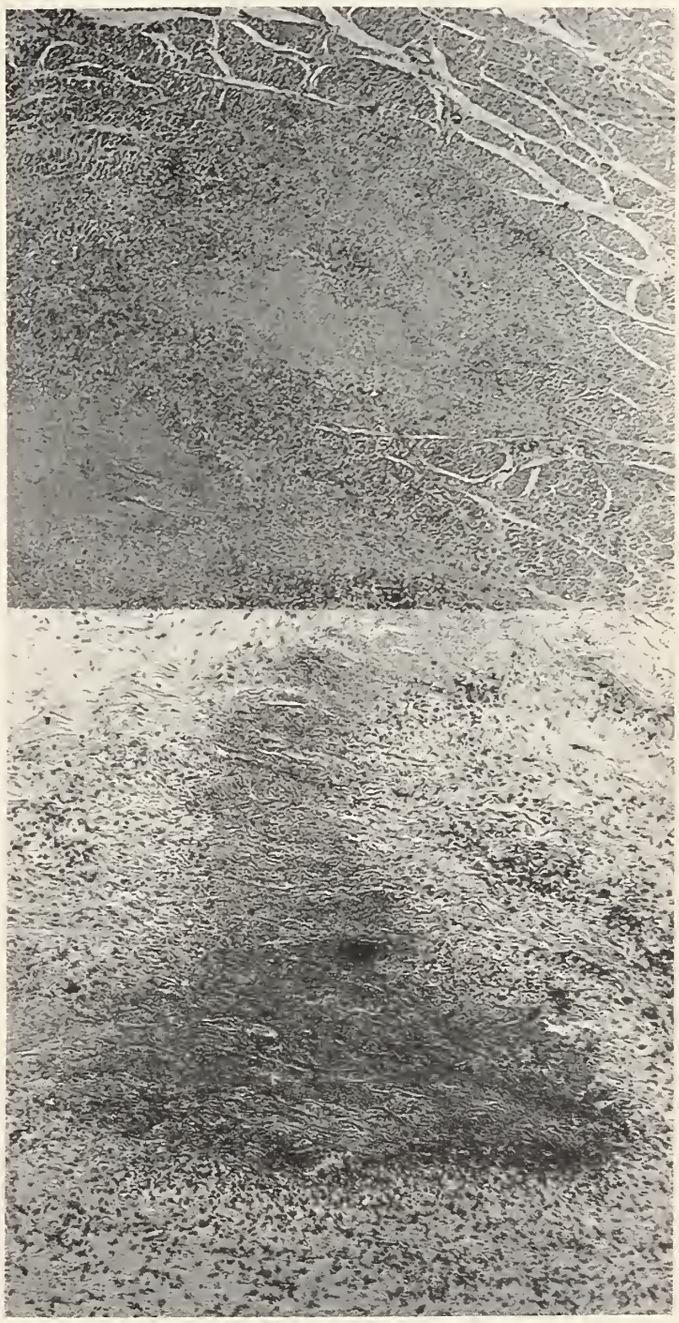


Fig. 3. *(above)* Case 2. Myocardium, showing multiple areas of fibrinoid necrosis with moderate lymphocytic infiltration peripherally.

Fig. 4. *(below)* Case 2. Sclera, illustrating again the typical three-zone structure of a rheumatoid nodule. Within the area of fibrinoid necrosis are partially intact collagen fibers.

Discussion

The first of these cases was of interest in that multiple spontaneous ruptures of tendons occurred relatively early in the course of the disease, before objective joint manifestations became apparent.



Fig. 5. Case 3. Submucosa of vocal cord, illustrating central area of necrosis and lime salt deposition with a surrounding epithelioid zone and peripheral lymphocytic infiltration.

Ansell and Bywaters[1] have recently reported three cases in which finger contractures due to tendon lesions were the initial manifestation of rheumatoid arthritis. Tendon involvement is a frequent accompaniment of established rheumatoid arthritis, having been found in 48 per cent of 391 cases by Edstrom[4] and in 42 per cent of 100 cases by Kellgren and Ball.[7] Spontaneous rupture of tendons in rheumatoid arthritis has been described but is certainly uncommon. Harris[5] was able to collect five cases of spontaneous rupture of the tendon of the extensor pollicis longus complicating rheumatoid arthritis. All five occurred during normal everyday activity and at a time when the disease exhibited activity (as demonstrated clinically and by elevation of the sedimentation rate) and had been present for from one and one-half to ten years.

It was thought, on the basis of histologic examination of material removed at the time of surgery, that the tendon rupture in the present case had occurred at the site of a rheumatoid nodule. At present there is no therapeutic agent capable of regularly bringing about the healing of established rheumatoid nodules. Although such nodules have been observed to decrease in size under cortisone or ACTH therapy,[11] recent studies would tend to support the view that hormonal therapy fails to produce any consistent modification of the principal histologic pattern.[15] In view of the fact that it has been unusual in our experience to observe the appearance of new nodules during hormonal therapy, it was decided to treat the present patient with steroids. It is not yet possible to determine whether this approach will prevent further tendon involvement.

The nodules in the second case illustrate the widespread involvement of connective tissue which may occur in rheumatoid arthritis. These nodules were typically rheumatoid and distinguishable from tuberculous and luetic lesions on the basis of histologic characteristics and anatomic distribution. There was no clinical information suggestive of tuberculosis or syphilis; search of the histologic lesions for acid-fast organisms and *Histoplasma capsulatum* was negative. The dural lesions presented the accepted histologic features of other extra-articular lesions in patients with rheumatoid arthritis. The peripheral neural, subcutaneous and ocular involvement are not infrequent manifestations of this disease. We, and others,[2] have seen similar pericardial lesions in other patients who have had rheumatoid arthritis.

Withdrawal of cortisone, especially if abrupt, has been observed to produce a panangiitic and panmesenchymal reaction which may simulate a flare of rheumatoid arthritis or disseminated lupus erythematosus or polyarteritis nodosa.[3,9,13,14] The following features suggested that such a reaction may have occurred in the present case: (1) the recent withdrawal of cortisone therapy, (2) the ensuing abrupt terminal course, (3) pericardial effusion, (4) corneal ulceration and staphyloma, (5) decubital ulceration, and (6) necropsy findings of unusually widespread rheumatoid nodules.

Examination of the larynx of the third patient revealed nodular lesions which were considered atypical "speaker's nodes" (chorditis nodosa). Surgical material from the right vocal cord contained typical rheumatoid nodules in the submucosa. The histologic structure was essentially identical with that of a nodule removed previously from the left forearm. "Speaker's nodes" are among the most common benign lesions of the larynx. They are usually located, as were the lesions in this case, on the superior surface of the vocal cords at the junction of the anterior and middle thirds. The etiology is thought to be improper or excessive use of the voice. The standard textbooks of otolaryngology do not mention rheumatoid nodules in the differential diagnosis although Lederer[8] lists "rheumatic diatheses" among the etiologic factors of chronic nonspecific laryngitis. Raven, Weber and Price[12] reported the

case of a sixty-two-year-old woman with rheumatoid arthritis and numerous subcutaneous nodules who developed inspiratory strider and progressive loss of voice, which became indistinct and croaking in character. Postmortem examination revealed unusually widespread distribution of necrobiotic nodules in viscera and striated muscle. Although the vocal cords appeared normal, submucosal nodules were found in the region of the glottis and epiglottis. We have been unable to find any other reference to the occurrence of rheumatoid nodules in the larynx or on vocal cords.

Summary

Three cases of rheumatoid arthritis are described in which rheumatoid nodules presented rather unusual features. In the first of these tendon involvement with spontaneous rupture of the right extensor pollicis longus tendon appeared as the initial manifestation of the disease. Histologic examination of material obtained during surgical repair of a subsequently ruptured tendon revealed a typical rheumatoid nodule at the rupture site. Steroid therapy has been undertaken in the hope of minimizing nodule formation and avoiding further tendon ruptures.

The second patient was observed during her brief terminal course which followed withdrawal of cortisone therapy. Postmortem examination revealed rheumatoid nodules in the subcutaneous tissues, lung parenchyma, splenic capsule, annulus fibrosa near the base of the aortic valves, pericardium, sclera, in one of the ciliary nerves, in extraocular muscle, and in the dura. To our knowledge, the occurrence of typical rheumatoid nodules in the dura has not been reported previously.

Because of persistent and progressive hoarseness the third patient was examined in the department of otolaryngology where lesions thought to be atypical "speaker's nodes" were observed on each vocal cord. Microscopic examination of material removed surgically from the right vocal cord revealed rheumatoid nodules remarkably similar in appearance to a previously removed subcutaneous nodule. We have been unable to find any previous report of the occurrence of rheumatoid nodules on the vocal cords. The occurrence of persistent hoarseness in a patient with rheumatoid nodules and subcutaneous nodules should suggest the possibility of rheumatoid nodules in the larynx.

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Prenatal Development and Growth of Bones in Man

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ONE OF THE most fascinating features of bone growth is the manner in which shape is maintained as growth takes place. Long bones such as the humerus, for example, when first formed in cartilage already resemble the adult in form and arrangement, and the general proportions are maintained as length and width increase. The ordinary textbook accounts rarely give an accurate explanation of this process. Scattered reports in the older literature and recent morphological and experimental work in lower animals[3,8,9] indicate that one of the most important features is removal of bone from the external surface of the metaphysis and deposition of bone on the internal surface of the shaft in the same region. Surprisingly enough, there has been no comprehensive account of such processes in man. Various bones have been reported on in detail for certain parts of the prenatal period[1,7,11,14] but rarely with reference to general growth processes. Nor have differences between man and those animals commonly used in experimental work been emphasized.

This paper describes briefly the development, ossification and growth of the human humerus during the prenatal period. There is a comprehensive account of the entire human skeleton now in press elsewhere,[4] which is based on the literature and on personal observations of an extensive series of human embryos and fetuses. In the interests of space, it was decided to limit the present paper to a discussion of a typical long bone. Since the reference mentioned above[4] contains an extensive bibliography, no attempt is made to duplicate it here.

Ossification and Growth

Osteogenesis is an inclusive term, referring to all of the factors concerned with the formation and growth of bones as organs. Ossification is but one phase of osteogenesis and is a process which is fundamentally similar wherever it occurs. All bones begin as mesenchymal condensations which appear early in the embryonic period. Some are predominantly fibrous; ossification in them forms membrane or dermal bones. Most condensations, however, are more cellular, and they become cartilages which are then replaced by bone.

Cartilage Bones — Periosteal and Endochondral Ossification.—In the case of the humerus, and other long or tubular bones as well, the sequence of changes may be outlined as follows, bearing in mind that these stages are not sharply separated.

1. A cartilage model forms. This grows until a center of hypertrophied cartilage cells is present in the center of the shaft.
2. A primary bone collar forms.
3. Phosphatase appears in the zone of hypertrophied cartilage and matrix calcifies.
4. The bone collar is eroded and cartilage removal begins.
5. Cartilage removal and periosteal bone formation extend longitudinally. Endochondral bone formation begins.
6. Vascular invasion of epiphyses begins (variable, depending on bone).
7. Endochondral ossification and periosteal bone reach metaphysis. Remodelling becomes prominent. Endochondral growth zone becomes orderly in arangement.
8. Epiphyseal ossification begins (before or after birth, depending on bone).

The steps outlined above will now be discussed in somewhat more detail, with specific reference to the humerus.

1. The first indication of an upper limb in man is found in embryos about 3 to 4 mm. in crown-rump length (almost 4 weeks after ovulation).[13] By 7 to 8 mm. (4½ weeks) cellular proliferation in the limb has resulted in a central, longitudinally arranged skeleto-muscular condensation. By 11 to 13 mm. (5 weeks) individual muscles are well differentiated and the more central part of the condensation is evident as the avascular skeletal blastema. Cartilage formation is beginning in this blastema, in a proximo-distal sequence. By 14 to 16 mm. (5½ weeks) the cartilages have the general shape of future bones, and by 22 to 24 mm. (6 weeks) the humerus resembles the adult in form and arrangement. The cartilage cells in the center of the shaft are now hypertrophied.

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2. In embryos of 25 to 27 mm. crown-rump length (6½ weeks) a thin layer of calcified bone matrix has been laid down between perichondrium and that central portion of the shaft containing the hypertrophied cartilage cells. By extending around the shaft it forms a ring or collar. This *periosteal bone* or *primary bone collar* is directly in contact with cartilage. The inner cells of what is now termed periosteum differentiate into osteoblasts, and alkaline phosphatase can be demonstrated in them. These cells line up in relation to bundles of collagen fibers and trabeculae begin to form, so that the primary collar gradually becomes multilayered.

The precise manner in which the matrix forms is unknown, although it seems likely that connective tissue cells are directly concerned. Like matrix or ground substance of connective tissue elsewhere, it contains complex compounds, including mucopolysaccharides, in varying degrees of polymerization.[6] Bloom and Bloom[2] and McLean and Bloom[10] have shown that, in rats, ground substance is calcified as soon as it is formed. The term osteoid refers to bone matrix which has not been calified, and as such is not generally present in rats. Whether or not osteoid is present in normal bone formation in man is unknown. Microscopic observations have to be interpreted in light of the fact that salts in early bone matrix are removed by many fixatives.

3. In the zone of hypertrophied cartilage, alkaline phosphatase appears in the cells and then in the intercellular material or matrix. Sometimes concurrently with the formation of the primary bone collar, but more often a little later, this matrix becomes calcified.

4. The time between the formation of the primary bone collar and calcification of cartilage matrix on the one hand, and the next phase, vascular invasion of the cartilage, is extremely variable, depending on the bone. In the case of the humerus and other large, long bones there is very little delay. Once the primary collar is well-established, it is penetrated at several points by vascular tissue and osteoclasts, derived from the periosteum. Cartilage matrix is removed and proliferating vessels with associated tissue extend toward both ends of the bone. The vascular invasion of the shaft marks the end of the embryonic period and usually occurs in embryos of 28 to 30 mm. crown-rump length (7 ovulation weeks).

In the case of other bones, such as metacarpals and phalanges, days or weeks may intervene between the formation of the primary bone collar and vascular invasion.

5. The invading tissue is mainly cellular, containing few if any fully formed blood vessels. Cartilage is rapidly removed by this proliferating tissue. Blood vessels and a circulation are then established. Some of the cells differentiate into osteoblasts while others are forerunners of blood forming cells. At a variable time after invasion, calcified bone matrix is laid down around bits of cartilage which are left, both in the region of the original entry and at the advancing zone of cartilage removal. This constitutes *endochondral ossification,* and in the case of the humerus is generally under way by the tenth menstrual week. By the twelfth week, endochondral ossification occupies more than half of the shaft.

6. By the ninth menstrual week vessels begin to penetrate the head of the humerus, preceding epiphyseal ossification by many months.[5] Similar invasion of the distal end usually begins by the twelfth or thirteenth week. This epiphyseal vascularization seems to be related to size of cartilage. It does not occur in smaller animals, such as rats, until actual ossification is imminent.

7. From the tenth week on, the rapid advance of endochondral ossification leaves behind a loose network of trabeculae which fuses with the multilayered periosteal shell. Each bony trabecula is formed around a bit of calcified cartilage matrix. Many of the trabeculae are removed almost as soon as they are formed, so that a short marrow cavity is formed. Those trabeculae which remain become progressively larger as more bone is laid down around them.

Periosteal ossification likewise extends towards the ends of the bones, by means of a continuing deposition of bone matrix adjacent to hypertrophied cartilage. New trabeculae are then added so that the shaft increases in thickness.

When the zone of endochondral ossification nears the epiphyses (by the end of the third month), it becomes much more orderly in appearance. The hypertrophied cartilage cells become arranged in longitudinal columns, separated by thin strips of calcified matrix. The columns are not, however, as long or as regular as those of lower animals commonly illustrated in textbooks. Osteogenic tissue and blood vessels invade the cell columns, leaving bars of calcified matrix. Bone

is then deposited on the surfaces of these bars. Many of the trabeculae thus formed are removed almost immediately, absorption occurring from their free ends.

The growth zone is responsible for the increase in length of the bone. The reconstruction which is necessary to maintain form as length increases becomes particularly prominent by the fourth to fifth months. While the precise functions of osteoclasts are still unknown, these cells are, however, commonly found where bone is being removed, and there seems little doubt that they are important in this process. Osteoclasts are seen in the tissue which first invades the shaft, and next to trabeculae which are being removed. By the end of the fourth month osteoclasts are found on the external surface of the metaphysis, and in the early part of the fifth month, many portions of this region show removal of periosteal bone. In other words, in this region of the humerus, bone is removed from the external surface and is laid down internally or endosteally. Were it not for these changes, an abnormally shaped bone would result. This type of reconstruction has been demonstrated experimentally by Leblond et al.[9]

The removal of bone from the external surface is most prominent in the region just below the level of the growth zone, to the extent that periosteal bone may be completely removed, exposing endochondral trabeculae and leaving an isolated periosteal ring or "l'encoche de Ranvier" around the level of the growth zone. A complete ring, however, is not common in human bones. Osteoclasts are numerous in the metaphyseal region, as Kölliker pointed out in some detail.[7]

One feature which is rarely explained satisfactorily in textbook accounts is the presence in the shaft or primitive compacta, of areas of calcified cartilage matrix, especially after the early part of the sixth month. If the shaft is formed from periosteum, and therefore by intramembranous ossification, how is the presence of cartilage explained? It is present because bone laid down on the inner surface of the metaphysis incorporates adjacent endochondral trabeculae. These, with their calcified cartilage cores, thus become part of the shaft.

The portion of the shaft which is uniform in width increases in diameter by surface accretion and endosteal removal. By this process those endochondral trabeculae which had become incorporated in compacta are eventually removed.

The reduction of metaphyseal width described above does not take place at each end of every bone, nor does it necessarily occur all the way around the end of a bone. The distal end of the humerus, for example, narrows in the anteroposterior direction but widens from epicondyle to epicondyle. Therefore on anterior and posterior surfaces, periosteal bone thickens above the growth zone. Removal of bone from the surface occurs only in medial and lateral epicondylar regions.

The shaft at birth is composed of a thick compacta, in which trabeculae are directed mainly longitudinally. The inner surface of the primitive compacta is irregular and trabeculated. Haversian systems (osteones) with lamellar arrangements characteristic of adult compacta are usually not present at birth.

8. The classical epiphyseal plate is not seen in the humerus until well after birth. Yet there are certain phases of epiphyseal growth which are indicated prenatally. As mentioned above, vessels begin to invade humeral epiphyses early in fetal life, preceding ossification by many months. The cartilage canals which are thus formed are filled with loose connective tissue, containing one or more arterioles, venules, capillaries and a few nerve fibers accompanying the blood vessels.

Ossification in the head of the humerus is usually indicated at or before term. Cartilage cells in the region of the future center enlarge and become vesicular. Matrix calcifies and vascular buds from adjacent cartilage canals then invade this area. They erode the matrix and deposit bone around cartilage remnants. Endochondral ossification then extends in all directions. After an epiphyseal center is well established, its growth zone forms in the deep part of the articular cartilage.

Conclusions

The above account is intended to illustrate certain features of the development of the humerus in man. The fundamental changes described are true also for the postnatal period. An understanding of these events is particularly important from the standpoint of bone disorders. If we consider cells, intercellular material (fibers and matrix), calcification and absorption, then specific pathological conditions may arise from involvement of each of these categories.[15] In scurvy, for example, there is failure of matrix formation. Vitamin A is extremely important for normal functioning of the endochondral growth zone. There is surprisingly

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Arthritis and Injury

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MAY ARTHRITIS be caused by injury? May pre-existing arthritis be aggravated by an accident? These two questions are often asked of physicians by patients and in legal actions in courts and industrial hearings. In these two latter instances it is surprising to hear how many physicians under oath answer a categorical "yes."

Mrs. X fell forward two steps while going down stairs in a large store. She landed on her hands and knees. Several months later symptoms of a long-standing degenerative arthritis of the cervical spine flared up. Mrs. X sued the store owner. In the trial her physician testified that the injury aggravated Mrs. X's arthritis. The jury awarded Mrs. X a substantial judgment.

The above actual case in which the writer was a witness for the defendant provides a glaring example of what many doctors evidently believe as to the relation between arthritis and injury. In the above case there was, in the first place, no proof whatever that the claimant had sustained any injury to her neck. She had an accident, but did not injure her cervical spine. This was proven by her own history, the physical findings and roentgen examination. Granting she did have an injury to her cervical spine, did it aggravate the arthritis she was known to have had for several years? With no immediate symptoms referable to her neck and none presenting until six months had passed, with no x-ray evidence of injury and with no x-ray evidence that the arthritis was any different than two years before, how could it then be asserted that Mrs. X had an injury to her neck or that an injury aggravated her arthritis? The answer to the second half of the question lies in the apparent widespread misunderstanding on the part of physicians as well as laymen as to how injury may affect a joint to produce arthritis and how it may aggravate a pre-existing arthritis.

It has long been recognized that degenerative arthritis is associated with age changes and with *chronic* traumatism. In an extensive literature it has repeatedly been pointed out that in degenerative arthritis "the joint tissues undergo slowly increasing deterioration and a characteristic adaptation to changed mechanical conditions."[1] No definite cause for the disease has ever been established. Perhaps the condition should not be thought of as a disease but merely as part of the aging process like wrinkles in the skin and greying hair. It is believed that wear and tear on the joints over a long period of time produces the changes in the joints which are recognized as degenerative arthritis. Consequently it is seen more frequently in the weight bearing joints and especially in those of obese individuals and in those who have done heavy manual labor through many years.

It is seen more frequently in weight bearing joints which have been functioning at a mechanical disadvantage as in genu valgus and varus. Correction of the valgus or varus strain at the knees by the simple expedient of an arch support in the shoes often completely eliminates pain at the knees. Many obese patients with painful weight bearing joints often get complete relief by nothing other than reduction of weight to normal. Both these observations tend to prove the theory that mechanical wear and tear and undue mechanical stresses play a prominent part in the development of degenerative arthritis and in the production of symptoms.

The whole problem of etiology can be reduced to a simple question of mechanics. A good carpenter would not hang a door without properly aligning the hinges, nor would he hang a 100-pound door with hinges designed for a 50-pound door. It should be obvious that improper alignment of hinges or use of a too heavy door would cause the hinges to wear out much faster than might be expected under proper normal conditions.

No authority has come forward with the claim that a single trauma to a joint, even severe, has anything to do with the production of degenerative arthritis or exacerbation of a pre-existing arthritis, unless the trauma produces some irregularity of the joint surfaces resulting in abnormal friction during motion or unless it produces a malalignment of the joint resulting in increased stress and strain and wear and tear during motion. While classical degenerative arthritis rarely occurs in young people, the orthopaedic surgeon often sees young adults with changes radiologically and pathologically identical with degenerative arthritis, particularly in the knees. Almost without exception these patients are overweight and/or have joints which are mechanically unsound due to congenital anomalies



Fig. 1. Fracture dislocation of the hip.

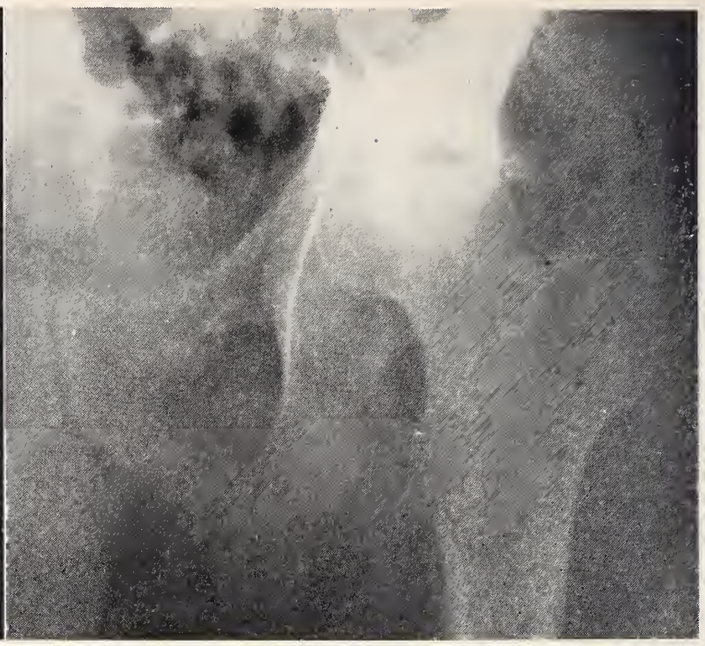


Fig. 2. Same patient as in Figure 1, one year later; marked degenerative arthritis.

in development, changes which have occurred during the growth period or internal derangements due to injury.

Injury must have been severe enough to produce irregularity of the joint surfaces or a disturbance in alignment. In both instances there is usually no question as to how and when the initial trauma occurred. If there is some doubt as to when and how the injury occurred—its mechanics—it must be assumed that the trauma was insignificant and not of sufficient severity to produce the conditions necessary for the subsequent development of degenerative changes in the questionable joint.

How do we account for the fact that persons with symptomless degenerative arthritis of the spine often develop symptoms following minor falls or simple lifting strains? One should be extremely careful in interpreting these symptoms. In the first place, most of these individuals have had faulty postures for many years. Faulty spinal posture undoubtedly contributes to the development of degenerative arthritis of the spine. Once the arthritis has become established and as part of the pathological process, the ligaments lose their elasticity and hence may tear rather than stretch if put under undue sudden tension. The immediate symptoms are more severe and persist for a longer period than would be anticipated in a young person with a normal spine. The persistence of symptoms should therefore not necessarily be interpreted as an indication of an extension or exacerbation of the arthritic process. If the muscles and ligaments of the back are injured severely enough to produce considerable weakness of them for a long period, it is conceivable that this weakness might permit further increase in an already poor posture and thus contribute to an increase in spinal arthritis. It is difficult to imagine how a minor lifting strain could produce such weakness. One must therefore conclude that any apparent increase in arthritis is purely coincidental and unrelated to the alleged injury.

The relationship between injury and degenerative arthritis is well recognized in certain instances. A classical example is dislocation of the hip associated with fracture of the acetabulum. Without open reduction (not commonly employed) it is almost impossible to secure accurate reposition of acetabular fragments. When union takes place, the articular surface of the acetabulum is irregular. The head of the femur cannot move in the socket and bear the weight of the body without being subjected to abnormal friction. Furthermore, this injury is invariably associated with some damage to the blood supply to the femoral head and its articular cartilage. This results in degenerative changes in the femoral head, in addition to those of the acetabulum. The combination is a bad one and usually results in severe degenerative arthritis of the hip joint.

Fractures of the tibial plateaus not properly reduced, resulting in irregular and rough articular surfaces or in varus or valgus of the knee, are



Fig. 3. Fracture dislocation of the ankle: appearance five months after injury. Chief complaint was deformity. Fibrous union of fractures was present and patient was bearing full weight. Degenerative arthritis was inevitable without surgical correction of the deformity.

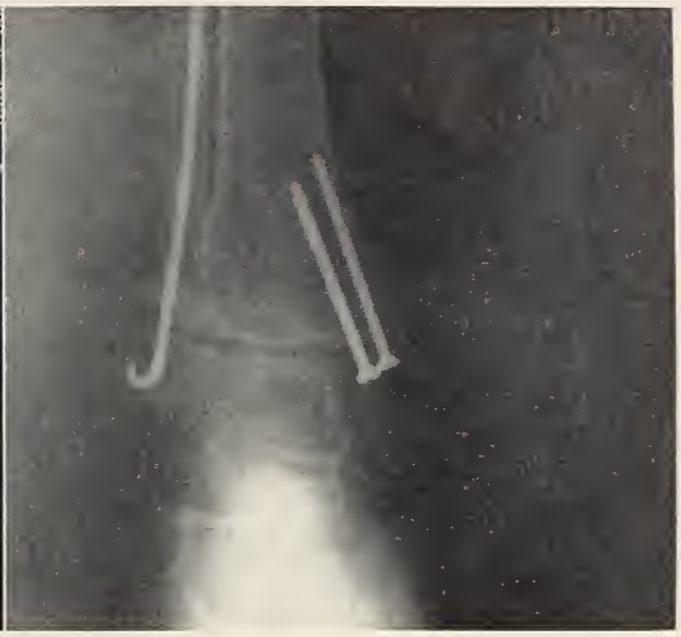


Fig. 4. Same patient as in Figure 3, one year after operation. Note correct alignment of joint and preservation of joint space. Patient was symptom free.

notoriously prone to be followed by degenerative arthritis.

Fractures of the calcaneum so frequently result in such incongruity of the subastragaloid joint and subsequent development of degenerative arthritis in that joint that many orthopedists routinely arthrodese the joint immediately.

In the above three instances there is no doubt as to the "when" and "how" of the injury. It is sudden and severe. The difficulty in determining the causal relationship between injury and arthritis occurs in those instances in which the alleged injury is indefinite and in which symptoms usually develop months or even years later.

The lack of regenerative power in articular cartilage is well recognized. It is likewise recognized that even slight trauma to articular cartilage may produce irreversible damage and chronic degenerative changes which gradually increase in severity with function. On the other hand, and in absolute fairness, one should not jump to the conclusion that every joint injury is responsible for a degenerative arthritis which may develop later. One must first differentiate between accident and injury. The two terms should not be used synonymously. The exact mechanics of the accident must be determined and analyzed before it can be assumed that it caused sufficient damage to joint structures to produce arthritis. The injury must have been of sufficient severity to produce (1) permanent impairment of the circulation to subchondral bone, (2) irregularity of articular surfaces, (3) malalignment of the joint or (4) a combination of these three factors.

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HEALTH COSTS

Medical care is costing the American people 12.4 billion dollars a year, according to an article in the December 24, 1954, issue of *U. S. News and World Report.* Payments by individuals and companies, excluding workmen's compensation and other payments required by law, came to $3 billion for hospitalization, $3 billion for physicians' and surgeons' fees, $1 billion for dentists' fees, $0.6 billion for nursing and other professional service, $2.2 billion for medicines and appliances, and $2.6 billion for health insurance and pre-payment plan premiums. Persons covered by health insurance and prepayment plans received $2.1 billion in benefits, leaving a net bill of $10.3 billion. These figures are based on the latest study of the Social Security Administration, and were brought up to date through estimates by the Economic Unit of *U. S. News and World Report.*

Rheumatology, 1954
A Therapeutic Survey

With Review of Cases Treated with Procaine Hydrochloride

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A REALISTIC appraisal of the therapeutic agents that have been recently added to the field of rheumatology leads inevitably to the conclusion that they have not lived up to expectation. The urgency of the problem assumes greater importance when we consider that the rheumatic diseases rank first in incidence and second only to nervous and mental disorders as causes of disability. It was estimated that in the United States more than 300,000 persons are made unemployable by rheumatic diseases annually, and more than 147,000 are rheumatic invalids, and that these diseases accounted for more than 92 million days lost from work per year, representing an annual economic loss of a half-billion dollars.

Classification

The 1953 "Primer on Arthritis" divides the more common rheumatic diseases into eight important groups: (1) arthritis due to known bacterial agents, (2) the arthritis of rheumatic fever, (3) rheumatoid arthritis, (4) the "collagen diseases," (5) degenerative joint disease, (6) arthritis due to direct trauma, (7) arthritis due to gout, and (8) the non-articular forms of rheumatism.

We shall not go into a detailed discussion of the various groups. We shall dwell primarily on the group which assumes major importance in causing serious disability, namely, rheumatoid arthritis. Further on, we shall review a few representative cases of the non-articular form of rheumatism, which we treated successfully with injections of aqueous procaine hydrochloride.

Rheumatoid arthritis is not a disease which is treated uniformly by all rheumatologists. The fact that it is treated by some with steroid compounds, by others with either butazolidin, gold, salicylates, atabrin, or by a well-balanced conservative regime, bespeaks the complexity of the subject and the variability of response by different patients. Coupled with the uncertainity of a "cure" is the danger of complications which sometimes arise in the course of treatment. It takes a courageous physician to face a complication which has made it necessary to discontinue an otherwise effective medication. The patient must be made aware of the risks involved, and only upon his willingness to face a possible danger can a physician embark upon the use of some of the newer forms of therapy, including the "miracle drugs."

Types of Therapy

Cortisone.—The ultimate value of cortisone in the treatment of rheumatoid arthritis has not yet been fully determined. Favorable results with both short and long term cortisone administration have been reported by Hench and colleagues,[11] McEwen and Bunim,[13] Boland and Headley.[3] However, in the majority of cases, relapse began within two to fourteen days following cessation of therapy. The limitations of cortisone and the dangers in its administration are listed as follows:

1. The benefits derived from the hormones are temporary and suppressive only, not curative.
2. They must be administered more or less continuously for an indefinite period of time, if improvement is to be sustained.
3. The hormones, in addition to their antirheumatic action, produce manifold physiologic responses in various organs and tissues, and these may become clinically manifest as adverse hormonal complications.
4. Certain co-existing pathologic conditions may be aggravated by the hormones and serve as relative or absolute contraindications to their use.
5. Long continued use of the hormones results in histologic and functional changes in the adrenal cortices and the anterior pituitary gland.
6. Optimal methods of administration and patient management have not yet been established.[10]

Similarly, intra-articular injections of *hydrocortone,* as reported by Duff and associates,[4] did not produce universal improvement, although in 19 per cent the periods of remission upon discontinuance of therapy persisted for four to twelve months. In 31 per cent of the cases, this treat-

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ment was discontinued because partial initial benefit could not be further improved.

Butazolidin (phenylbutazone).—Based upon a series of 800 cases treated with butazolidin, Kuzell and associates[12] conclude as follows: "The most striking clinical improvement was observed in acute and chronic gout. Among the other diseases which improved were ankylosing spondylitis, psoriasis with arthritis, painful shoulder, rheumatoid arthritis and osteoarthritis, in that order. The most frequent toxic manifestations were gastrointestinal and those related to fluid retention. On cessation of medication in chronic rheumatic disorders, where a variable degree of improvement was observed. symptoms promptly returned in almost all instances."

Chrysotherapy.—Freyberg[8] compiled statistics on therapeutic results in 4,086 cases which appeared in the European and American literature between 1935 and 1948: 61 per cent were reported as arrested or greatly improved. Ragan and Tyson[15] studied 142 cases of rheumatoid arthritis treated with gold over a three-year period and summarized their results as follows: "Of patients receiving full treatment with one or two courses, 10 to 20 per cent can be expected to show no improvement, and 40 to 60 per cent to show striking improvement; but 80 to 90 per cent of these can be expected to relapse within five years, with 80 per cent of these again being benefited by gold."

Formerly the popular treatment schedule was to give one, two or several courses of gold therapy with rest intervals of six weeks to six months between courses. The modern trend has been to administer a single course, followed thereafter by "maintenance doses" consisting of 50 mg. every two to four weeks for an indefinite period. The purpose of the maintenance dose plan is to reduce the incidence of relapses.

Conclusions on Chrysotherapy.—"Because of the high percentage of toxic reactions attending their use, gold compounds are far from a satisfactory therapeutic agent."[17] Several authors believe that the case for gold therapy is unproved as a palliative or adjuvant measure, and that the hazards attending it should furnish a decisive argument against its general use.[2] Advocates of gold therapy admit that it should not be relied on exclusively, and that it should be used in conjunction with general measures (rest, salicylates, nutritious diet, physical therapy, et cetera). But, in view of the serious potentialities of rheumatoid arthritis, many agree with Hench[9] that chrysotherapy, although still on trial, is justified whenever rheumatoid arthritis has lasted more than a few months and shows evidence of being progressive, provided that the patient understands and is willing to share the risks involved.

Atabrin (quinacrine, mepacrine).—Our first introduction to atabrin as a therapeutic agent in rheumatoid arthritis came last August during a discussion period at a meeting of the Israel Medical Association. which we had the pleasure to address. It had been used by U. Adar, of Tel Aviv, and others. with apparently satisfactory results. In a personal communication dated May 4. 1954, Dr. Adar submitted the following report:

". . . The idea of using atabrin struck me when I read in the *Lancet* the well-known article concerning the use of atabrin in lupus erythematosus disseminatus.

"About two years ago, I started my experiments, and a year later published my first results in the *Harefuah.*

"Hitherto I have thus treated forty patients, in twelve of whom the pains and the swellings disappeared, and the blood sedimentations rate became normal. Four improved, and the others did not react.

"My patients received 0.4 gm. atabrin daily, consecutively for six weeks. Two patients who had a relapse were successfully treated again in the same way.

"Apart from two instances of mild hepatitis, I have not noticed any ill-effects or complications arising from the use of atabrin."

A search of the literature reveals a rather meager supply of information on the subject. Freedman and Bach[7] reviewed twenty-three cases of rheumatoid arthritis treated with atabrin, in which all but one were very much improved. The longest period of observation was eight months, the shortest six weeks. "As their skin became yellow, their pain gradually eased and they needed less analgesics. Soft tissue swelling subsided, and movement became free and more vigorous. Joints showing contracture or ankylosis, or with secondary degenerative disease, lost all signs of active inflammation. Power of grip and speed of walking gradually improved. Six to ten weeks of

treatment were necessary before all signs of joint inflammation were lost."

Engeset and Hanssen[6] report eleven cases of rheumatoid arthritis treated with atabrin. The longest period of observation was five months, the shortest six weeks. "All of the patients declared that their pain gradually eased, and in five there is already definite objective improvement. Treatment with mepacrine is not followed by eosinopenia or increased excretion of 17-ketosteroids; nor is the erythrocyte sedimentation rate influenced in our experience." The authors agree with the findings of Freedman and Bach regarding dosage and length of treatment.

Long-Term Conservative Treatment in Rheumatoid Arthritis

The quest of a sovereign remedy that would have all the advantages and none of the disadvantages connected with some of the newer drugs in the field of rheumatology has thus far been fruitless.

"Rheumatoid arthritis remains an incurable disease. It should now be recognized that treatment with gold, cortisone, or phenylbutazone has not been shown to alter the natural course of the disease in a significant manner.' A number of investigators, notably Short tnd Bauer and Ragan, have, therefore, undertaken an investigation of long-term conservative treatment in rheumatoid arthritis, including bed rest, exercises, physical therapy, a well-balanced diet and analgesics, and found that approximately 50 per cent had improved, and in the remaining 50 per cent the end results were poor. The results of the British investigators, headed by Duthie, showed a larger percentage of improvement and indicate that 'the activity of the disease can often be significantly reduced by conservative measures applied in the hospital, and that functional capacity can continue to improve, if medical and social after-care are adequate.' "

Non-Articular Forms of Rheumatism

We now come to the consideration of a group of miscellaneous rheumatic diseases, which include such clinical entities as bursitis, periarticular arthritis, fibrositis, neuritis, sacroiliac sprain, peritendinitis, et cetera, in which there is involvement of the fibrous, muscular, ligamentous and nerve structures, rather than the joints. While the etiologic factor in these conditions might vary, embracing such diverse causes as acute and chronic trauma, exposure to cold and dampness, infection and metabolic changes, their response to procaine is more than just a temporary relief of pain, as might be inferred from the type of medication, as it brings about complete relief of the condition through the interruption of a chain of causes and effects, which begins with pain, spasm and limitation in motion and ends in disability, which, if unrelieved, may become permanent.

By way of illustration, we shall present a few representatives cases in which treatment was given at our office, and let these speak for themselves.

Case 1. Brachial neuritis.—Mrs. E. M., aged fifty-two, was first seen at the office on February 11, 1954, complaining of pain in the right arm and limitation in abduction and external rotation. She was given three brachial blocks, at the end of which her condition improved sufficiently to discontinue treatment for about six weeks. When the pain returned, she was hospitalized for two weeks and given daily injections of procaine. While she was receiving additional treatment consisting of thiamine, tolserol, salicylates and local heat applications, nothing gave her as much positive relief as the brachial blocks, to which she looked forward eagerly. At the end of two weeks, following her discharge from the hospital, she has continued her injections of procaine at semi-weekly intervals which have now been extended to once a week or longer. A more detailed history, at this point, from the patient's point of view, would not be amiss:

"Although I was unaware of it," she writes, "my condition started about two years ago. Distressing symptoms first appeared in the upper muscles of my right arm. These I attributed to the air conditioning at the place at which I worked, as a 'cold in my system.' Frequently I felt I was being a hypochondriac and just imagined my discomfort.

"When my arm was bothering me, I usually applied various liniments, which did nothing to relieve it. On the rare occasion when I did mention it to my family doctor, he suggested that I probably had a 'cold'; or that he, too, had aches and that everyone gets more of them as he gets older.

"Last year the condition seemed to be getting progressively worse, and I could no longer delude myself that I merely had a 'cold' in my arm, so I went to the hospital and consulted an orthopedic specialist. No real diagnosis was given, but diathermy treatments plus cortisone and tolserol were prescribed, with no appreciable difference in my condition resulting.

"In December, 1953, I was hospitalized for colitis. Meanwhile, my arm became progressively worse. My doctor, an ulcer specialist, told me that I had neuritis but that he knew of nothing other than heat treatments plus vitamin B_1 in large quantities.

"The pain in my arm which had been more or less localized now traveled up into my shoulder, under my armpit and down to my fingertips. As the pain became more intense and constant, my hand and arm became swollen, my arm was discolored with a blotchy mottled

effect, and I could not raise it. As the pain increased, so did the discoloration of my arm and the swelling in my hand and arm. This happened in spite of the fact that I had followed different doctors' advice —soaking with epsom salts, diathermy, heating pad applications, et cetera. I was forced to give up my work, and was at my wits' end, when I heard of the procaine injection treatment for neuritis. I received a few of these treatments early in February and was helped a great deal. Because I felt somewhat better, I decided I did not need any more treatments, because I still had the idea in my mind that my condition was not physiological but psychological. However, the pain returned, and I was hospitalized for a period of two weeks, during which I was given brachial blocks, proper diet and bed rest, and my arm began to show marked improvement. The swelling and discoloration below my elbow began to disappear. Through continued treatment, my period of relief now numbers days, whereas at first it numbered hours. I can now use my arm with limitation, whereas before I could not use it at all."

Case 2. Sacroiliac sprain with referred sciatic neuralgia. —Mrs. B. K., aged thirty-one, consulted us on November 8, 1952, for pain in the lower back and right leg, of two years duration, at first intermittently, but for the past eight weeks continuously. There was a possible traumatic onset, occasioned by washing the kitchen walls. The pain was aggravated by coughing and sneezing. There was no numbness in the leg. The pain was so severe that the patient had to stay in bed most of the time. Examination revealed tenderness on pressure over the right sacroiliac joint. Straight leg raising was painful. The Lasegue sign was positive.

While the patient was not hospitalized for myelography to rule out a possible slipped disk, she was treated empirically at the office, with procaine injections, first into the ligaments adjoining the sacroiliac articulation, and later into the sciatic nerve. Altogether, the patient received four injections of 1 per cent aqueous procaine (15 cc. each) into the sacroiliac area and 20 cc. into the sciatic nerve. The patient made a complete recovery. The pain has not returned since November 24, 1952— a period of over two years.

Case 3. Chronic sacroiliac sprain.—Mrs. H. G., aged thirty-one, complained of lower backache of eight years' duration, following the birth of a child, delivered by forceps. She also gave a history of having lifted a heavy piece of lumber thirteen years ago. She was hospitalized, placed on a bed with boards under the mattress; the back was strapped with adhesive tape, an infra-red light was applied, and analgesics given. However, after a week of the above treatment, the patient did not improve and wished to go home. All laboratory data, including x-rays, were negative.

When several days later the patient returned to the office with the original complaint, the back was re-examined and acute tenderness elicited in the left sacroiliac region. The area was then injected with 15 cc. of 1 per cent aqueous procaine, and the pain disappeared almost immediately. She was re-injected at weekly intervals for a total of three weeks, and has now been free from pain since December 19, 1953—a total of fifteen months. A sacroiliac support was recommended to prevent recurrence of the condition.

Case 4. Sacroiliac sprain, with radiation down left leg. —Mrs. A. C., aged forty-seven, came to our office, complaining of "kidney trouble." There was no frequency or burning on urination, there was no edema of the ankles, and the urine contained no albumin or pus. The reason for the complaint was pain in the left "kidney region." Examination of the spine revealed marked tenderness over the left sacroiliac spine, and 20 cc. of 1 per cent procaine was injected in the sacroiliac area, followed by a similar amount one week later. The pain disappeared promptly, and has not recurred since March 9, 1954—a period of one year. This case illustrates the value of differential diagnosis.

Case 5. Suspected protrusion of intervertebral disk.— Mrs. M. M., aged thirty-seven, while stooping, sneezed violently and developed a sudden excruciatingly sharp pain in the lower back. She was unable to sit or lie down and was still in a kneeling position with her head resting on the bed when we arrived in response to an urgent call. There was acute tenderness in both the lumbosacral and sacroiliac joints. Injections of 20 cc. of 1 per cent procaine were given in three tender areas, and the injections repeated in three and seven days, respectively, the last injection being given in the sacroiliac region where the pain still persisted. Following the third injection, the pain disappeared, and has not returned since January 9, 1953—a period of about two years. The patient was advised to wear a Mayo sacroiliac belt to prevent recurrence of the pain. Since the patient was completely relieved, no further examinations were indicated. It is possible that the protrusion, if any, automatically receded and no longer caused pressure on the lumbo-sacral plexus.

Conclusions on Procaine

Procaine injection treatment represents a simple method for relieving acute and chronic conditions affecting nervous, muscular and ligamentous structures within the framework of rheumatic diseases. It is more amenable in the treatment of non-articular rheumatism than in either rheumatoid or osteoarthritis. While tender spots in rheumatic joints have been infiltrated, the response, in general, has not been as satisfactory as the injection of soft tissues, such as nerves, muscles and ligaments. Though the procedure is simple, one must nevertheless have some familiarity with the anatomic structures involved, especially for the infiltration of the brachial plexus. The site of injection must be accurately determined, as the success of the treatment will be dependent upon infiltration of the nerve proper, rather than the

(Continued on Page 316)

Plasma Fibrinogen Level

I. Mechanism, Observations and Interpretations

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INTEREST in the amount of fibrinogen in the blood plasma as an index of disease activity received great impetus from the development of reliable clinical laboratory methods for its quantitative estimation by Ratnoff and Menzie[10] in 1951. Since that time plasma fibrinogen determinations can be made routinely in any clinical laboratory, but time enough has not yet elapsed to evaluate properly the significance of fluctuations in the plasma fibrinogen and their relationship to various clinical conditions. Although quantitative methods suitable for use in the average clinical laboratory have only recently been made available, more cumbersome but reliable methods have been in use for a long time. Regardless of that, very little has appeared in the literature as to the value of the plasma fibrinogen level as a diagnostic and prognostic aid in clinical medicine. Of course, it has been known for a long time that an increase in the plasma fibrinogen occurs in pregnancy, infections, malignancy, and the collagen diseases, but the literature reveals very little as to why it occurs.

In good health the fibrinogen content of the blood plasma remains fairly constant, being stabilized somewhere between 250 and 350 mg. per cent, depending upon the individual. Repeated determinations made upon the blood of a normal person shows that the fibrinogen content varies but little, unless a change in the state of health takes place.

In disease the plasma fibrinogen level is not stabilized and may fluctuate rather rapidly depending upon the pathologic physiology associated with it. In more than 3,000 determinations made on the blood of patients suffering with a wide variety of conditions, from which these observations and interpretations were made, the plasma fibrinogen level was found to vary all the way from zero in abruptio placenta to 2,200 mg. per cent in active rheumatoid arthritis associated with liver disease.

In disease as in health the amount of fibrinogen circulating in the blood is regulated by homeostasis.[3] The fibrinogen is an extremely important part of the coagulation mechanism, which in a biological sense is essential to life itself. Nature regulates the coagulation mechanism to a fine degree by a complex system of very delicate balances and counterbalances. One of the major balances in this complex system of coagulation homeostasis is the reciprocal relationship established between the amount of fibrinogen in the plasma and the activity of the thromboplastin mechanism. In the process of blood coagulation the fibrinogen is converted to fibrin by the action of the thromboplastin mechanism and a delicate reciprocal balance must be maintained between the two in order to maintain just the right degree of coagulability in the blood at all times. When the ability of the thromboplastin mechanism to convert fibrinogen to fibrin is reduced by drugs or disease, biological homeostasis increases the amount of fibrinogen as a compensatory measure in order to maintain normal coagulability and preserve life itself.

Factors Which Decrease the Plasma Fibrinogen Level

1. Congenital Afibrinogenemia.—Congenital afibrinogenemia, first described by Pinninger and Prunty,[9] fortunately is a very rare condition. It is thought by some that this condition is a reversion to an earlier stage in our phylogenetic development, in which the fibrin clotting mechanism had not yet appeared. It is suggested that the blood platelets may be prototypes of the earlier amebocytes, which, on exposure to a foreign surface, clump and coalesce into a compact, elastic and even retractile mass similar to the fibrin clot in higher animals.

2. Congenital Hypofibrinogenemia.—In congenital hypofibrinogenemia the fibrin clotting mechanism is intact, but functioning at a lower level than normal. Homeostatic functions are in perfect balance and no clotting defect exists. The milder forms may go unnoticed while the severe forms are found in infants and children physically below par with no particular diagnosis in many cases. In others, recurrent and fleeting pneumonitis, vague abdominal discomfort, general malaise, secondary

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anemia, pallor, failure to gain weight, anorexia, and increased neuromuscular irritability chiefly at night, should arouse suspicion and indicate a fibrinogen determination.

3. Abruptio Placenta.—The average normal plasma fibrinogen level of nonpregnant women is stated by Stevenson et al[11] to be 260 mg. per cent while the average of normal pregnancy at term to be 480 mg. per cent. In pre-eclamptic women the average is increased to 510 mg. per cent while in eclampsia, according to Dieckmann,[1] the average plasma fibrinogen level reaches 660 mg. per cent.

With premature separation of the placenta, thromboplastin from the abruption site gains entrance into the open sinusoids and into the arterial circulation where it brings about a conversion of the fibrinogen to fibrin. Massive thrombosis does not occur, but instead there is an intimal fibrin coating of the entire arterial tree. The plasma fibrinogen level is either partially or totally reduced to zero.

4. Thromboplastin. — The administration of homologous thromboplastin* does not appreciably reduce the normal plasma fibrinogen level but it does reduce the plasma fibrinogen level that is pathologically high.[6,8] In contrast to the intravascular action of thromboplastin on fibrinogen in abruptio placenta, the reducing effect of oral thromboplastin on hyperfibrinogenemia is indirect by way of the homeostatic mechanism which controls blood coagulation. Homeostasis increases the plasma fibrinogen when the thromboplastin mechanism is weakened by drugs or by disease. Thromboplastin therapy acts to correct the imbalance. By supporting the thromboplastin mechanism with additional thromboplastin, the fibrinogen level drops accordingly.

5. Trypsin.—This enzyme has a marked tendency to reduce hyperfibrinogenemia[6] when first given for a short period of time depending upon the dosage. With the larger dosage the plasma fibrinogen level drops at first and then markedly increases if trypsin treatment is continued. The larger dosage by injection (but not orally) is especially prone to cause a rise in the fibrinogen after an initial period of reduction. The concurrent administration of thromboplastin prevents the delayed rise in the fibrinogen from trypsin treatment. These observations tend to agree with Ferguson, Travis and Gerheim[2] who found that trypsin activated and potentiated thromboplastin. The plasma fibrinogen level is controlled by homeostasis and regulated inversely proportional to the strength in the thromboplastin mechanism. Potentiation of the weakened thromboplastin mechanism with trypsin reduces the hyperfibrinogenemia by way of improving the homeostatic balance for the time being. When the thromboplastin has been potentiated to exhaustion, the fibrinogen rises sharply to compensate for the lack of adequate thromboplastin in the coagulation mechanism. Adequate thromboplastin must be present to prevent untoward results with trypsin therapy.

6. Protamine Sulfate.—Protamine sulfate when used to neutralize metabolic toxins (i.e., heparinoid toxin) reduces hyperfibrinogenemia.[5,7] When used in larger amounts, the excess protamine sulfate neutralizes thromboplastin and thereby causes the plasma fibrinogen level to rise.

7. Heparin.—When heparin is used as replacement therapy in patients with heparin deficiency, its administration causes a reduction in hyperfibrinogenemia.[5,6] Heparin, just as with trypsin and protamine sulfate, when used in excess will exhaust the thromboplastin and cause a compensatory rise in the plasma fibrinogen level.

Factors Which Increase the Plasma Fibrinogen Level

1. Pregnancy.—The physiologic withdrawal of thromboplastin from the maternal organism in pregnancy reduces the power of the thromboplastin mechanism to convert fibrinogen to fibrin, and in order to maintain normal coagulability in the blood, homeostasis increases the fibrinogen to compensate for the loss of thromboplastin. The placenta is extremely rich in thromboplastin, but it is not synthesized there. It is mobilized in the maternal organism and appears to be transported to the placental site by way of the blood platelets. Observations made on the platelets of pregnant women before they have missed a menstrual period show a sharp drop in the platelet count occurring simultaneously with morning sickness. The platelet count recovers to near normal within a few days, but the plasma fibrinogen level increases.

*As used in these studies the hexose polysaccharide sulfate esters as "Polyheparin" and thromboplastin as "Thromboplex" were supplied by Drug Industries Company, Detroit.

The administration of oral thromboplastin in adequate amounts stops the vomiting but does not reduce the increased fibrinogen level until late in pregnancy.

2. *Antithromboplastin.*—Substances which inactivate thromboplastin cause the fibrinogen level to rise. The two most commonly recognized therapeutic antithromboplastins are heparin[5] and protamine sulfate.[7] However, heparin-like substances with anticoagulant action by virtue of their antithromboplastin activity are widespread in the plant world, but these substances are all too toxic for internal use.

3. *Drugs.*—Bishydroxycoumarin[4] and its homologues in the coumarin group weaken the thromboplastin mechanism indirectly by inactivating vitamin K which is necessary for the synthesis of prothrombin. Simultaneously with the administration of these drugs hypoprothrombinemia develops. The thromboplastin mechanism is thereby weakened and the plasma fibrinogen increases as a compensatory measure.

4. *Metabolic Toxins.*—These are biological substances formed within the body that have antithromboplastin activity. Heparinoid toxin[5] at the present time is the only demonstrable metabolic poison which effects an increase in the plasma fibrinogen level, but there is no doubt that in due time others will be discovered. Heparinoid toxin appears to have its origin in a congenital defect in the biosynthesis of heparins, in which the presence of heparinoid toxin is associated with a heparin deficiency. While the presence of heparinoid toxin has not been found without indications of a coexistent heparin deficiency, indications of a heparin insufficiency have been observed without the presence of heparinoid toxin. This heparin-like substance is an abnormal heparin which is not used in the body metabolism and exerts its toxic effect by virtue of its antithromboplastin activity. It is the inactivation of thromboplastin by this heparin-like substance that causes a compensatory rise in the plasma fibrinogen level.

Interpretation of the Plasma Fibrinogen Level in Disease

In order to be of value in clinical medicine the plasma fibrinogen level must be interpreted in the light of its place in physiologic homeostasis and also in the light of the disease condition associated with it. The amount of fibrinogen in the blood is controlled by homeostasis and regulated inversely proportional to the activity of the thromboplastin mechanism. One of the major mechanisms set up by nature to maintain normal coagulability in the blood is the balance between fibrinogen and the ability of the thromboplastin mechanism to convert it to fibrin. When either disease or drugs interfere with the thromboplastin mechanism, the imbalance thus created is immediately reflected by compensatory changes in the fibrinogen. When these changes are quantitatively determined and interpreted in the light of our present concepts of the mechanisms involved and in the light of our knowledge of the particular disease associated with it, the plasma fibrinogen level becomes not only a good diagnostic and prognostic aid but also an important guide for directing therapeutic measures. In all instances the plasma fibrinogen level must be interpreted in relation to the clinical conditions associated with it.

For practical purposes the plasma fibrinogen levels as they are found in disease may be divided into four groups, namely: normal, subnormal, false normal and high.

Normal.—Many diseases do not affect the amount of fibrinogen in the blood because these diseases do not disturb the efficiency of the thromboplastin mechanism in any way. The normal fibrinogen level is schematically illustrated in Figure 1 *(above)*. The body reservoirs of thromboplastin and polyheparin (hexose polysaccharide sulfate esters or heparin spectrum) are physiologically balanced with fibrinogen which is at the average normal level of 300 mg. per cent. These balances revolve around and aid in maintaining a normal clotting time in the blood.

Subnormal.—With the exception of abruptio placenta all subnormal plasma fibrinogen levels may be classified as primarily congenital in type. There is no known disease or therapeutic measure which will reduce a true normal plasma fibrinogen to subnormal levels. A true normal fibrinogen level is protected by a normal homeostatic mechanism which does not permit hyperthromboplastinemia to develop. False normal fibrinogen levels are readily reduced by protamine sulfate to their rightful subnormal levels, as discussed later. The subnormal plasma fibrinogen level is schematically repre-

sented in Figure 1 *(below)*, with thromboplastin, polyheparin and fibrinogen all in perfect functional balance but operating at a low level. Homeostasis maintains normal coagulability in the blood

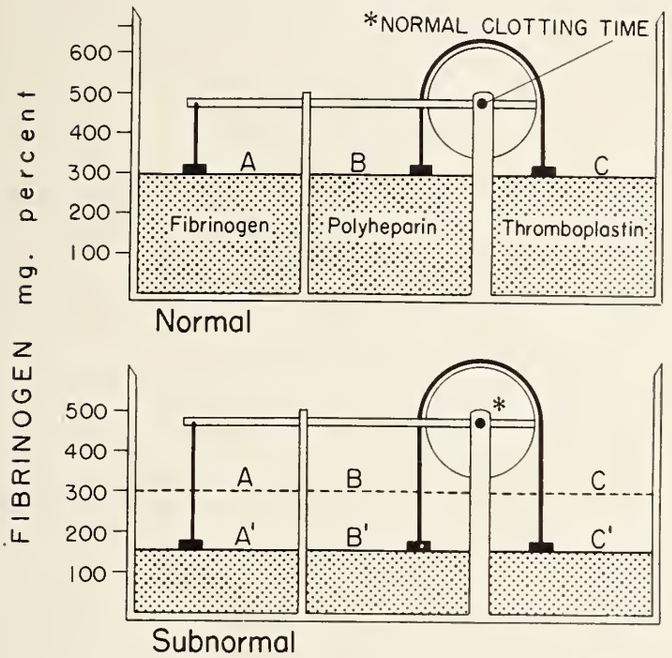


Fig. 1. Schematic illustration of the normal plasma fibrinogen level *(above)* in the homeostasis of normal blood coagulation. The body reservoirs of thromboplastin and polyheparin (hexose polysaccharide sulfate esters) (heparin spectrum) are balanced with each other and these are balanced with fibrinogen at the average normal level of approximately 300 mg. per cent. The entire homeostatic mechanism revolves around the normal clotting time as a physiologic constant.

The subnormal plasma fibrinogen level *(below)* functions in perfect homeostatic balance with thromboplastin and polyheparin. All three are equally balanced at a lower level. This illustrates the homeostatic balance in congenital hypofibrinogenemia.

of these patients, and this is schematically illustrated by the coagulation balances and counterbalances operating around the normal clotting time as a fulcrum.

From the large number of children and young adults having a subnormal plasma fibrinogen level, congenital hypofibrinogenemia appears to be a very common condition. It appears to be the basis upon which the false normal and the high plasma fibrinogen levels are founded.

False Normal.—Observations indicate that congenital hypofibrinogenemia is associated with a low or insufficient production of hexose polysaccharide sulfate esters. Because of the inability of the body to meet the demand for these substances, stimulated by disease and the stress and strain of living, the metabolic processes synthesize a similar substance (heparinoid toxin) which is not physiologic but toxic in that it accumulates in the body and inactivates thromboplastin. The inactivation of thromboplastin by heparinoid toxin causes a compensatory rise in the plasma fibrinogen. The production of just a small amount of heparinoid toxin may cause the plasma fibrinogen level to rise just enough to bring it up into the normal range. This mechanism is schematically illustrated in Figure 2 *(above)*.

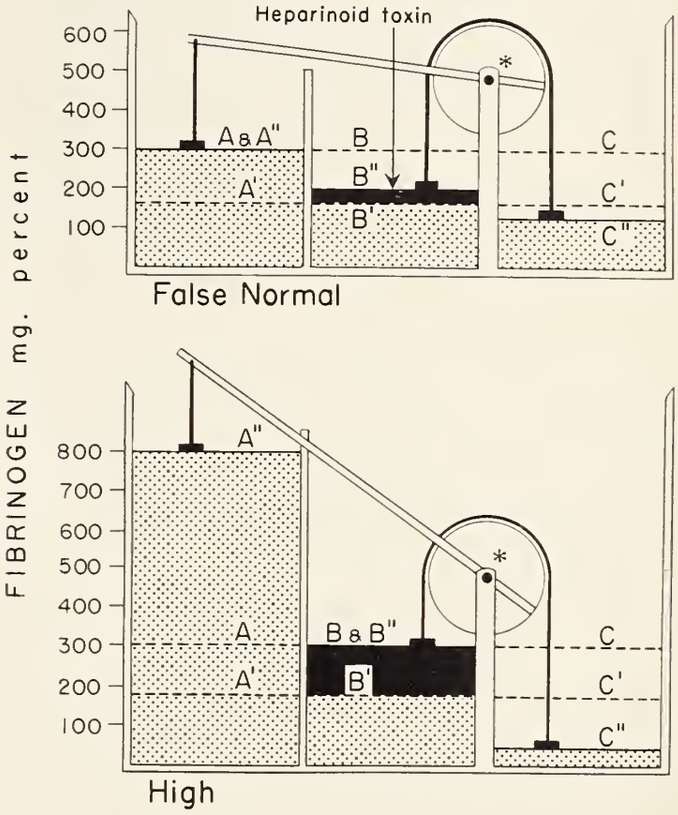


Fig. 2. Schematic illustration of the false normal plasma fibrinogen level *(above)* which is essentially congenital hypofibrinogenemia with a small amount of heparinoid toxin. The heparinoid toxin neutralizes a small amount of thromboplastin and this causes a compensatory rise in the fibrinogen. The rise in fibrinogen is necessary to maintain normal coagulability, i.e., normal clotting time in the blood. The small rise in fibrinogen is just sufficient to elevate the original low fibrinogen up to the normal level. (By removing the heparinoid toxin with protamine sulfate the fibrinogen drops to its original subnormal level.)

The high fibrinogen level *(below)* is simply the presence of a larger amount of heparinoid toxin which causes a greater compensatory rise in the fibrinogen. Homeostasis functions to maintain a normal clotting time regardless of the magnitude of the imbalance.

The false normal fibrinogen level is easily detected by the administration of 20 to 30 mg. of protamine sulfate daily for ten to twelve days with a plasma fibrinogen determination every three days. This small amount of protamine sulfate is not enough to appreciably affect the true normal

level but is sufficient to neutralize the accumulated heparinoid toxin which allows the thromboplastin to recover and the plasma fibrinogen to drop to its rightful subnormal level.

High.—The presence of a larger amount of heparinoid toxin depletes the thromboplastin reservoir and homeostasis increases the plasma fibrinogen to compensate for the loss of thromboplastin. This is schematically illustrated in Figure 2. Regardless of the height of the plasma fibrinogen level, homeostasis maintains a normal clotting time.

Summary

The plasma fibrinogen level is controlled by physiologic homeostasis, and regulated inversely proportional to the ability of the thromboplastin mechanism to convert fibrinogen to fibrin. Factors which weaken the thromboplastin mechanism cause the plasma fibrinogen to rise, while factors which strengthen the thromboplastin mechanism bring about a reduction in hyperfibrinogenemia.

Congenital hypofibrinogenemia is a common condition and appears to be the basis upon which compensatory hyperfibrinogenemia later develops. An insufficiency in the hexose polysaccharide sulfate esters (polyheparin) appears to be associated with congenital hypofibrinogenemia, and probably is a manifestation of the same metabolic defect. Unable to meet the physiologic demand for these substances created by disease and the stress and strain of living, the body forms a similar substance, heparinoid toxin, as a substitute which accumulates in the body and depletes the thromboplastin mechanism. The homeostatic imbalance thus created in the coagulation mechanism is immediately reflected by a compensatory increase in the plasma fibrinogen level.

The plasma fibrinogen level interpreted in relation to the clinical condition associated with it, and in the light of its place in homeostasis, is an important aid in diagnosis and prognosis as well as an excellent guide in therapy.

Acknowledgment

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Rehabilitation of the Chronic Arthritic Hand

By Max Karl Newman, M.D.,
A. S. Goldstein, M.D.
P. Wall, R.P.T., and
H. B. Jewett, O.T.R.
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IN THE FIELD of physical medicine and rehabilitation, the trend of activity has been toward the total concept of management of chronic incapacity. Hence, chronic arthritis, as a major disease syndrome, along with neuromuscular and other musculoskeletal disease, warrants tremendous scientific interest. Most important in the therapeutic trend of this disease has been the intense effort to prevent and correct deformity, and many self-help devices are available to replace lost functions of the extremities, especially the hands. Our thesis, in chronic arthritis, particularly the rheumatoid type, will concern itself with the management of hand deformities and disabilities. A program of prevention and correction will be developed.

Bunnell has aptly described the importance of the hand. Next to the brain, the hand is the greatest asset to man.[1] It is the organ of development of man's handiwork; it is also an organ of expression and a special sense organ for steriognosis. "Our brains are crowded with memories and conceptions of objects and actions which have been built up and developed by sensation through the use of the hands. . . . Our fundamental activities concerning shelter, food, combat and perpetuation, and in constructing, building, drawing, sculpturing and thinking derive from the hands." We, now in a mechanized "age of trauma," industry and mechanized warfare, are bound to have hand involvement due to trauma and disease. At the present time, the hand leads the list of compensable injuries. Disability of the hand is a serious economic problem since it provides the livelihood for the manual worker.

From an evolutionary standpoint, the brain-hand combination accounted for the superiority of man over animal. The brain developed the hand, and the mental processes improved because of the feeling and movement of the hands. Consider the remarkable self job of rehabilitation accomplished by Helen Keller despite the absence of the senses of sight and sound. Even in language and thought, the hand is most important: handle, handy, second hand, give the hand in marriage, all hands on deck, rule with a strong hand, et cetera. Since the hand is composed of exact machinery of much refinement, and the tissues are of great delicacy and specialization, the rehabilitation of the hand function, when upset by chronic arthritis, is a most important therapeutic procedure.[1]

Pathology

There are many disturbances which produce hand problems. Closely allied to chronic arthritis are the following types: (1) skin and flexion contractures—scar tissue, keloids, flexion contractures due to infection and burns; (2) Dupuytrens contracture of the palmar fascia; (3) Volkmann's ischemic contracture associated with elbow injuries; (4) upper extremity disturbances—cervical motor or sensory root compression, scalenus anticus syndrome, brachial plexus injuries, shoulder dislocations, et cetera; (5) congenital deformities of the hands; (6) vasomotor and trophic hands—causalgias, sympathetic reflex dystrophies, collagen-type diseases, et cetera; and (7) tumors of all types. However, our discussion will be confined to the consideration of the impaired hand function associated with rheumatoid arthritis. Generalization of this discussion could easily apply to the above-mentioned syndromes.

The stages of development of the rheumatoid hand disability is that of early or late. In the early stages, the hand assumes the typical deformity of ulnar deviation, hyperextension of the metacarpophalangeal joints and acute flexion of the interphalangeal joints.[2] In the later stages, the clinical entity most commonly presented to the physiatrist for rehabilitation consists of ulnar deviation, flexion at the metacarpophalangeal joints and hyperextension of the proximal interphalangeal joints and flexion of the distal interphalangeal joints, contraction of the palmar fascia, subluxation of the proximal phalanges anterior to the metacarpal heads, and space loss at the proximal phalangeal joints.

Pathologic Physiology

The groups of muscles that supply the hand consist of the dorsal interossei, lumbricales, pal-

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mar interossei, flexors and extensors of the fingers. The dorsal interossei are bipennate muscles which maintain the normal alignment at the metacarpophalangeal joints of the phalanges. The pull of these muscles is centered in a central tendon, hence producing an inefficient mechanical force of muscle contraction. Similarly, due to the extensive muscle weakness about the hand in rheumatoid arthritis, and the positioning of the fingers normally in ulnar deviation along with the index finger, there results a stretching and weakening of the radial components of the dorsal interossei; at the same time, the positioning results in a shortening and contracture of the ulnar components. Therefore, the angle of insertion to the central tendon is less acute and the pull is even less effective. The palmar interossei, which are fusiform muscles, transmit their tension directly to the tendon of insertion, thus increasing the mechanical force of muscle contraction. Hence the imbalance of the dorsal and palmar interossei may account for the deformity of ulnar deviation.

The second deformity, flexion at the metacarpophalangeal joints and extension of the interphalangeal joints, results from several processes. Because of the pain of the arthritic process, the patient tries not to flex the fingers; the least painful motion is flexion of the metacarpophalangeal joints with splinting of the interphalangeal joints to produce an alienated flexor function of the hand. Since the lumbricales are flexors at the metacarpophalangeal joints and extensors of the interphalangeal joints, they hypertrophy to the detriment of the extensors and flexors of the fingers. The net result is the deformity described at the beginning of the paragraph.

Clinical Procedure

The aim of rehabilitation of the rheumatoid arthritic hand must be a total one. The patient must be treated from the physical, psychological, vocational, medical and surgical aspects as indicated. However, if the arthritis is progressive, a conservative program must be outlined. It can be best summarized by the four "M's" of Rose's[6] treatment: motivation, mobilization, measurement and medication.

The deformities to be treated are: (1) metacarpophalangeal flexion, (2) deformity of finger flexion, (3) ulnar deviation. Supportive therapy consists of (1) assistive devices, (2) rehabilitative functional retraining, (3) steroid therapy, (4) general medical supportive therapy, (5) corrective plastic and orthopedic surgery.

The metacarpophalangeal deformity can be treated with assistive or unassistive stretching. Use of a smooth board with a lubricant, either dry or moist, with the fingers extended, and the palmar surface of the metacarpophalangeal joints is carried out. This also stretches the palmar fascia and the joint capsule. Counterpressure can be added over the dorsum of the hand by the therapist or the patient's other hand. In this way, the metacarpophalangeal joints are lowered, the fingers are extended, and the opposite hand is motivated. Making palm prints permits the patient to observe the progress of the procedure from week to week, and the prints can be kept as the progress record.

Finger extension deformity is best influenced by an inclined plane type of occupational device. The original concept of squeezing a sponge rubber ball to strengthen the hand and to correct the deformity is not sound physiologically or anatomically, since the hand is so constructed to grasp a cylindrical and not a round object. Rose advocates the inclined plane because it is a semicylindrical object well adapted to the function of grasp, and the opposing force of the handle surface resists compression in a plane perpendicular to its surface, thus tending to force the fingers radialward as they grip the handle. Also, at the same time, assisted flexion can be provided by the therapist or the hand of the patient. The adaptability of the inclined plane to other household objects and tools is readily discernible. Hence, a saw or hammer handle, electric iron or broom can be used during the day to provide further therapy to the afflicted hand. Care in application of treatment is emphasized because of the danger of trauma to tender joint.[4]

Ulnar deviation can be helped by several simple procedures of physical and occupational therapy. Any activity that exercises the dorsal interossei by stretching the ulnar components and strengthening the radial components is used. As in the previous two deformities, assistance can be by the hand of the therapist or of the patient. Hence, we use wide-spread abduction of the fingers, especially the second and third fingers abducted radially. Again, the finger tracings left by the patient can be a measure of progress and improvement.

The assistive devices fall into two categories,

i.e., exercisers and replacers. The ideal device is one that permits free hand function while supporting the fingers. There are three devices which will be described.

1. A curtain ring is placed in the palm of the hand, and is anchored by a leather strap around the wrist. Rubber bands of varying thickness are attached to the ring, and then are attached to the individual fingers by means of circular leather thongs fastened to the terminal phalanges. Effort on part of the patient to extend the fingers serves to produce a resistive exercise which gradually corrects the ulnar deviation.[5]

2. Modified deRosa glove.[3] This glove was modified by Small and Rose. It serves to reproduce the normal function of the finger extensors and dosal interossei. A wrist band is attached to the glove and has inserted into the hooks the rubber bands which provide the so-called muscle tension. The insertion of the rubber bands is on the glove at the radial side of the interphalangeal joints (corresponding to the dorsal interossei insertions) and into the dorsum of the proximal interphalangeal joints (corresponding to the finger extensors). This permits a variation of the intensity and direction of tension of the hands. Radiographs taken with the gloves on show the correction of ulnar deviation and alteration in the subluxation of the metacarpophalangeal joints. The glove further acts as a self-induced source of radiant heat, and so influences muscle relaxation, increases circulation to the area, and acts as a mild nerve analgesic. Routine strengthening exercises of the fingers may be used concomitantly. Such details can be obtained from any text on physical medicine and rehabilitation, and consist of proper rest positioning, finger flexion and abduction, hyperextension at the metacarpophalangeal joints, radial deviation of the hand and thumb, or widespread abduction and flexion of the fingers.

There are many mechanical devices, but the difficulties are mainly the cost, the nonpliability in carrying out an exercise program suited to the individual hand, and the general unadaptability to individual deformities of the hand. One such device* is made of ebony plastic with moving parts felt cushioned, rubber covered coil springs and self-tapping screws. It fits on a table top, and permits a great variety of hand and finger development exercises, mostly in resistance for finger flexion, right palmar fascia, and dorsal and palmar interossei. Where the hand is completely anklylosed, a "Handy Hand" device is available.† This device was designed based on on the principle of the hook used as a terminal device for a prosthesis by the amputee, and constitutes a rigid form fitting glove-like structure. The device is jointed at the metacarpophalangeal joint of the fingers, and the fingers and the thumb of the patient's hand are brought together in a firm grip by the tension of the elastic bands; it requires no voluntary motion by the patient and is limited only by the power of release and grasp through scapular motion. To arrange each hand for custom fit, the prosthetist takes a series of impressions in a manner similar to that of measuring an amputee stump for a prosthesis.

Similar devices may be used in total rehabilitation of the fixed deformities in which the hand is useless. Hence we have the variation of the opponens splints, lapboard with overhead sling attachments from the wheel chair, suspension feeders attached to overhead slings for support of the forearm and glass holder with attached glass straw, feeders mounted on stands, table cutlery attached to the basic hand splint, and similar assisting devices.

Comment

Hence, it can be seen that not only is correction possible to varying degrees with the proper type of physical therapy and occupational therapy, with or without assisting devices, but also where deformities are fixed, the assistive rehabilitation devices prevent the patient from becoming an invalid.

To obtain the maximum improvement, various types of orthopedic and reconstructive surgery can be used. It is not within the scope of this paper to elaborate on the procedures used. The use of steroid drugs has provided an excellent adjunct source of therapy, especially in diminishing rest pain, muscular and articular stiffness or joint pain and tenderness on motion. It permits more active exercises within a minimum of soreness, swelling and stiffness. There is no need to detail the mode of therapeusis with corticotropin, cortisone and hydrocortisone at this time. We also suggest protein supplements to obviate the

*Manuflex Company, 2130 N.E. Klickitat Street, Portland, Oregon.

†Robin Aids, 2015 Broadway, Vallejo, California.

negative nitrogen balance and osteoporosis that occurs (at times, the addition of sublingual androgens and estrogens are useful).

Conclusion and Summary

1. The brain-hand concept is one of the most important evolutionary creations, and must be maintained to permit economic and social effectiveness.

2. The concept of deformities of the hand in rheumatoid arthritis is developed as an imbalance of hand muscles, producing the various anatomical changes such as ulnar deviation, flexion and extension deformities of the fingers.

3. A program of physical medicine and rehabilitation is described. Assistive devices for an active program of improvement are outlined, and devices for hand substitution are detailed.

4. Medical and surgical adjunct management as concomitants are suggested.

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surrounding tissues. Similiarly, the success of a sciatic block depends upon familiarity with the distribution of the sciatic nerve and the exact point of infiltration. Sacroiliac injection is simple indeed and is based upon injection of the tender spots, as elicited on pressure over the affected area. The exact technique of infiltration can be found in recent textbooks on arthritis, and it is definitely worthwhile to become familiar with it, especially for those who treat rheumatic diseases. The extra effort thus entailed will be more than compensated by the gratitude of the rheumatic patient, whose suffering and disability will have been shortened by a comparatively simple method within easy reach of the average physician.

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Management of Rheumatoid Arthritis in Relation to Physical and Surgical Measures

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IT MAY BE that scientific progress will at some time either prevent rheumatoid arthritis or permit its arrest at the very outset. In such event, a millenium could be visualized when the crippling or disabling effects of this disorder would no longer prevail. But so long as the toll remains great despite such strictly medical resources as are yet available, more thought might well be given to adjuvant measures for minimizing the damaging effects and for rehabilitation. There is quite a wide field of applicability for such measures. But their utilization requires a considerable understanding of the pathological process in its secondary effects, its vicious cycle characteristics, and the consequent tendency to disability from deformity.

In true rheumatoid arthritis, bony ankylosis or rigidity of joints is the exception. Usually, the ultimate disability stems not from rigidity, but from the nonfunctional (and at the same time pain-inducing) posture which the affected joints have assumed. And the arrest or control of the basic disease itself is often thwarted by these secondary effects of dysfunction and deformity. The latter are in large measure preventable when understood.

Mechanisms of Deformity

Appreciation of the mechanisms involved in the development and progression of deformity is most important and involves recognition of some anatomic as well as pathologic details. Such details enable us to see that initially the deforming effect is of a negative or inhibitory character. Depending on the acuteness of a disease process in the joint, either early or, in rheumatoid disease, more often later, a positive or dynamic effect supervenes.

Most of the articulations of the body, or its extremities, have action which in one direction is opening-up ("extension") in the other, closing-in ("flexion"). Now rarely does any bony configuration limit the range of motion in either direction. The range of opening up is controlled or checked by a heavy fibrous capsular ligament, which is lined by a very thin layer of synovial membrane, contains very little elastic tissue, is not very vascular and is most susceptible to fibrosis and contracture.

In most joints, the range of closing-in is limited mainly by physical apposition or approximation of the adjacent segments of the limb. The capsular ligament on this extensor aspect is thin, very elastic, has a profuse synovial surface and is highly vascular. It is in this tissue that the initial inflammatory reaction occurs and, along with it, a synovial effusion into the joint.

Now, with all joints supplied with a delicate and automatic nerve reflex arc between capsule and corresponding muscle, the routine and automatic effect of inflammation and distention of capsule on extensor aspect is muscle inhibition, atony and atrophy of extensor muscles (irrespective of nature of disease process). Hence develops the first negative effect—progressive weakening of extensor function. The second negative effect arises from the fact that the flexor portion of the capsular ligament is non-elastic; when the joint is in position of extension, no space at flexor aspect prevails in which to accommodate the increased fluid content, but with the slack of a little flexion, space becomes available to lessen intra-articular tension.

Positive factors soon enter the picture. With the extensor muscle atony, the physiological balance of opposing muscle tones is upset in favor of the flexors. And whenever any muscle fails habitually to reach its full resting length, it undergoes progressive adaptation to a shorter excursion. Much the same adaptation, although at a slower rate, follows in the heavy fibrous flexor capsule. As the disease progresses, the inflammatory reaction spreads to the initially less susceptible synovial surface of this part of the capsule. Uniformly, and regardless of nature of disease process, an inflammatory process in this type of capsular tissue produces not inhibition, but spasm of corresponding muscles; and so another positive deforming factor enters the picture—muscle hypertonicity and fibrotic capsular infiltration.

In the digits, the existence and the complicated function of the so-called "intrinsic" muscles results in this disease in a much more puzzling (but still understandable) deformity picture. This will be

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elaborated on below, but for the moment consideration may rest with the above basic and general factors in deformity production.

Measures to Combat Deformity

Reverting to the above sequence of pathological or physiological events, the first logical approach would be to combat the reflex muscle atony and atrophy by massage and exercises, at first gentle but progressing to resistance exercise, which alone will restore muscle power. This would be in addition to articular heating (mild) and massage. It could well be mentioned in the latter connection that simple acute hyperemia without mechanical emptying of engorged venous and lymphatic channels by massage and exercise is of limited value.

Later, when in a moderately advanced stage adaptive shortening of antagonistic muscle groups and capsule has occurred, the treatment must start with gentle stretching of the muscles until the articulation will permit passively a close to normal range of extension. No muscle can be built up far unless it can assume close to its maximum position of contraction. The passive or assisted exercises must continue until this can be achieved actively and proceed against resistance or load.

Protective Relief of Pain

All too frequently, a stage of the disease has supervened where the vicious cycle of pain on any movement, reflex inhibition and reciprocal atony and contracture all prevail. Measures must be sought to break this chain of events. These are available in the form of protective splinting or bracing. But in this connection, account is taken of the known fact that prolonged and uninterrupted immobilization is distinctly harmful in rheumatoid disease (save where its necessary aim is to secure competent rigidity of a hopeless joint). So fixed splinting must be interrupted for increasing periods in the day as the cycle resolves itself.

Splinting and bracing have the following three forms of utilization: (1) rigid, (2) electively rigid, and (3) dynamic. The rigid splint, which may be metal, plastic, or plaster-of-Paris, is adapted to two phases. It may have to be utilized primarily for relief of pain by rest and relaxation of spasm, and may have to conform to an existing position of deformity. As relaxation occurs, the posture of the splint will be changed progressively to the optimum physiological one, this being a little short of the normal extension range of the articulation. For example, in the lower extremity the ankle would be at a right angle, the knee at about 10 to 15 degrees short of full extension, and the whole limb held in neutral position at the hip (when it is involved) by a cross-bar. The wrist should be in a position of moderate extension without ulnar deviation, basal finger joints in a few degrees flexion, interphalangeal joints (see below) in 45 degree flexion. The rigid splint may eventually be for night use only.

An "electively rigid" splint or brace has its usual application to the lower extremity (and may include features of controlled range or mobility). For example, after obtaining correction of flexion contracture at the knee, quadriceps re-education to such strength as will prevent sagging posture on weight-bearing may be only slowly obtained; yet walking activity may be most desirable. So a long knee-locking leg brace is utilized, maintaining extension on weight-bearing only. With crutches and bilateral bracing, one side can be unlocked at a time for steppage and reciprocal joint motion re-education.

The wrist joint presents a very dominant indication for progressive correction of flexion deformity, and not only from the weakness of digital function which that deformity entails. For self-assistance with hands, the flexed wrist posture prevents taking weight on the "heel" of the hand. The sensitive fingers will not permit pressure, so the individual pronates the hand to take pressure at its radial thenar aspect. This flattens the thumb into the palm and produces ulnar deviation of the digits as well as the wrist in a very damaging fashion.

Though seemingly apart in character from splinting or bracing, nevertheless shoe design and correction to prevent or control the anticipated pronation or valgus deformity of that area stems from the same basic considerations. Deformed and painful feet militate against control of posture and balance in the joints above. In subtalar involvement (the commonest), the peroneal muscles—themselves supplementary foot flexors—are prone to spasm with a vicious cycle of other foot deformities. Shoe adjustments alone may be inadequate, indicating further assistance by a T-strap at the inner side of the ankle, pulling to an upright on the other side.

The third form of mechanical aid is termed "dynamic" splinting. It has long been used in joint trauma for the purpose of correcting contractures

and re-educating muscles, with applicability to hand conditions much stressed by Bunnell, so that his name is commonly attached to such procedures. They constitute mobile splinting, in which functional activity of muscles and joints obtains, but with springs or elastic bands assisting weak muscles or stretching contractures. This has a considerable field of utilization for the rheumatoid hand.



Fig. 1. (*above*) Mr. G. Interphalangeal hyperextension deformity, from secondary displacement and overpull of intrinsics. A rheumatoid residual, though typical of condition known as the "pin-roller's hand."

Fig. 2. (*below*) Mrs. T. Left hand is illustrative of ulnar deviation deformity of digits. The right hand, in which the deformity was more severe, has been surgically corrected.

Prolonged Forcible Correction

Other methods for overcoming contractural deformity involve the gradual and continued application of greater force. One example is the use of weight traction, especially in resistant flexion contracture at the knee. It is most important that this be overcome for many reasons. First is the fatigue load on the initially weakened extensor apparatus, when standing or walking is done with knee in flexion. It takes a minimum of extensor muscle power for stability in full or nearly full extension: but overwork, strain and fatigue are constant otherwise and increase disproportionately with an increasing angle of uncorrected flexion. Second, it is a known fact of kinetics that while a large arc of flexion is not necessary for rebuilding of power, a close to normal range of extension is essential. A third consideration is that standing or walking with knees partly bent imposes traumatic strain on the feet, as well as fatigue both at hips and low back, all these sites being prevented from normal static balance.



Fig. 3. Mrs. M. Digital effects of rheumatic disease in feet. Complete dislocation of metatarso-phalangeal joints. To initial physical inspection, the hammer toe effects are the more obvious ones.

Finally, in this defective posture, there resides the probability of secondary joint damage of chronic traumatic nature sustained by the femoropatellar articulation. Unlike other joint cartilage, that of the patella is not physiologically adapted to sustained compression; and that is what it receives, for definite mechanical reasons, when weight is constantly taken in much knee flexion. This particular chondrous tissue is very susceptible to attritional breakdown; and the sensitiveness thereby engendered reflexly adds to weakness and instability. It should not be forgotten that hyaline cartilage has no reparative or replacement capacity whatever.

Early flexion contracture at the knee of not over 30 degrees will usually yield in a week or two to 10 or 15 pounds of "Buck's extension" traction. A greater degree of deformity must be met by the initial use of a type called Russell's balanced traction, which serves to correct the tibial subluxation along with the flexion.

Contractures of 45 degrees or more of any duration are likely to necessitate the use of the hinged and progressively wedged plaster cast, the hinge joint being placed just a little proximal to the joint line in order to encompass correction of the subluxation. It is quite necessary to protect the subcutaneous surface of patella and dorsum of foot

with thick sponge-rubber padding, and the back of the heel by a window. Contractures of greater degree or of long standing usually require the well-established surgical procedure of posterior capsulorrhaphy.

displace palmar-ward with the phalanx. The resultant functional action then becomes one of further flexion and subluxation, with increasing resistance in efforts to "open" the hand. With extensor capacity thus weakened at the basal joints,

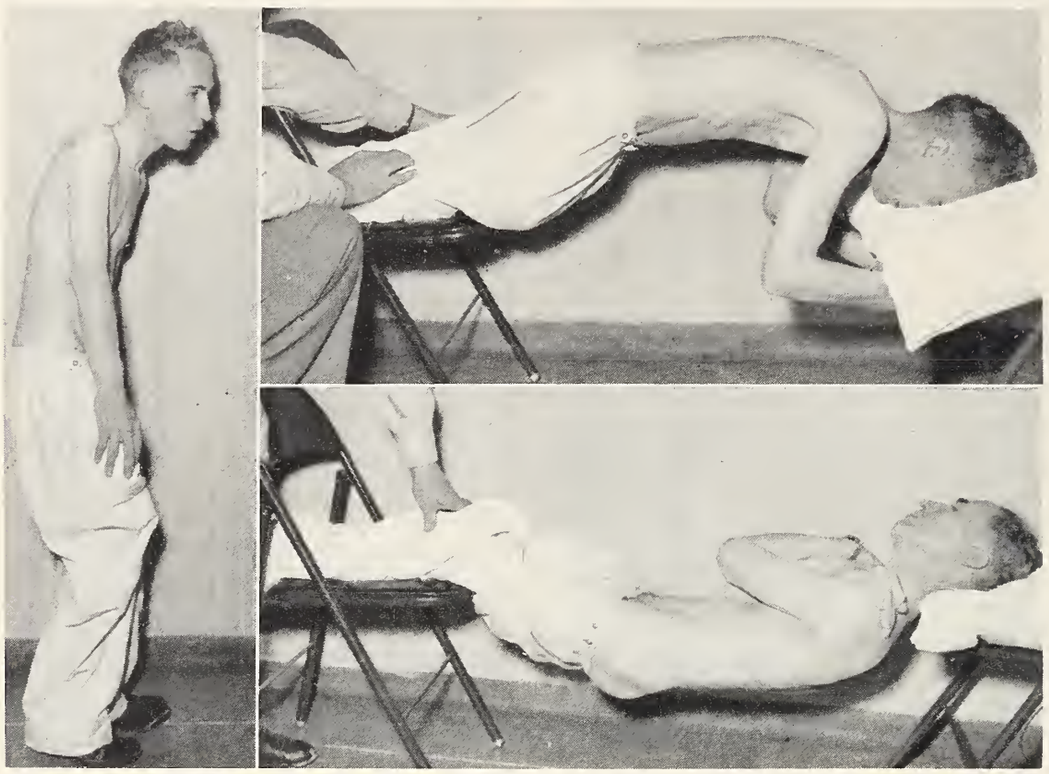


Fig. 4. Mr. B. Bony rigidity, of fifteen years' duration, extending from skull to knees, latter mobile. Note in standing view how flexion posture in knees is imposed by flexion deformities above. Patient was perfectly comfortable suspended either prone or supine between head and knees.

The Rheumatoid Hand

Separate consideration of hand deformities is indicated by reason of the kinetic factors inherent in the presence there of what are termed the "intrinsic muscles" and in their complicated anatomical and dynamic relations. While a small part of this muscle group accomplishes "fanning" action of the fingers, the major function is that of extending the small joints when the basal ones are flexed. The initially persistent relaxation in posture of flexion of the basal joints gradually results in disturbed kinetic effects, which bring about a vicious cycle of progressive deformity of the hand. The stages by which this comes about and also how it can be combatted are understandable.

With an initial process of effusion, synovial proliferation and capsular distention, the weaker dorsal portion becomes thinned out and lax, permitting a palmar subluxation, at the metatarsophalangeal joint, of the base of the phalanx. The normally axially placed tendons of the intrinsics spasm and instinctive "over-pull" of the intrinsics in their function of extending the small joints bring about the commonly observed attitude of interphalangeal hyperextension and finally, by contracture, a fixed hyperextension. "Closing" of the hand can then be accomplished only by flexion action of the stiffened fingers at their bases. As this now can be accomplished by both the intrinsics and the essential flexors, the balance is completely upset, the weakened essential (long) extensors being at the same time mechanically blocked in their function by the basal subluxation.

Such progressive hand (and also wrist) deformities and weaknesses are a paramount indication for the use of the Bunnell type of dynamic corrective splinting. Such appliance, worn on the back of the hand and wrist, is not in the way in most activities. It is adapted to give constant elastic uplift to the flexing and subluxating basal phalanges and to allow active vigorous function of the flexors to act on the interphalangeal joints



Fig. 5. Mr. B. After bilateral hip arthroplasty. Erectposture (within limits of flexed spinal column) obtained as well as 90° flexion range at hips. This patient wasshown going up and down steps on one of the television periods of the 1954 Michigan Clinical Institute program.

and overcome their hyperextension. When there is contractural tension in the joints, they can be constantly or intermittently stretched by a light elastic pull to the finger tips of a cotton glove.

Ulnar Deviation

A frequently seen secondary (and occasionally primary) hand deformity, and one also susceptible of restraint by dynamic splinting, is that of progressive ulnar deviation of the digits at their bases. Irrespective of initiatory factors, once under way, palmar subluxation of the tendons of the radial intrinsics and ulna-ward slipping off the knuckle of the long extensors set up a vicious cycle for progression through functional activity. It is more commonly seen in the rheumatoid hand of a woman than that of a man, and should be for reasons associated with anatomical differences of normal posture. Also for good reasons it is more common in those who, by reason of lower extremity disability, must do much grasping of chair-arms, and in those who because of a wrist flexion deformity cannot use the "heel" of the hand, and so obtain support from the radial or thumb side by pronation.

Advanced ulnar deviation deformities of the digits are perhaps the ones which most dramatically represent the outcome of a vicious cycle of disbalanced kinetic forces, secondary to—but operating without any positive contribution from—the pathologic process in the articulation itself. While dynamic splinting, including an elastic pull opposing the direction of drift, is effective at an early stage, at an advanced stage functional rehabilitation can be secured only through reconstructive surgery and with limited goals.

Foot Deformities

Mention has been made above of atonic effects on postural control of ankle and foot. With resultant planus and valgus and mechanically consequent further damage to the subtalar joint, the inevitable response of peroneal spasm occurs. The forefoot is abducted and everted; the great toe yields to pronation pressure; the small toes, pressed against the outer side of the shoe vamp, automatically curl and retract. Their intrinsic musculature, now unbalanced, enhances the deformity.

To any observer, the "hammering" of the toes is obvious enough. What is less apparent is a progressive and rapidly complete dorsal dislocation of the proximal phalanges on the metatarsal heads, and a consequently miserable situation for weight-bearing function.

Corrective shoeing and ankle brace control are effective only if instituted at the outset of symptoms. Splinting is not applicable. The attack must be very aggressive once any deformity has devel-

oped. Since alignment statically is essential and mobility of minor importance, manipulative correction and immobilization to obtain rigidity must be resorted to. A combination of intramedullary pin fixation of corrected toes and boot cast is very useful. Advanced deformities, including dislocations, require open surgical reconstruction. Such radical measures should be introduced regardless of control of arthritic processes elsewhere.

Major Surgery

It is probably well appreciated that in many instances the "burned-out" arthritic patient, if not too long bedridden, can be very considerably rehabilitated by major surgery. For instance, an extensively destroyed knee joint or hip joint may be completely disabling, not through loss of mobility, but from inevitable pain on any functional effort or from anklyosis in position of the deformity. Resection and arthrodesis in optimum position restore its basic usefulness. In selected cases of bilateral ankylosis, complete or partial, arthroplasty may bring very considerable rehabilitation, not only in the above joints but also for the elbow.

What is less extensively appreciated is the rehabilitative possibilities in certain types of painfully disabling but relatively mobile knees, impaired by residual rather than active pathological effects. One such type represents a pathologic condition largely restricted to excoriation of patella articulation, which is most successfully treated by patellectomy. Another constitutes chronic hypertrophic villus synovitis and permits excellent restoration of painless function by either partial or total synovectomy. In instances of the synovectomy, where sometimes the excised pathological tissues will amount to two fistfuls, a striking amelioration of symptoms in remote joints has often followed.

Summary

For, on the one hand, the amelioration and, on the other, functional repair of the local effects of rheumatoid arthritis, there must be first an understanding of the tendencies to and the mechanisms of deformity. Secondly, there is frequently need for logical preventive and corrective measures by physical means. The more effectively invalidism can be combatted, the more likely is the disease to be brought under control. Surgical measures to overcome invalidism during the course of the disease need be kept in mind as well as for rehabilitation at a "burned-out" stage.

GROWTH OF BONES IN MAN

(Continued from Page 300)

little precise biochemical information about most of these processes, particularly the manner in which matrix forms, how absorption occurs and especially the manner in which growth hormone acts. The necessity for continuing research is obvious, and it is urged that such research include primate material as far as possible.

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Polycyclic Continuous Acute Gouty Arthritis

Long-Term Clinical and Metabolic Study

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GOUT typically shows an episodic pattern of joint involvement with entirely symptom-free periods between the attacks. Persistent arthritis in a gout patient seldom is due to continuing gouty activity; more often it represents traumatic arthritis in a joint injured during the period of vulnerability induced by acute gout or, in other cases, secondary osteoarthritis activated by antecedent gout. Persistent joint disability also occurs in chronic gouty arthritis, a poor designation which denotes intimidation of joint function by extensive tophaceous deposits. Finally, there remain a few patients with polycyclic continuous acute gouty arthritis; that is, attack after attack occurring so close together in time that, instead of the usual asymptomatic interval between attacks, there occurs only some periodic lessening in the intensity of symptoms.

This report is concerned with a patient who developed uncontrollable polycyclic continuous acute gouty arthritis. The causative factors appeared to be three: (1) the patient's gout was unusually severe and active, (2) the usual therapeutic effects of colchicine were unavailable because of the existence of hypersensitivity to this drug, an extremely rare misfortune, and (3) the endocrine adaptive mechanism of the hypothalamo-pituitary-adrenocortical system which may assist in ending acute gouty arthritis was incompetent because of the existence of selectie hypopituitarism-with-respect-to-corticotropin. In other words, he was deprived of the two best defenses against gout in the presence of disease of unusual activity.

The study covers a period of almost 2,900 days since June, 1946, and is divided into seventeen periods of different lengths on the basis of treatment used (Table I). In the first two and one-half years of the study, the treatment given was conventional and consisted largely of careful attempts to derive the maximum benefit from measures of accepted value. By the end of December, 1948, it was quite clear that this procedure had failed. The patient, despite all efforts, was hospitalized with the most severe gout the writer has yet seen. He had lost 68 pounds in a little over a month. A falling creatinine coefficient indicated loss of muscle mass. Renal impairment also was advancing, and the outlook for a return to normal activity, or perhaps even for life, was increasingly discouraging. His treatment thereafter consisted chiefly of newer experimental modalities and will be discussed in detail.

Some of the findings during the period before 1950 were presented at the First Armour Clinical ACTH Conference.[7] Six features of our experience with this patient are unique and have not previously been reported in the medical literature: (1) maintenance of full colchicinization at maximal tolerated levels for a period of six years, (2) continuous administration of corticotropin in suppressive, individually adjusted dosage for four years in a gout patient, (3) prompt, but temporary, relief of acute gouty arthritis by adrenal cortical extract in large dosage, (4) permanent cure of hypersensitivity to colchicine by a brief course of corticotropin, (5) the existence of selective hypopituitarism-with-respect-to-corticotropin as a well differentiated endocrinopathy with predictable consequences upon the course of gout, and (6) simultaneous use of full continuous colchicinization, suppressive corticotropin dosage, phenylbutazone, and probenicid to achieve maximum control of gout.

Methods and Subjects

The biochemical methods employed are those described in the earlier report of Wolfson and Cohn.[7] Urinary neutral Pettenkofer chromogens were estimated by the method of Munson and coworkers,[3] 17-ketosteroids by the method of Robbie and Gibson.[5]

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TABLE I.

Study Period and Days Duration	Colchicine Route and Tolerance mg./day	Corticotropin Requirement units per day	Phenylbutazone or Probenicid grams per day	Articular Symptom Index arbitrary units	Blood Pressure mm. Hg.	Serum Urate mg. %	Serum Creat mg. %	Curate Creat	17-KS Creat mg./day	P.C. 17-KS	Serum Cholesterol and Ester Per Cent mg. per 100 ml. & per cent of total	Weight* pounds	Creat Coeff**Z mg./kg./day	Creat (GFR)** c.c./1.73 sq. m.
A. 1 to 853	Traditional brief courses only	—	—	>200	130-150 70-104	11.8 11.8	1.05 1.06	0.025 0.025	1.3 (ket)	—	199 68% ester	284	24 (32)	112 (149)
B. 854 to 915	Fully colchicinized, oral, 0.36	—	—	300		14.3	1.05	0.022	1.2 (ket)	—	240 69% ester	218	23 (23)	102 (104)
C. 916 to 1165	Fully colchicinized, i.v., 0.42	occasional in attack	—	<200		10.0	1.00	0.058	—	—	204 70% ester	270	17 (22)	85 (108)
D. 1166 to 1190	I.v. route ris from 0.42 at beginning to 1.20 at end	61.01 (1949 fall hay fever season)	—	<150		8.0	1.05	0.033	—	—	— —	270	19 (24)	97 (122)
E. 1191 to 1212	Fully colchicinized, i.v., 1.20	—	—	>150 100		13.0	1.25	0.033	—	—	— —	264	19 (23½)	97 (120)
F. 1213 to 1512	Fully colchicinized, oral, 2.50	occasional in attack	—	>150		11.5	1.57	0.044	4.0	—	— —	276	19 (25)	60 (78)
Suppressive Use of Long-Acting Corticotropin in All Subsequent Periods														
G. 1513 to 1602	Fully colchicinized, oral, 1.70	58.8 (plus low calorie diet; 1950 fall hay fever)	—	<100	150 106	13.7	1.64	0.049	5.1	—	— —	256	18 (22)	71 (85)
H. 1603 to 1632	Partial withdrawal of colchicine for trial of N-methylcolchicamid, aver: 1.25	39.4	—	163		10.2	1.28	0.045	5.2	—	242 74% ester	261	16 (20)	53 (65)
Fully Colchicinized to Tolerance by Oral Route—Plus Suppressive Use of Long-Acting Corticotropin in All Subsequent Periods														
I. 1633 to 1692	Fully colchicinized, oral 1.70	41.6	Probenecid 2.0	30	150 70	6.4	1.42	—	—	—	252 71% ester	276	—	—
J. 1693 to 1742	Fully colchicinized, oral 1.83	39.4	—	92	154 110	10.3	1.18	—	—	—	179 —	286	—	—
K. 1743 to 1832	Fully colchicinized, oral, 2.10	33.9	Probenecid 2.0	98	—	—	—	—	—	—	— —	—	—	—
L. 1833 to 1882	Fully colchicinized, oral, 2.10	56.4	—	154	154 100	10.3	1.20	—	—	—	169 68% ester	—	—	—
M. 1883 to 2022	Fully colchicinized, oral, 2.10	55.8	Probenecid 1.0	84	155-180 110-120	7.4	1.45	0.076	5.5	0.26	188 70% ester	284	20 (27)	66 (88)
N. 2023 to 2222	Fully colchicinized, oral, 2.50	23.5	Probenecid 2.0	98	168-170 110-114	6.4	1.49	0.104	4.1	0.19	150 71% ester	278	21 (27)	68 (89)
O. 2223 to 2472	Fully colchicinized, oral, 2.50	19.7	Phenylbut. 330	68	150-166 108-115	9.9	1.20	0.038	—	—	248 81% ester	283	21 (28)	85½ (114)
P. 2473 to 2672	Fully colchicinized, oral, 2.42	24.6	Phenylbut. 200	84	168 108	9.4	1.29	0.058	5.4	0.34	— —	297	20 (28)	74 (103)
Q. 2673 to 2872	Fully colchicinized, oral, 2.34	19.6	Probenecid 2.0 Phenylbut. 400	64		6.5	1.30	0.088	—	—	264 78% ester	297	20 (28)	74 (103)

Pharmacologic Comparison of Treatment Schedules in Gout. Calculation of the articular symptom index is discussed in the text. Except during Period B, the values indicated for Periods A through G are estimates based on a somewhat different recording method used at that time. The urate clearances, creatinine clearances are based on 24-hour samples of urine. The abbreviation (ket) indicates a 17-ketosteroid value (17-KS) was obtained on a ketonic fraction. P.C./17-KS is the ratio of Pettenkofer chromogen to 17-ketosteroid in the crude neutral urinary steroids. In the final two columns, the figures not in parenthesis are calculated from actual body weight while those in parenthesis are based upon 120% of ideal body weight and probably are more realistic. The values for these two functions in Period A appear implausibly high.

AGE: 39
HEIGHT: 5'10"
WEIGHT: 270
ONSET OF CLINICAL GOUT: 1939
MARRIED, ONE CHILD



RENAL FUNCTION:

HISTORY OF ACUTE G.N., 1922
TRANSIENT NEPHROTIC EPISODE, 1924
NORMAL SEDIMENT, FT.T. ALBUMIN
NORMAL I.V. PYELOGRAM
GLOMERULAR FILTRATION RATE, 117 c.c./min./1.73 sq.m.
NO HYPERTENSION

ENDOCRINE STATUS:

URINE 17-KETOSTEROID, MG./DAY:	1.66
SPERM COUNT, PER EJACULATION:	100,000,000
NORMAL BODY HAIR, MALE BITEMPORAL BALDNESS	
CREATININE COEFFICIENT:	20.5
ABNORMAL CREATINURIA:	ABSENT
BASAL METABOLIC RATE:	-9%
RESPONSE TO 25 MG. ACTH,	
FIRST TEST DAY:	ABSENT
FOURTH TEST DAY:	SUBNORMAL
RESPONSE TO 0.3 MG. L-EPINEPHRINE,	
NO ACTH PRIMING:	ABSENT
AFTER ACTH PRIMING:	ABSENT

HEMATOLOGICAL FINDINGS, MEDIAN

ERYTHROCYTES:	4,650,000
HEMOGLOBIN:	13.8 GM.%.
HEMATOCRIT:	42
TOTAL LEUKOCYTES:	8600
EOSINOPHILS (Randolph):	260
LYMPHOCYTES:	2160
MONOCYTES:	515
GRANULOCYTES:	5665

PURINE METABOLISM, MEDIAN:

SERUM URATE:	10.8
SERUM OXYPURINE:	0.24
SERUM CREATININE:	1.03
URINE URATE/CREAT.:	0.41
URINE OXYPURINE/CREAT.:	0.01
^{C}URATE/^{C}CREATININE:	0.049

LIVER FUNCTION:

NO SIGNIFICANT FUNCTION DEFECT
SERUM CHOLESTEROL;
INTERVAL: 223, 67% esters
ATTACK: 166, 69% esters

Fig. 1. Basic history and certain significant laboratory findings in Mr. M. K.

The data shown were included in our first report on this patient.[7] Two subsequent normal serum P.B.I. values and normal urinary gonadotropins during long-term corticotropin treatment are additional evidence for normal gonadotropic and thyrotropic function by his pituitary. There is still no urinary abnormality except for traces of albumin. The excellent preservation of glomerular filtration rate with serum urate concentrations continuously over 10 mg. per cent since he first was seen represents a distinctly unusual combination. The typical extremely low 17-ketosteroids (ketonic) with normal spermatogenesis is an interesting and frequent finding in the gouty patient.

Articular activity was graded each day in a scale from 0 to 3-plus; the figure used for the day was that applicable to the most severely involved joint. This quantitative scale was not rigidly adhered to until period H. In earlier periods, except B, quantitative estimates are approximate. However, in period B all days of the period had 3-plus activity. The *articular activity index* is the sum of 3 (per cent of days with 3-plus activity) plus 2 (per cent of days with 2-plus activity). This calculation ignores minimal (and therefore somewhat equivocal) activity and, logically, it weights severe involvement as more important than moderate involvement. The maximum value of this index is 300.

The corticotropin occasionally given briefly for attacks in Periods A through F usually was aqueous crude corticotropin. Thereafter only long-acting preparations were used, generally once every day to once each week except for a brief period of twice daily administration in Period G. The patient was carefully trained in dosage self-regulation according to principles outlined elsewhere.[4]

The following medications were given routinely and receive no specific mention in the tables: (1) two grains of desiccated thyroid during long-term corticotropin therapy, (2) pyribenzamine during the hay fever season (last two-thirds of August, September, first third of October) each year beginning in 1949, (3) supplementary potassium chloride and calcium lactate according to schedules given elsewhere[4] when average corticotropin dosage was over 40 units/day, (4) antibiotics of appropriate nature during infectious disease or minor surgery, such as dental extraction.

The establishment and maintenance of full colchicinization was accomplished as follows: When the intravenous route was used, some selected dose was given daily until diarrhea occurred. None was then given until these symptoms ended. Daily ad-

ministration then was resumed at a very slightly lower level. If no diarrhea occurred within a week, the possibility of a slight increase in tolerance was explored by slight elevation of dosage. A similar technique was used to determine daily oral colchicine tolerance. Intravenous colchicine tolerance has not been estimated in gout patients other than Mr. M. K. Maximum oral tolerance has been determined in a number of other patients. It is seldom less than 1.5 mg./day or more than 2.5 mg./day. The maximum fluctuation in tolerance from year to year rarely exceeds ± 0.5 mg./day. No toxic reactions to full colchicinization have been observed in a number of patients so treated for more than five years.

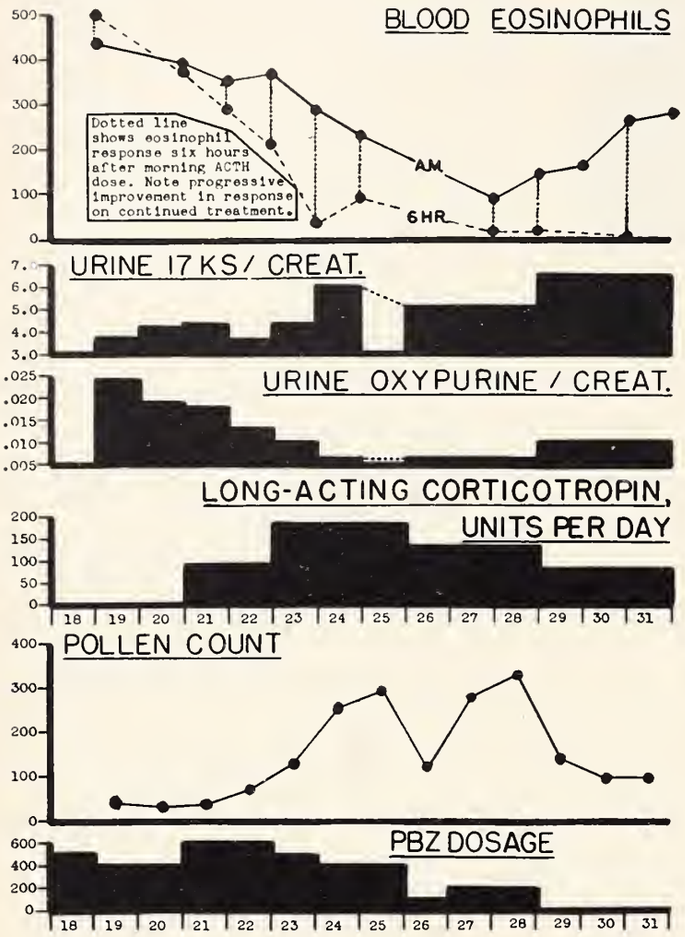


Fig. 2. Confirmation of hypopituitarism-with-respect-to-corticotropin in Mr. M. K.

The minimum response detectable in the eosinophils of a normal subject after one similar corticotropin dose was not obtained until four doses were given; an average normal response was not obtained until the end of the study. No significant increased excretion of 17-ketosteroid appeared for three days. Together with previously reported data,[7] these findings show that Mr. M. K.'s adrenal cortex is markedly unresponsive to initial doses of corticotropin but eventually responds normally after continued stimulation. The implication of this finding is that the spontaneous secretion of corticotropin by the pituitary is greatly reduced. The additional requirements for the suggested diagnosis are the demonstration that other hypophyseal functions are essentially intact; these data are given in Figure 1.

The significance of the occurrence of this selective pituitary defect in gout patients is twofold. They will be unable to terminate their attacks by releasing extra corticoid and, in addition, their attacks will be relieved only slowly by exogenous corticotropin since the adrenal cortex must first be stimulated for a period.

There is at least a hint of a more basic relationship between this disturbance and gout. All four known patients with this endocrinopathy have been gout patients.[1,2,7] In addition, the defect of rebound hypersecretion of corticoid often observed after withdrawal of exogenous corticotropin from gout patients may represent a transition stage between the normal function and the full-blown endocrinopathy shown here.

Results

Figure 1 summarizes certain important aspects of the patient's history and laboratory findings prior to the institution of corticotropin therapy. His marked obesity is interesting and intractable. The absurdity of labeling such a patient as uncooperative because he refuses semi-starvation has seldom been more apparent than in this man who has so carefully kept his own records and has gone to great efforts to make possible this unusually prolonged study.

Table I summarizes the successive therapeutic periods of the study. Two general points deserve comment in addition to those included in the latter description of successive changes. (1) Long-term corticotropin treatment for four years did not result in any persistent hypercorticoid manifestation. There was, for example, no progressive hypercholesterolemia such as is seen if the effects of corticogenic hypothyroidism are not prevented. The creatinine coefficient showed a gain in muscle mass, not the loss of muscle seen in Cushing's syndrome. (2) In our earlier report[7] we described the surprising disappearance of hypersensitivity to colchicine during the first course of corticotropin treatment. It will be noted that this hypersensitivity never has returned.

Figure 2 confirms the existence of initial unresponsiveness of the adrenal cortex to corticotropin which previously had been shown by other studies.[7] Since thyrotropic, growth, and gonadotropic functions of the pituitary appeared normal (Fig. 1) and since the slow appearance of increased adrenocortical function could be elicited with persistent stimulation, there is ample evidence for the diagnosis of selective hypopituitarism-with-respect-to-corticotropin. The clinical significance of this defect is easily understood: studies have shown that increased endogenous secretion of pituitary corticotropin ultimately will terminate severe attacks of gouty arthritis in the usual gout patient, but this

protection was absent in Mr. M. K. So far as one can tell from relatively imprecise data on metabolic functions and 17-ketosteroid output, continued stimulation eventually restored at least normal responsiveness to the adrenal cortex.

In Period A (Table I) treatment consisted primarily of attempts to give the usual courses of oral colchicine but, of course, without success since so little could be given. Low fat, high protein, high carbohydrate diet; low fat, low protein, high carbohydrate diet; intravenous glucose during attacks; 5-pregnenolone, pregnentriolone, testosterone and other androgens, podophyllotoxin, estrogens and certain other suggestions were evaluated. None modified the disease course.

In Period B, 3-plus articular activity was present continuously. Because maintenance of full colchicinization had been found highly effective in other gout patients subject to frequent attacks, it was prescribed for Mr. M. K. By the oral route the average daily colchicine tolerated without bloody diarrhea was only 0.36 mg. per day. At this point, in December, 1948, a single intravenous infusion of 50 ml. of a specially concentrated aqueous adrenal extract prepared by the Wilson Laboratories was given to test the importance of this hormonal factor. Marked relief began two hours after the rapid infusion and ended abruptly thirty-six hours later, when the attack returned with a fury unequaled in the writer's experience. It seems unlikely that more than 25 mg. of hydrocortisone could have been contained in this 50 cc. of extract. Its prompt relief of the attack suggests a very low level of endogenous cortical secretion. The exacerbation after thirty-six hours suggests that even less corticotropin was secreted at this time than before the infusion.

In Period C, in the hope that bypassing the gastrointestinal tract would enable more colchicine to be given without diarrhea, the patient was transferred from oral to intravenous colchicine, but still carried at maximally tolerated dosage. The slight extra amount of colchicine which could be given by this route (average tolerance 0.42 mg./day) appeared of critical benefit and the severe attack gradually subsided. Control of serious flare-ups became possible during this period because of the availability of ACTH. The excellent response of other gout patients to single 50-unit doses of this hormone so contrasted with Mr. M. K.'s poor response, until several successive doses had been given, that it aroused suspicion of hypopituitarism-with-respect-to-corticotropin. Except when bloody diarrhea was present on each of the 150 days of this period, the patient received intravenous colchicine. Since he had exceedingly poor superficial veins, and since administration of colchicine outside a vein creates an area which remains painful for up to several weeks, this was a trying phase both for the patient and his physician. Even with corticotropin to terminate severe episodes, the patient was not really well during this period. He worked every day but sometimes with great difficulty.

The fall hay fever season of 1949 was used to study the effect of prolonged corticotropin treatment on both the patient's gout and hay fever. The data obtained during this period, Period D, have been discussed in detail elsewhere.[7] The patient entered Period D with an intravenous colchicine tolerance averaging 0.42 mg./day. Sometime during the administration of this course of corticotropin, his hypersensitivity to colchicine disappeared so that in Period E, although no corticotropin was given, he manifested an average intravenous colchicine tolerance of 1.20 mg./day. This seemed so encouraging that a trial of full oral colchicinization was undertaken in Period F. This revealed that almost normal colchicine tolerance now existed and permitted abandonment of the intravenous route. The difference between treatment given in Period C and Period F is merely the difference between a colchicine tolerance of 0.42 mg./day and one of 1.50 mg./day, since in both periods corticotropin was used to control severe episodes. Clinically, however, Period F marked the first time when there really were days on which no articular activity was present.

Period G opens with the beginning of the fall hay fever season of 1950. It provided a convenient point to begin the patient on long-term corticotropin therapy together with full oral colchicinization. Since the patient's weight had risen from 218 to 276 pounds in one and one-half years, the high dosage initial phase of treatment was also used as an umbrella against the precipitation of acute gouty arthritis by drastic dieting. Finally, the metabolic studies of this period once again permitted examination of the responsiveness of the adrenal cortex to initial stimulation.

Figure 2 shows the initial portion of Period G. On the first two days the patient had a food intake of 300 calories and received morning doses of 90 units of long-acting corticotropin. The same caloric ration was continued for three more days but two doses each of 90 units of long-acting corticotropin were given each day (equivalent approximately to a single 216 unit dose each day). The caloric intake was then increased to 600 calories for six days. On the first three a single 135 unit dose of corticotropin was given, on the last three a single 80 unit dose was given. At no time did this drastic restriction of food intake result in more than fleeting twinges although 14 pounds were lost in an eleven-day period. Examination of either eosinophil or metabolic data shows marked failure of response until several doses of long-acting corticotropin had been given. The normal adult given one 90 or 100 unit dose of long-acting corticotropin shows a median 91 per cent depression of eosinophils six hours later; *all normals* show at least a 40 per cent depression six hours after the initial dose.[6] Mr. M. K. did not show a 40 per cent six-hour eosinopenia until his fifth 90 unit dose and a 90 per cent eosinopenia was not observed until he had received his fourteenth dose, that is, until he had received 1,350 units of corticotropin. Similar delayed response in metabolic indices established the unequivocal existence of an unresponsive adrenal cortex prior to therapy. Its ultimate restoration by corticotropin showed that pituitary hyposecretion of corticotropin was at fault while the intact function of all other endocrine glands showed the defect to be selective. High fat diets, inade-

quate caloric intake, and ketosis have long been known to induce an anti-uricosuric effect (they raise plasma urate and decrease urate clearance and urine urate) which is an exact opposite of the uricosuric effect of corticoids. The simultaneous presenee of both effects in Period G resulted in persistence of high plasma urate levels.

The low articular symptom index of Period G correlates with the return of the patient to almost normal health. Period G suggested that full suppressive doses of corticotropin and full continuous colchicinization actually exhibited additive therapeutic effects. Period H provided dramatic support for this view when oral colchicine was withdrawn for six days to permit a trial of n-methyl-colchicamid. On the first five days, there was no unusual articular activity. On the sixth day, 2-plus activity occurred for the first time in 100 days. Colchieine was resumed the next day but nevertheless there occurred polyarticular attaeks involving five joints. These were of 3-plus grade for the next seven days and of 2-plus grade for still another eight days. Some years ago, from metabolic observations, it had been inferred that the effect of colchicine in gout is not mediated through the pituitary-adrenal system. The marked improvement when corticotropin was added to full colchicinization (Period G) and the precipitation of relapse by withdrawal of the colchicine although corticotropin was continued (Period H) also indicates that corticotropin and colchicine act on different mechanisms.

In all subsequent periods the patient was continued on full oral colchicinization; long-acting corticotropin dosage was adjusted so that articular symptoms were less intense than Grade 1, if this was possible. During prolonged corticotropin treatment gouty activity could be controlled very promptly because normal adrenal cortical responsiveness was present. The possible benefits of this prompt suppression of inflammatory activity are suggested by certain of the data in Table I. From Period A through Period H, the muscle mass estimated by the creatinine coefficient showed a steady decline but thereafter returned to normal. The twenty-four-hour creatinine clearance, a measure of glomerular filtration rate, showed a parallel pattern. The full extent of this anabolic effect is masked by the rise in the patient's weight. Actually the twenty-four-hour urine creatinine rose from 1900 mg. per day in Period H to 2690 mg. per day in Period P suggesting a 41.5 per cent increase in muscle mass! This is merely an additional example which shows that when corticoids successfully induce convalescence, the marked anabolic effects of convalescence may completely mask any catabolic effects (or anti-anabolic effects) of the steroids.

The remaining periods have been devoted to control of two additional aspects of the patient's disease. Probenecid was employed in 1 gram doses in Period M and in 2 gram doses in Periods I, K, and N in an attempt to restore a normal serum urate level and control tophi. Restoration of the normal urate level and of normal urate clearance actually was accomplished at the 2 gram level but not at the 1 gram level. While no new tophi appeared during the last five years of the study, old tophi did not disappear. The old tophi tended to become sore whenever Probenecid was withdrawn, and this low-grade discomfort was relieved when its use was resumed. Rather unexpectedly, the final figures suggested that the corticotropin requirement was decreased by 2 grams of Probenecid daily, but not by 1 gram each day. For the higher dosage, the average daily corticotropin requirements were 41.6, 33.9, and 23.5 units per day in three study periods. For periods during which only 1 gram per day or no Probenecid was given, the average daily corticotropin requirements were 39.4, 56.4, 55.8, and 59.4 units per day. The median value for the 2-gram Probenecid periods, 33.9 units per day, is only 60.5 per cent of the median value for the other periods, 56.1 units per day.

In the Periods from G through N, the daily corticotropin requirements had a median of 41.6 units per day (average deviation $\pm$ 10.7 units per day). We were somewhat concerned that this relatively high dosage might be partly responsible for the generally higher blood pressures being recorded, although certainly gout and obesity could well have provided a full explanation. Phenylbutazone was added in the hope that it might reduce the required corticotrophin dosage, and was given at a dose level averaging 330 mg./day in Period O and 200 mg./day in Period P. In both periods, the corticotropin dosages tend to be lower than in the preceding seven periods and that observed with the higher phenylbutazone dosages is only 47.5 per cent of the median value for the Periods from H through N. The metabolic data showed little evidence that phenylbutazone was importantly uricosuric; plasma urate was hardly 1 mg. per cent less than when only the eolchicine-corticotropin combination was used.

Since phenylbutazone appeared chiefly to reduce corticotropin requirements while Probenecid normalized urate metabolism, it appeared interesting to add both agents to the basic regime of full colchicinization and suppressive corticotropin. Unlike salicylate, phenylbutazone did not interfere with the uricosuric effect of Probenecid. The quadruple colchicine-corticotropin-probenecid-phenylbutazone regime proved to represent highly gratifying therapy. Serum urate returned to within the normal range and the simultaneous clearance of urate and creatinine became almost normal. The annoying soreness about the old tophi was gone. Articular symptoms were as well suppressed as in any period except Period I. All medication was well tolerated and the desired reduction of corticotropin requirements was suceessfully accomplished. The corticotropin requirements for the last 500 days of treatment averaged only 20 units per day, a safe dosage since this patient tolerates twice this amount without severe hypocorticism.

Summary

A steady downhill course with progressively longer and more severe attacks, muscle atrophy, decreasing renal function, and finally the supervention of intractable continuous polycyclic acute gouty arthritis were the clinical events of the first

two-and-one-half years of this study. These difficulties arose at least in part from an unfavorable conjunction of three factors. (1) An unusually severe degree of gouty metabolic disturbance was suggested by unusually severe hyperuricemia and decreased renal urate clearance, unusually early appearance of tophi and unusually low urinary 17-ketosteroid coexisting with normal gonadal function, sperm counts, motility, and fertility. (2) Effective use of colchicine, the specific for acute gout, was impossible because hypersensitivity reduced daily tolerance by either oral or intravenous route to less than one-quarter that of an average patient. (3) It has been shown in a previous report that severe gout attacks are often terminated by increased spontaneous activity of the patient's pituitary-adrenal system. The existence of hypopituitarism-with-respect-to-corticotropin, an isolated pituitary defect, deprived this patient of this type of endocrine adaptive mechanism.

This inadequacy of conventional treatment led to study of the following experimental therapeutic maneuvers: continuous administration of oral or of intravenous colchicine carefully and continuously adjusted to current maximum tolerance; continuous full colchicinization together with continuous administration of corticotropin at fully suppressive dosage levels; this latter colchicine-corticotropin program supplemented by either Probenecid or by phenylbutazone; and, finally, the colchicine-corticotropin program supplemented by both Probenecid and phenylbutazone. The first two agents gave excellent control of articular manifestations, the Probenecid (2 gm./day) normalized urate metabolism and the phenylbutazone (400 mg./day) permitted a 60 per cent reduction in corticotropin dosage to levels clearly within the safe range.

These therapeutic trials required five years of study; they achieved the following concrete results: (1) The slight extra daily amount of colchicine which could be given by intravenous colchicinization terminated the polycyclic episode. (2) Hypersensitivity to colchicine was cured during the first brief course of corticotropin. (3) Severely disabling annual fall hay fever also responded well to corticotropin. (4) Two grams of Probenecid daily returned the serum concentration and renal clearance of urate approximately to normal. (5) Progressive renal impairment and muscle loss was halted and, to some extent, previous losses were recovered. (6) While existing tophi did not disappear, no new tophi formed and, if Probenecid was used, the old tophi were no longer irritable or painful. (7) Finally, the ominous prognosis given at the end of 1948 proved entirely incorrect. During the final five years of this study gout has not caused the patient to lose one day from work.

Acknowledgment

The contribution which was made to this study by Mr. Meyer Kurlansky of Chicago, its subject, was far greater than that of mere cooperation and, indeed, was instrumental in its success. The techniques of symptom evaluation and their reliability as relatively constant standards for many hundreds of days were largely Mr. Kurlansky's responsibility as was the manipulation of dosage essential for the determination of continuous colchicine tolerance and corticotropin requirement. Without his intelligent and delicate handling of these functions, the quantitative results could not have been reliable. Thanks are also extended to Dr. Irving M. Wolin for referring Mr. Kurlansky for treatment.

The corticotropin employed in this study largely was either Purified Corticotropin-Gel, Wilson, or H. P. Acthargel, Armour, donated through the co-operation of the manufacturers. Generous gifts of Probenecid and Phenylbutazone were kindly made available by Sharp and Dohme and by the Geigy Company, respectively.

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Rehabilitation in Arthritis

A Case Report

By William M. Jackson, M.D., John W. Sigler, M.D., Dwight C. Ensign, M.D., Joseph L. Fleming, M.D., and Charles Long, M.D.

Detroit, Michigan

A PATIENT disabled with arthritis is not only a candidate for organized care and therapy in a rehabilitation center but also should be the responsibility of every physician engaged in the practice of medicine. As physicians it must be our aim to prevent joint deformities whenever possible. This can only be accomplished by the early recognition of crippling disease and the immediate employment of proper therapy. It is far easier to prevent than to treat deformities, but it would be erroneous to say that all deformities can be prevented. At times joint deformity progresses in spite of all therapy, but fortunately this is rare. More commonly, disability and deformity are the result of neglect and inadequate therapy. The purpose of this paper is to present and discuss a few fundamental problems that confront the physician when a patient disabled by arthritis enters the office.

Of major consideration is the question as to whether everything possible is being done for the patient. This involves not only the treatment of the arthritis but also the care of the patient's general health. Other questions to be answered are: What is his financial reserve? Is he the wage earner? Are there small children demanding care? Is the patient so disabled that he cannot perform simple activities for self care? Is the patient young or old? Does the patient desire help or is he satisfied to remain disabled? Has he had previous treatment? If so, why did it fail? Has there been a well-planned scientific attack on the problem, or has the patient sought advice from ill-informed sources?

Most patients with arthritis are unusually grateful for any help they may receive. It is the responsibility of the physician to recognize the need for therapy in the disabled patient, and to plan his program carefully and enthusiastically. The case to be presented represents one of "mixed" arthritis, including elements of osteoarthritis, rheumatoid and traumatic types.

Aided by a grant from the Michigan Chapter, Arthritis and Rheumatism Foundation.

From the Divisions of Arthritis, Orthopedic Surgery, and Physical Medicine and Rehabilitation, Henry Ford Hospital, Detroit.

Case Report

E. H., a thirty-five-year-old white housewife and mother, was admitted to the Henry Ford Hospital on November 23, 1953, complaining of arthritis and inability to walk. The patient's joint complaints dated back to 1946. Over the next four years she had multiple intermittent joint pains. No swelling was present, but her symptoms generally grew worse over this time. From 1946 to 1950 her weight increased from 160 to 200 pounds. At this time she noted severe pain without swelling in the left hand. She consulted a physician and received ACTH and cortisone for one month by injection, with complete clearing of the symptoms. After cessation of the steroids, symptoms recurred.

In December, 1951, she sustained a right ankle fracture in an auto accident, developed osteomyelitis at the fracture site, and the right astragalus was removed. After this she was never able to walk without crutches. Four months later she developed crepitus, pain, swelling and later contractures of both knees. In September, 1952, she was admitted to another hospital for large doses of oral cortisone and again noted relief of pain. In the thirteen months before admission to our clinic she obtained cortisone without medical supervision in total oral dosages of 150 mg. or more per day. She stated that discontinuance of cortisone was promptly followed by return of joint pain and severe headaches. During this period her appetite was ravenous and she gained weight rapidly. For six months prior to admission she felt generally weak and was completely bedridden, and she developed rounding of the face, increased facial hair, easy bruising, dyspnea, leg edema and a dorsal fat hump.

On physical examination the positive findings included the following: She was a tremendously obese thirty-five-year-old white woman with a moon face, buffalo hump, malar flush and purple striae on the flanks and abdominal wall, lying completely helpless in bed. She weighed over 320 pounds. She was mentally depressed. There was 3-plus edema of the lower legs. The blood pressure was 150/90. Except for the musculoskeletal findings, the rest of the physical examination was normal. There was a suggestion of spindling in the proximal interphalangeal joints of the fingers, and there was difficulty in making a fist. The knees were very tender, somewhat warm, and there was thickened synovium bilaterally. The right knee flexed to 90 degrees and extended to 150 degrees (30 degrees flexion contracture), and the left flexed to 90 degrees and extended to 140 degrees (40 degrees flexion contracture). There was coarse crepitus in both knees. As a result of the old injury to the right ankle, there was no active dorsal or plantar flexion of the ankle. The right leg was 1 inch shorter than the left. The other joints were normal.

Initial Laboratory Data.—The hemoglobin was 13.1 grams, red cells 4.48 million, and white cells 7,000 with polymorphonuclears 80 per cent, eosinophils 3 per cent, and lymphocytes 17 per cent. Urine specific gravity was 1.025, and examination was negative for sugar, albumin or microscopic abnormalities. A Kline exclusion test was negative. The erythrocyte sedimentation rate was 25 mm. per hour with a hematocrit of 38 per cent. Serum sodium was 138 mEq/l., potassium 4.2 mEq/l., carbon dioxide 19.6 mEq/l., and chloride 101 mEq/l. A fasting blood sugar was 87 mg. per cent and the non-protein nitrogen 36 mg. per cent. A chest x-ray was normal.

X-rays showed marked narrowing of the joint spaces of both knees, with slight atrophy of the articulating bones, mild osteoporosis of all bones of the fingers, absence of the right astragalus and spotty osteoporosis of the bones of the right foot. No other bone or joint abnormalities were observed on x-ray.

Hospital Course.—The obesity, the Cushing's syndrome secondary to cortisone, the flexion contractures of the knees and the patient's disinclination to fight her disease were recognized as the most important problems. She was placed on a 1,000 calorie (later 700 calorie) diet, given multiple vitamin and potassium chloride supplements, and enteric-coated acetylsalicylic acid, grains 60 daily. She was withdrawn from steroids, using diminishing doses of oral cortisone. Corticotrophin gel was administered intermittently during this period. Although steroids were discontinued, she showed steady improvement. Her knees continued to be painful, but there were no objective signs of a flare-up of rheumatoid arthritis. The orthopedist's opinion initially was that skeletal traction was most promising in dealing with the flexion contractures of the knees, but because of the marked edema of the extremities, infection was feared. She received acidifying salts and mercurial diuretics without initial diminution of edema. Therefore, progressive wedging casts were used from December 18, 1953, to February 1, 1954, and it proved possible to achieve 175 degrees extension bilaterally. During this difficult period the patient not only complained of severe knee pain, but became quite disgruntled and unhappy. Physical and occupational therapy had been started during the second hospital week, but because of the casts and technical difficulties associated with her obesity and helplessness, little could be accomplished initially. She was seen twice during the wedging procedures by a psychiatric consultant. It was his opinion that her behavior represented an anxiety reaction of moderate intensity, and that she was a very dependent individual.

After the knee straightening had been accomplished, the patient began to take an interest in helping herself. Physical measures brought marked, though very slow, improvement. Despite her rigid diet, and gradual subsidence of the edema, weight loss was fairly slow though progressive. She at first received active resistance exercises to the upper extremities and to the knees. These were designed to strengthen her arms for crutch walking, and to increase knee motion without weight bearing. Later she graduated to parallel bar walking, and then to crutches. Plaster shells were used during sleeping hours to prevent recurrent contractures of the knees until quadiceps strength was improved. This was accomplished by May, 1954.

At that time she had an exacerbation of rheumatoid arthritis, especially in the upper extremities, whereas on admission her rheumatoid arthritis had appeared to be in partial remission. Because of severe pain in the hands and wrists, she was given paraffin baths to these segments daily with considerable improvement. This arthritic activity in her hands prolonged her hospitalization, hampered her crutch walking, and lessened her strength. Nevertheless a remission occurred, and thereafter her general improvement was steady. Because of the leg shortening, she was provided with a lift for the right foot and with orthopedic shoes. The ankle brace previously used following her auto accident proved satisfactory. From February, 1954, until the time of her discharge she received intra-articular injections of hydrocortisone in both knees from time to time, which afforded her good relief from pain and improved knee function. She was finally discharged on August 7, 1954, after 215 days' hospitalization. Her weight at the time of discharge was 172½ pounds.

Since then she has been seen at monthly intervals in the out-patient department. She is able to do her housework and able to walk without crutches although she uses them most of the time. She has needed intra-articular hydrocortisone in each knee about once a month. She is using paraffin baths and a regular active range of motion exercise program at home. She remains on daily salicylates, restricted diet, and dexedrine to curb her appetite. On her last visit she weighed 167 pounds. The gradual transformation of a helpless despondent mass into a functioning human being has more than justified the efforts of the many individuals who contributed to this accomplishment.

Discussion

In assessing this case, one notes that 215 days of hospitalization were required. Even on discharge she was still on crutches and had evidence of rheumatoid arthritis. Financially, this program would have been impossible without aid from the Arthritis and Rheumatism Foundation. On the other hand, this case was complicated by exogenous Cushing's syndrome and marked obesity. Probably most important in the patient's slow progress was her mental attitude and to some extent her home environment. Before admission she would have preferred to be pain-free, though bedridden, and she was rather indifferent toward caring for herself and living effectively in the face of some discomfort. It should be pointed out that this is fortunately quite opposite from the reaction of most severely disabled arthritic patients. In rehabilitation the physician must convince the patient that functional improvement is more im-

portant than completely relieving moderate discomfort. Pain in itself is disabling and should be relieved as far as possible. In this case the price of complete pain relief was invalidism.

Admitting the absence of curative therapy in most of the arthritides, in most cases there are available at this time rehabilitative measures which can do much to relieve suffering, improve function, correct deformities and return the patient to a nearly normal, useful and hopeful life. These divide themselves into three general, overlapping categories. These are the general medical care, the orthopedic measures which may be undertaken and the contributions of physical medicine.

The case presented illustrates the important role of the orthopedist in the rehabilitation of the arthritic patient. Many times plaster shells, leg cylinders, night splints, skin or bone traction, or wedge casts may be required depending on the deformity in question. At times corrective surgical procedures may be required in order that maximum function be obtained. When rehabilitative problems appear to require more than medical, physical or self-help measures, the consulting orthopedist can aid by deciding which orthopedic procedures will be helpful and safe. From his experience he can also predict when intervention should not be undertaken since ill-chosen methods may be useless or even harmful. Because practitioners of medicine will invariably encounter severely disabled arthritic patients, all physicians should have a working knowledge of the approach to such problems.*

The general medical care of arthritic patients entails initially a complete history and physical examination. Many times arthritic patients fall heir to other ills besetting mankind in addition to their arthritis. In addition to the arthritic evaluation, it is important to look for evidences of associated or coincidental disease, to carry out indicated diagnostic studies and to institute corrective therapy should abnormalities be found. In evaluating the arthritis, one must try to determine whether or not rheumatoid arthritis is present, its degree of activity and the amount of joint change. Most severely crippled arthritics will be of the rheumatoid type, but co-existing rheumatic disorders may be present and should be recognized. Extensive laboratory studies are not required in every patient, although basic blood count, sedimentation rate, urinalysis, chest x-ray and bone films are always desirable. When this evaluation is completed, the findings should be frankly discussed with the patient, and a general outline of therapy presented. Severely disabled arthritic patients know they have a serious disease and are usually more pessimistic than the situation warrants. A factual discussion is invariably better than their ignorant fears. At this time one must assess the patient's personality and his willingness to fight for rehabilitation and recovery. Although a cure cannot, and should not, be promised, one can usually be optimistic for some improvement of joint function.

Once the co-operation and confidence of the patient have been gained, the required therapy may be instituted. A detailed discussion of these measures is beyond the scope of this paper; however, medical care must include careful general therapy, educating the patient to his disease, and the judicious use of medications and procedures that are of proven benefit in rheumatic disorders.

*Several publications helpful to both physician and patient may be obtained by writing to the Arthritis and Rheumatism Foundation, 23 West 45th Street, New York, N. Y.

M.D. PLACEMENT BUREAU

Doctor Locations—To February 1, 1955

Placed by Michigan Health Council:	Opened Practice in	Approximate Date	Moved from
Thomas Campbell, M.D.	Kingsley	Nov. 26	Kenner, La.
Robert Hornbeck, M.D.	Atlanta	Jan. 1	Lewiston
Richard K. Meinke, M.D.	Morley (Temporary)	Feb. 1	Military Service
Assisted by Michigan Health Council:			
Robert E. Rowe, M.D.	Port Huron	Nov. 15	Detroit
William Compton, M.D.	Belleville	Aug. 20	Wyandotte
Frank W. Hedges, M.D.	Edmore	Aug. 25	——

Highlights of Meeting of American Rheumatism Association

By James J. Lightbody, M.D.
Detroit, Michigan

THE AMERICAN Rheumatism Association held its annual meeting in San Francisco, California, on June 18 and 19, 1954, preliminary to the annual meeting of the American Medical Association.

Dr. Edward W. Boland succeeded Dr. Charles Ragan as president of the ARA for the coming year. Two Detroit physicians were elected to membership in the ARA: Dr. Abraham Grant and Dr. Gennady G. Platoff.

Dr. Charley J. Smyth, who was medical director of Wayne County General Hospital for a number of years, and who now is associated with the University of Colorado, was chairman of the Program Committee for this year's meeting of the ARA. Dr. Ivan F. Duff of the University of Michigan Medical School assisted in the development of the scientific program which was presented to over 500 physicians interested in the specific problem of arthritis and allied diseases. There were thirty-two scientific papers presented over a period of two days, including a general discussion on "Hormones in Rheumatic Diseases," which was moderated by Dr. Richard H. Freyberg of New York City.

Dr. Joseph J. Bunim of Bethesda, Maryland, who is associated with the National Institute of Arthritis and Metabolic Diseases, presented a report on "The Rate of Disappearance from Plasma of Cortisone and Hydrocortisone." Both of these steroids were administered intravenously to normal subjects, and the rate of disappearance from plasma was determined. Studies of plasma obtained 100 minutes following infusion of hydrocortisone have shown that 90 per cent of the steroid assayed is identical with hydrocortisone. The mean biologic half-life for hydrocortisone in normals was found to be 115 minutes, whereas cortisone disappeared from plasma approximately twice as rapidly with a half-life of 65 minutes. Calculations of the volumes of distribution indicate that both steroids were distributed roughly throughout total body water. In patients with liver disease, hydrocortisone disappears from plasma at a rate up to four times slower than normal, whereas cortisone disappears at the normal rate. It may be that the ameliorating effect of jaundice on rheumatoid arthritis is related to the slow rate of metabolic transformation of the hydrocortisone normally elaborated by the adrenal cortex.

Dr. Morris Ziff of New York City reported on "Studies on the Metabolism of Adrenal Cortical Steroids in the Synovial Cavity in Rheumatoid Arthritis." Chromatographic analysis of post-injection synovial fluid shows substantial amounts of a number of metabolites of intra-articularly injected cortisone and hydrocortisone. Only trace amounts were found when the uninjected contralateral knee was aspirated at the same time, indicating local metabolism, since if metabolites had been formed recently, they would have returned in more nearly equivalent concentrations on each side. A different pattern of metabolism was found for each steroid. Cortisone yielded hydrocortisone, several other corticosteroids and an abundant noncosteroid component. These results raised the question of whether the unique anti-inflammatory effect of hydrocortisone in the synovial cavity may not reside in its transformation to a specific metabolic product.

Dr. Walter Bauer and associates, Boston, Massachusetts, analyzed "The Metabolic Effects of Long-Term Cortisone Therapy." Several patients with chronic, active, rheumatoid arthritis were studied over a period of years to determine the effect of prolonged administration of cortisone, and the results show that in these patients who were initially in negative nitrogen balance, prolonged administration of cortisone was associated with an increased and continued loss of nitrogen and other body constituents. Sudden increase in cortisone dosage and performance of surgery were primarily manifested by sodium retention rather than an added catabolic response. Although there was apparently no adrenal cortical response to surgery, evidence suggests that there may have been "increased" utilization of altered metabolism of adrenal steroids.

Dr. Philip S. Hench and his associates at the Mayo Clinic presented a paper on "Use of Cortisone in Prevention and Treatment of Surgical Stress in Hormonally Treated Rheumatoid Patients." They pointed out that patients treated with cortisone, hydrocortisone or corticotropin may re-

quire additional amounts of these hormones to withstand safely the effects of anesthesia, surgery, severe trauma, burns, or other stressful situations. When significant amounts of cortisone or related hormones have been administered within three months of surgery or other severe stress, there is benefit derived from a preoperative schedule or adequate amounts of cortisone to combat the stress reaction. When available, preparations of hydrocortisone for administration intraveneously during or following surgery may be used if other preoperative preparation is not possible. Very careful observation of the patient's reaction to the anesthesia and other stress is essential in any instance where the patient has received cortisone or related hormones. Employment of the principles of preoperative preparation with cortisone and related hormones has eliminated fatalities from postoperative adrenocortical insufficiency.

Dr. Charles L. Short and his associates in Boston presented detailed information obtained from eighty rheumatoid arthritic patients picked from a consecutive admissions group of 293 rheumatoid arthritic patients. These eighty patients (27 per cent of total number admitted) experienced one or more remissions while under observation, while the remainder (73 percent) of the group were essentially progressive. The remissions occurred throughout the year with a peak in May, but exacerbations started more frequently in the colder months, a distribution corresponding to the available figures for the season of onset of rheumatoid arthritis. The rheumatoid arthritic patient is therefore more likely to experience either a serious setback in his disease or the actual onset of his arthritis in the colder months of the year. It has been assumed that climatic changes are probably responsible.

The subject of "Pathological Fractures During Cortisone and Corticotropin Therapy" was discussed by Dr. Charles H. Herndon and his associates from Cleveland, Ohio. Severe osteoporosis with pathological fractures is a recognized hazard of prolonged treatment with cortisone, and the precise role of cortisone or corticotropin in the genesis of the fractures can not be determined. Cortisone, phosphorous and nitrogen excretion are known to be increased during cortisone and corticotropin administration, during immobilization and during the course of active rheumatoid arthritis. All of these factors were present in the patients presented, but it is reasonable to assume that hormone treatment was mainly responsible for the pathological fractures.

Dr. Ivan F. Duff and Dr. William D. Robinson of the University of Michigan presented a paper on the "Clinical and Laboratory Effect of Long-Term Intra-Articular Hydrocortisone in Rheumatoid Arthritis." Over a three-year period there were 1,020 serial injections of hydrocortisone made into 105 rheumatoid joints. In fifty-three joints (50 per cent) worthwhile benefit was achieved. In fifteen other joints benefit was prolonged for seventeen to thirty-four days before repeat injection was required. Upon discontinuation of therapy, benefit has persisted from four to twelve months in 19 per cent of all treated joints. Treatment of thirty-two joints (31 per cent) was eventually discontinued because partial initial benefit could not be further improved. In twenty joints (19 per cent) there was no clinical response to hydrocortisone. Ten patients refused repeated injections because of discomfort or failure to achieve worthwhile benefit. Synovial fluid studies were made repeatedly on thirty-five knees, and it was found that hydrocortisone may produce remarkable alterations towards normal in joint fluid. These changes generally parallel the clinical effect, but dissociation was apparent in 29 per cent. Maintenance of joint fluid improvement was usually dependent upon repeated steroid injections.

Dr. Sydney Cobb and his associates of Pittsburgh reported a critical survey of the problem of classification in the field of arthritis. It was pointed out that data obtained by arthritis surveys have usually been unsatisfactory because they have been neither precise nor disease specific. A town of about 10,000 persons in 3,000 families had been selected for a household survey of arthritis. It was found that persons with rheumatic symptoms far outnumber those fitting a classical disease description. The majority of these people had not consulted a physician for these symptoms, which suggested a somewhat different population sample from that observed in clinical practice. Many illustrative patients were shown to emphasize the difficulty in deciding when an atypical case is too atypical to be included in specific classification categories. There is an urgent need for limiting definitions in diagnosis of arthritic diseases so that future attempts in epidemiologic surveys would be more accurate and acceptable.

Postprandial Symptoms Following Gastrectomy

By H. Marvin Pollard, M.D.

Ann Arbor, Michigan

RECENTLY, after his partial gastrectomy, a patient made the following comment: "Once I had pain when my stomach was empty. Now, I get a pain when it's full."[1]

Within the past week, I saw a patient who had a subtotal gastrectomy five years ago. I quizzed her diligently regarding the possibility of manifestations of weakness, perspiration, nausea, and palpitation, all of which she emphatically denied. According to her statement she had an excellent response from her operation. As she started to leave the room, she turned to me and said, "I almost forgot to ask you. Why is it that on several occasions recently I have collapsed near the end of a meal?" I mention this point merely to emphasize that even on careful questioning it is sometimes difficult to elicit the symptoms about which we are concerned in these individuals. In this patient's case, she merely did not relate her manifestations of a "dumping syndrome" with her subtotal resection.

Postprandial symptoms following gastric surgery can be segregated as follows:

1. Symptoms due to recurrent ulceration.
2. Symptoms due to mechanical causes.
3. Symptoms due to alteration in the normal physiology of digestion.[3]

The incidence of all postgastrectomy symptoms, regardless of the source, varies from zero to 65 per cent. If we are concerned only with the more profound manifestations, the usual quoted incidence is around ten to eleven per cent. If we include in the grouping symptoms of a lesser degree, then in carefully studied groups the incidence may reach as high as 60 to 65 per cent. I have talked to surgeons who have indicated that in all of their patients with a subtotal gastrectomy or gastroenterostomy, with or without vagotomy, they have never seen a single incidence of any complication. I have talked to others who have seen all varieties of complications from hemorrhage on through the list, including nutritional complications, as well as mechanical complications and hypoglycemia. It is not my intention to give the impression that all patients with gastric surgery have complications. It is my purpose merely to evaluate the various complications that may occur, in the hope that we can outline a suitable form of therapy for each particular complication and improve the patient's condition. Certainly, where complications arise in the handling of ulcer patients and such complications are subject to justifiable surgery, we as internists are all relieved to know that corrective procedures are available to us by the surgeon. In most situations, however, it eventually becomes the problem of the internist to handle these patients in the late postoperative period.

I am not referring particularly to the symptoms which occur within the first three months after gastric surgery, inasmuch as there are a variety of symptoms which may arise and which disappear in that period of time never to return. I am concerned more with the patients whose complications appear at least three months after the gastric surgery.

Symptoms Due to Recurrent Ulceration

Symptoms arising from a marginal or jejunal ulcer correspond closely to the average typical duodenal ulcer history. It may be somewhat more variable, but these patients usually obtain relief by food or soda, although the location of the discomfort is more widespread and frequently is to the left of the mid-line or above the level of the midline, midway between the umbilicus and the xyphoid process. The recurrence rate following gastrectomy for duodenal ulcer from most reports averages around eight to ten per cent. The recurrence rate for gastrectomy for gastric ulcer is appreciably smaller and varies from zero to 7.5 per cent.

Symptoms Due to Mechanical Causes

1. *Afferent loop stasis and the afferent loop syndrome.*—Typically the particular symptoms described to this complication consist of a bitter taste in the mouth occurring within a few minutes up to an hour following ingestion of a meal. Soon thereafter there may be regurgitation of about a mouthful of bile after the meal or small intermittent regurgitations of bile following indulgence in extra large or rich meals. The term here implies, of course, entry of food into the afferent loop and

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subsequent stasis. This sequence by itself is almost pathognomonic of afferent loop stasis. If these symptoms persist after the three-month period then the true afferent loop syndrome has probably become permanently established. If, however, the pancreatic and biliary secretions remained dammed up for a day or days, the patient may complain of almost continuous epigastric pain or discomfort with a constant feeling of fullness, nausea, and anorexia. One interesting feature of this complication is that it is most commonly found after gastrectomy and seldom found after a gastroenterostomy. Wells and McPhee[5] maintain that this complication will occur in 18 per cent of patients following gastrectomy.

2. *Efferent loop obstruction.*—This condition, when present, gives rise to a sensation of fullness, nausea and food vomitus as distinct from bilious regurgitation. According to Pulvertoft, it is caused by adhesions between the first few inches of the efferent loop and the hilum of the spleen. These adhesions gradually contract and draw up the efferent loop, so that kinking near the stoma results. At the same time, the jejunal wall near the stoma distends. There are occasional instances where these mechanical causes may be suspected from the patient's symptoms, but where even after re-exploration no difficulty is found whatsoever. In time these symptoms usually become less pronounced and the patient is able to go on about his normal responsibilities.

Symptoms Due to Alteration in the Normal Physiology of Digestion

There have been a number of interesting and valuable studies conducted to explain what is commonly spoken of as the early "dumping syndrome," which has its onset either during the meal or shortly after the meal, usually within ten to thirty minutes. These symptoms frequently persist for thirty to sixty minutes and in some instances even longer. Manifestations of the late "dumping syndrome" usually occur two to three hours after a meal.

Many hypotheses have been developed with evidence to support them as an explanation of these various symptoms. Wells and Welbourn[6] attribute the early "dumping syndrome" symptoms to the removal of the secretory function of the stomach and the entry of hypertonic solutions into the small intestine which results in increased bowel activity. The main feature of this situation, therefore, is increased jejunal activity or as Machella[2] has emphasized, a distention of the jejunum. A distended balloon inserted into the jejunum, interestingly enough, will give rise to similar symptoms. These patients may experience sweating, tightness or pain in the epigastrium, nausea, weakness, palpitation, feeling of warmth, vertigo and even collapse. Such symptoms may not necessarily occur after every meal, but only after certain meals and in varying severity. The "dumping syndrome" has also been reproduced in control subjects by intrajejunal installation of hypertonic solutions of glucose, protein hydrolysate, and sodium sulfate. Excessive sympathetic stimulation due to retraction of the jejunal loop by the weight of food in the gastric remnant on the efferent and afferent enterostomy loops, likewise, must be an explanation of some of the immediate effects. Similar symptoms may be produced by vagotomy-sympathetic imbalance produced by the sudden entrance of food into the jejunum.

1. *Hypoglycemia.*—Hypoglycemia has been found by various individuals to be distinctly correlated with the onset of symptoms mentioned above. We took occasion to study a group of individuals operated upon in our hospital, using the technique of gastroenterostomy and vagotomy for the surgical management of duodenal ulcer. At least one-third of our patients so tested, utilizing a preparatory diet of 300 grams of carbohydyrate for three days, as proposed by Conn, and followed by the customary five-hour glucose tolerance curve, showed blood sugar levels going below 40 mg. per cent. In most instances at the time the blood sugar level reached the low point, the patient experienced the symptoms of hypoglycemia. Interestingly enough, in a few instances, the patient did not complain of any particular symptoms at the time of this extremely low blood sugar level. It is possible to have a low blood sugar in the immediate period following a meal, but most commonly this is the explanation of symptoms occurring in the late period, two to four hours following a meal.

The size of the stoma has, of course, been implicated as a possible source of complications, as well as jejunitis, the emptying of hypertonic solutions into the small intestine resulting in increased bowel activity, and more recently Smith[7] showed that there is an abnormal fall in serum potassium in some of these individuals post-gastrectomy.

2. *Nutritional Complications.*—Imbalance in the digestion and absorption of food, particularly of fat, has been observed repeatedly in both man and animals after a gastric operation. As emphasized by Welbourn, Hollenbeck, and Bollman,[4] steatorrhea may contribute to a state of severe malnutrition after gastric resection in man.

The mechanism of the imbalance has not been adequately explained and few studies have been made comparing the effects of the different operations. It has been shown, however, that in some individuals, particularly after gastric resection, there is an excessive amount of fecal fat and fecal nitrogen, even though the digestion of protein and carbohydrates is seldom seriously disturbed. Impaired absorption has been found in patients who have symptoms of hyperactivity of the small bowel after operation. In dogs, vagotomy performed three years previously did not affect the loss of fecal fat. Gastroenterostomy had no effect on loss of fat and, interestingly enough, loss of weight after gastrectomy seemed to be caused more by inadequate intake of food than by excessive loss of fat.

We have seen individuals following gastrectomy develop nutritional anemia, anemia of blood loss, anemia of iron deficiency, reduction of total serum protein with a reversal of the A/G ratio, even to the point of developing extensive ankle edema. These complications are not common, but are difficult to correct, inasmuch as the administration of pancreatic enzymes, bile, emulsifiers, and highly emulsified refined fats have not proven particularly beneficial, principally because the patient does not have the appetite for them.

3. *Other Complications.*—Bleeding episodes are recorded in as high as one-third of the cases of post-gastrectomy problems and perforation in approximately ten per cent. In our own experience with gastrectomy in these post-operative stomachs, almost invariably these patients have an extensive degree of gastritis. This must account for some of their inability to eat properly.

Medical Management of Postprandial Distress Symptoms

Needless to say, the extensiveness of the medical management depends entirely on the severity of symptoms. The majority of individuals will need nothing more than reassurance and encouragement. In patients, however, who have troublesome symptoms, the following program is proposed:

1. That they be placed on six moderate sized feedings per day.

2. That the diet be limited to approximately 100 grams of carbohydrates, 120 grams protein, and an average amount of fat.

3. Limiting the amount of liquid consumed with the meal may be of some assistance.

4. Urging the patient to recline in a horizontal position following a troublesome meal may either prevent the course of distress or aid in its elimination.

5. Preparations exerting antispasmotic activity, as well as blocking agents and sedation are of distinct benefit.

In summary, it is my belief that the post-prandial symptoms following any type of gastric surgery may vary greatly. When the symptoms do occur, they may prove quite distressing to the patient. A careful understanding as to the exact nature of the symptoms in a particular patient is important to evaluate, since it decides the proper form of treatment to be followed. Much can be done for these patients to relieve them of their distress.

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The Medical History in a Periodic Health Evaluation

By Warren B. Cooksey, M.D.

Detroit, Michigan

UNLESS one is unusually systematic and painstaking in recording the medical history as a part of the periodic health examination, it will become perfunctory and of too little value. Also, the examiner's attitude toward the examination can modify especially the medical history in such an examination. This "attitude" is of such importance that one may render by far the greatest service in these examinations when a special day or period of the day is set aside to do these periodic health evaluations. In this way a more complete concentration on the task is possible and if telephone calls and other distractions can be avoided, it is better still.

It is usually best to use a printed form for the taking of these histories and for recording the physical findings. By following such a guide no detail concerning the head, eyes, ears, nose, throat, sinuses, etc., will be slighted. This detailed questioning is important because these patients do not usually come to you with the idea of complaining, but only because their company or their wife has arranged it or they themselves think it is a good thing. Old patients in one's file, more than any other, are often treated too lightly in the periodic "check-up" and here especially it is wise to start with a totally new history sheet and question them as if they had never been seen before.

This task is a sleuthing job of the highest order and a challenge to ferret out, by every device possible, the slightest hint of emotional or physical stress that can be the harbinger of serious trouble to come. The finest medical teachers of all time always assess to the medical history a place of prime importance, and it hardly needs repeating that many important diagnoses are made entirely on the medical history. Unfortunately, however, it is frequently true that in a busy practitioner's office too little time indeed is devoted to history taking. The Periodic Health Evaluation examination is clearly becoming more and more popular among both laymen and the profession. If it is to contribute significantly as a measure in preventive medicine, it must be conducted as systematically and thoroughly as we know how to do it and a basic principle is the carefully taken history.

62 Kirby Avenue West, Detroit 2

Foreign Trained Medical Students

Foreign-trained medical students entering the United States may soon outnumber graduates from American medical schools.

Dean A. C. Furstenberg of the University of Michigan Medical School estimated, at the annual Congress of Medical Education and Licensure in Chicago, February 8, 1955, that the United States may have between 5,000 and 10,000 foreign medical men seeking opportunity to practice medicine in North America in 1955. And, he said, this number is increasing every year.

United States medical schools presently graduate between 6,000 and 7,000 students annually.

Dr. Furstenberg raised the question in his talk, "What is to be done with the foreign-trained medical student?" He added, "Here we have a real challenge shared alike and unavoidably by our medical schools and the State Boards of Registration in Medicine."

The Dean also said, "With world tensions what they are today and gallant efforts on our part to allay them and to establish peace on earth, we must formulate a policy based on an honest, factual, non-emotional approach to this issue."

He declared that no United States medical school seeks to discriminate unfairly against the foreign-trained doctor. But he also said reports from educators who have visited foreign schools are for the most part unfavorable, and often show that these foreign schools are inferior to the curricula of schools of this country.

In fact, declared Dean Furstenberg, there is general agreement that the vast majority of foreign graduates in medicine are "no match intel ectually" for the young graduates from American schools.

Dr. Furstenberg also said that entering foreign-trained doctors are "in most instances so inferior that they constitute a definite obstacle to the progress of American classmates with whom they are associated."

One of the problems which both the foreign-trained student and his American medical professor face is the English language. Said the Dean, "Many of these doctors try to translate the lectures, seminar, and conference transactions into their native tongue but cannot do it rapidly enough to comprehend the subject."

Dean Furstenberg made the following recommendations:

1. Set up screening boards which would give oral examinations to the foreign educated doctor.

2. Passing such an examination, the doctor would qualify for formal examination by the State Board of Registration.

3. Rejected candidates would take a minimum of one year in a basic science course in a class-A medical school.

4. The candidate would then be re-examined by the Screening Board.

Said Dean Furstenberg, "It should be incumbent upon the foreign doctor to accept our philosophy of education, acquire the knowledge essential to medical practice, and meet our standards of competence if he is to be granted the privilege of practicing medicine in the United States."

A Challenge to Clear Thinking

President's Message



Now is the time to stand up and be counted.

Are you in the practice of medicine to be of service to others, or only for your personal gain?

Just what do today's standards for the control and betterment of medical practice mean to you?

Have you supported the improvement in standards of hospitals, the regulations by hospital staffs and the advancement of better quality medical care?

Just what do your medical degree and license to practice in Michigan entitle you to do?

Don't worry about the answers to these questions. You soon may revert to the level of medical practice that was the pattern in Michigan in 1898. Your State Medical Society is now a defendant in a court of law, and if this case is decided against us, as in the recent Michigan Supreme Court decision on the Grand View Hospital case, the answer is plain. All our progress shall have been in vain.

Read carefully the editorials in this issue of THE JOURNAL. They tell a story of fact and prophecy. If your thinking follows the pattern of the Supreme Court, then the progress of a half century has been lost.

Robert H. Baker

President, Michigan State Medical Society

Editorial

MISERY LOVES COMPANY

ALMOST every day there is announced another "cure" for arthritis, and practically every issue of the popular magazines and periodicals gives a preliminary report on some new miracle drug that Dr. So-and-So and his co-workers have reported at a recent medical meeting.

Even before the majority of practicing physicians have heard that there is such a "miracle," the patients bring in the glowing reports which they have read in these magazines and newspapers concerning these new treatments; and many patients bring the artieles in to their own physician, place them on his desk and say—"Give me some of that stuff, Doc—quick!"

The average physician has enough difficulty trying to keep up on his reading of regular medical journals without trying to thumb through all the pages of the numerous pocket-size publications that contain easy-reading articles on revolutionary treatments for all types of diseases.

Patients with arthritis are constantly on the alert for new miracle drugs, and they fall prey to the type of advertising which promises them relief from all their aches and pains. Books written by so-called Science writers, medical technicians and others trying to get into the act, are offered to the public, enclosing promises of cures by various types of diets and medications. Recently an individual with no medical education of any kind was allowed to appear on television and, with the support of several of his so-called "patients" who gave verbal testimonials, he was permitted to inject his false theories of therapy into thousands of homes. There does not appear to be any reasonable means of controlling false advertising on radio, television, or in the public press, relative to ridiculous types of treatment and management of disease states. The poor arthritic buys anything and everything that anyone tells him to buy and is greatly affected by the things he hears and reads. He is under the impression that statements made in the public press and over the radio and television are absolutely factual and truthful.

Unfortunately, most arthritics are still looking for a miracle drug—but there is no such thing as a miracle—in the treatment of arthritis. It is a long, hard, weary road that both patient and physician must travel—but the patient should be told at the beginning of a program of treatment, that the biggest job is to be done by the patient—not by the physician. The psychosomatic aspect of treatment, or the effect of the mind on body functions, is never more demonstrable than it is in the field of arthritis. The prevention of deformities and the maintenance of function of the extremities is primarily in the hands of the patient, after proper education of the patient by the physician relative to types of exercises. Various medications only assist in the program of rehabilitation.

By putting the major part of the responsibility for improvement on the patient himself—the physician makes the patient more self-reliant—so that when improvement of function does appear, the physician will be able to say to the patient, "Look what a wonderful job you have done for yourself!" Let us concentrate on what the patient can do for himself—not on what we can do for the patient. When we deal in arthritis, we are dealing in months and years—not days or weeks. It is a long-term period of observation—and tries the patience of both the physician and the arthritic.

J. J. Lightbody, M.D.

MICHIGAN DEPARTMENT OF SOCIAL WELFARE

BECAUSE of the multitudinous blanks and the unsatisfactory relations with the recipients of public assistance, the House of Delegates of the Michigan State Medical Society at its session in Detroit, September, 1953, passed a resolution asking for a committee to study the problem and report. The Council appointed such a committee which met with the medical advisory committee of the Michigan Department of Social Welfare, surveyed the whole problem, and made a report to the Council. This subject had been under study

for years and progress has been made toward a solution. The Advisory Committee was first appointed at request of the Commission by the MSMS Council. On another page, an analysis of the program for assistance is published with an explanation of the forms necessary, and a hint as to a method of making the work simpler and assuring the doctor of more systematic payments from these people. Much of the complaint comes from misunderstanding. We hope our members will read the article carefully. One item not included is the necessity of making the medical reports sufficiently inclusive so that the medical consultant may have a clear picture to determine the amount and duration of illness. He has to approve the allotments.

A BIT OF HISTORY

TOWARD the close of the nineteenth century, and early in the twentieth, most of the states of the Union, at the request of the medical profession, exercised their police power by establishing State Boards of Registration in Medicine. In that wildcat era, anyone could practice if he chose to call himself a doctor. Now it is necessary to attain a degree of education and pass an examination for a license. Soon after the turn of the century, the Carnegie Foundation raised the question of the quality of education available in the medical schools, and after extensive examinations on campus issued a rating—Flexner report. Many schools were closed and others vastly improved. That was a great step in medical practice and promised that all practitioners would at least be adequately trained.

Soon the specialties developed, and the question of proper training for the very special services offered to the patients was another problem. In the early "teens" the American College of Surgeons came into being for the published purpose of improving the quality of surgery by requiring certain postgraduate studies before being accepted as a surgeon. The vicious practice of "fee-splitting" was to be suppressed; members were required to pledge not to engage in the practice. The AMA had long before established a so-called "Code of Ethics" which, among other attempts to impose good morals, included the fee splitting, and the promise not to attempt services beyond the abilities of the person himself.

In the late teens and the twenties, the ophthalmologists and the otolaryngologists established the first two Specialty Boards in another attempt to guarantee to the public and the profession that those who were rendering special services had adequate education and training. There are now nineteen of these American Boards representing that many departments of medical practice, every one with the hope of establishing and controlling moral and educative standards by the simple process of exercising some form of control over the doctor in his practice. During this same time, the hospitals of the nation, by action of their medical staffs, have accepted these provisions and required their practitioners to meet the established standards set by the doctors themselves. The hospitals came into line because, in the process of guaranteeing good care to the suffering patients, the AMA and the ACS began approving the hospitals. Loss of such approval became a serious consideration, and most staffs co-operated.

Thus has the medical profession for a half century improved itself and its members and hospitals until now the best medical service anywhere in the world is available. It has been a case of self-policing. The public, in the name of the state, had not even attempted regulation other than licensing.

A VITAL COURT DECISION

FOR SEVERAL years, a case has been pending in the Gogebic County Circuit Court and ultimately reached the Michigan State Supreme Court regarding the rights of a licensed doctor of medicine to practice in Grand View (Gogebic County) Hospital organized under Act 350 of Public Acts of 1913. For infraction of rules (there were thirty-three) the doctor, Samuel G. Albert, M.D., had been barred from practice in the hospital. Several of his patients were refused admission, unless under some other staff member, and he was not allowed to operate, unless under supervision of a senior staff member.

The trial court found and the Supreme Court sustained that:

(15) "The defendant board of trustees has no power, by rule, regulation or otherwise, to regulate the practice of medicine and surgery in Grand View Hospital."

(16) "Articles V, VI, VII, XVI, XVII, XVIII, XXVII, XXVIII, XXIX, and XXXIII of the 1950 rules and regulations of the defendant board of trustees, as placed in effect November 1, 1950, do so attempt to regulate the practice of medicine and surgery in Grand

View Hospital, and consequently they are void and of no effect and the same are hereby set aside."

(17) "All lawful power to discipline any duly licensed physician and surgeon, or to suspend or revoke his right to practice in any public hospital organized and existing under P.A. 1913, No. 350, as amended, is exclusively committed to the state board of registration in Medicine and is accordingly determinable by and in pursuance of the medical practice act, and Article XXXIII of said 1950 rules is accordingly void as an attempted usurpation of powers, duties and procedures set forth in the medical practice act, and the same is hereby set aside."

Article XXXIII of the 1950 rules reads:

"The board of trustees reserves the right to remove any member of the medical staff or to deprive any physician or surgeon of the privileges of the hospital whenever, in their sole judgment, the good of the hospital or of the patients therein demand it; by amendment, addition, substitution, repeal or revision, as in its judgment may seem for the best interest of the hospital and those who are to became patients therein."

Thus the Supreme Court of the State of Michigan has decided that in hospitals organized under this particular Act (P.A. 1913, No. 350), the trustees of such hospitals are not authorized to have supervision of the qualifications, or preparation of any registered doctor. He may demand entrance and do any surgery or treatment he chooses. This involves the police power of the state which has not been delegated to such trustees.

Very few doctors remember the condition of medical practice before the enactment of our Medical Practice Act in 1899, but prior to that time, anyone could practice medicine, and he did not have to have a medical degree. That Act was adopted at the request of the medical profession and did establish some specific police power. As years have passed, the medical profession has voluntarily established some self-imposed controls in an effort to give the best possible service and protect the people from inexperienced and incompetent physicians. We have formed the National Boards and set standards of preparation and experience. These appear under the foregoing decision to be unenforcable in hospitals under Act 350. Any rogue or incompetent person who is registered may do anything. Many criteria have been set up to supervise preparation and training of those to whom the people turn for the treatment of illness.

It would seem that the Supreme Court has definitely reserved all police power in regard to the practice of medicine to the State Board of Registration in Medicine, which is totally unprepared and unable to establish or exercise the supervision of standards which the profession has voluntarily followed.

Here is reassertion of police power.

THE FOOT IN THE DOOR

THE ENTIRE Supreme Court of the State of Michigan, in their decision on November 30, 1954, involving certain phases of the law, limited themselves to the questions before them but hinted that other rulings might and could be made, and remanded the case back to the circuit court for further consideration by the plaintiff, if desired.

The broad inference is definite: once a doctor of medicine is registered by the Board of Registration in Medicine, no board, person, or persons may make rules, or regulations, limiting, controlling or suspending his right to practice medicine or surgery in all its branches, except by statutory authority. This is a lengthy opinion written by Mr. Justice Reid. We have boiled it down to a specific statement.

Although the decision was based on Act 350, P.A. 1913, then under consideration, we see the danger of extending it to other hospitals, voluntary, religious or state. If all such police power has been delegated to the State Board of Registration in Medicine in one hospital what is to prevent the same application to rules made in any other?

Under the law of the State of Michigan as it is *now* interpreted, any person who is registered may go into certain hospitals, *and conceivably it might be any hospital,* even the University of Michigan hospitals, and not only demand entrance for consultation on a patient, but to perform any treatment or surgery he chooses.

Carried to its logical conclusion, this rule may be intolerable to the people of the state for whom the medical profession has established many self-imposed, completely voluntary protective rules.

ONE REASSURING FEATURE

DURING the years, the profession has been the target of thousands of critical items in the press, the magazines, and the platform, enumerating the failures of the practice because a few of the members have fallen by the wayside in their moral obligations. A survey last year by the editors of *Look* magazine showed that of the

articles published about the medical profession, 6 per cent were unfriendly and critical. Many have asked, "Why does not the medical profession or the AMA do something about it." Every one of us has heard that same question, if he has been alert to the problems.

We now have the answer, which we all knew but tried manfully to by-pass. In the case of Albert et al. vs. Board of Trustees of Gogebic County Public Hospital, on appeal, the Supreme Court of Michigan told us flatly that no one but the Board of Registration in Medicine may exercise any limitations or control over the practice of any licentiate of that board. This decision was applied to hospitals under the 1913 Act No. 350, but if applied there it can also be applied in other hospitals and circumstances. The State Board has the police power of the state, provided by law, and there is no other policing of the practice of medicine other than the established criminal law.

So far as this editor is concerned, we regret the action of the court. We are now completely and involuntarily relieved of our responsibility as "our brother's keeper." Now, when we are asked why the medical society doesn't do something about it, the answer is, "The Michigan Supreme Court says we cannot."

FEDERAL POLICE POWER

A FEW years ago the Federal Government brought suit against the Oregon State Medical Society for "Conspiracy in Restraint of Trade." This grew out of the voluntary non-profit health plans. There was a long trial, and a verdict that the government had not established its case. In California, there has been much trouble, many threats, and much fear of a trial on the conspiracy charge. Other states have had the threat, and their books looked over. The AMA had the government officials "looking" for several weeks.

Recently, a threat has been made of a charge of "conspiracy" in that the medical profession has so arranged the hospital practice that only a member of the society may have hospital privileges; so that it is necessary to be a member of the society to buy malpractice insurance; also only members may take the examinations of the various National Boards; that the stamp of approval of drugs and appliances is in the nature of a monopoly; that the stamp of approval for voluntary health service plans is available only to medically supported plans. It was intimated that a trip to Washington might obviate the need of a trial, the complaint might be adjudicated and the errors corrected—the old "Consent Decree."

Every one of these charges involved the police power. We heard an attorney arguing heatedly that the medical profession has set up a police system which it has no right to do. The police power rests justly only in the state. If we wish to exercise police power over our members, we should get a legally authorized agency of the state to set up these standards. They only can enforce them. We did not agree, but think we see the next approach toward the complete socialization of medicine. The Michigan Supreme Court has pointed the way. The federal officers (held over from the old regime) are now making the threat. Are we to be punished for trying to provide as best we can with our limited power, for the most expert and finest care possible for our patients?

Note.—Two weeks after these editorials were prepared a Dr. Kopprasch of Allegan (unable to find him in the AMA Directory) brought suit against the Allegan Health Center, its trustees by name, its medical staff by name, the Allegan County Medical Society, the Michigan Hospital Association, and the Michigan State Medical Society, alleging that they were preventing him from practicing medicine, refused to allow him in their hospital, and had hurt his reputation, and he asked for damages of $250,000.00.

THANK YOU

TO John G. Bielawski, M.D., of Detroit, goes our appreciation for the fine efforts on our behalf during the past several years and for his excellent co-operation in the preparation of the material for the Heart Number of The Journal published in January.

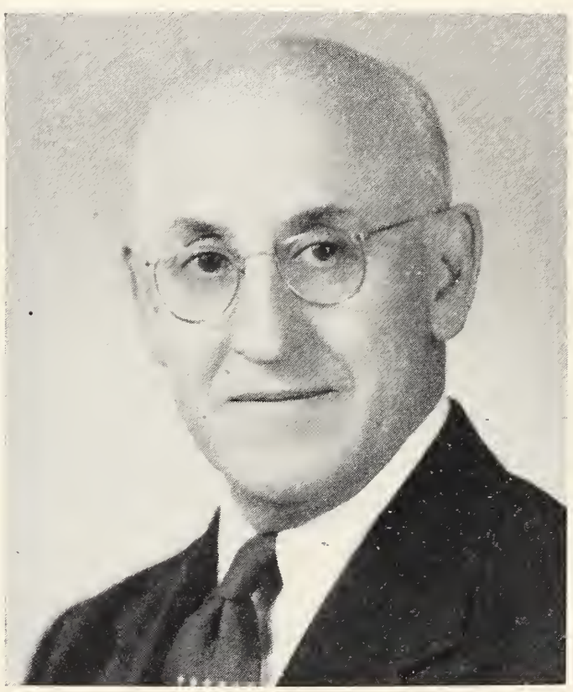
We wish to express our sincere thanks to Palmer Sutton, M.D., of Royal Oak, for his efforts in bringing up to date the work of the Maternal Health Committee, and in the preparation and assembling of material for the memorial issue of The Journal, published in February.

Equal thanks and appreciation are extended to John J. Lightbody, M.D., Detroit, for his ready assistance in compiling papers for the Arthritis and Rhuematism Number of The Journal comprising the present issue.

William A. Hudson, M.D.

The Trail from the Ozarks to Lisbon

William Andrew Hudson, M.D., a Detroit chest surgeon of international renown, is one of Michigan's most honored world travelers. The Spanish and Portuguese speaking countries to our south, the polylingual countries of Europe vie with one another for his scientific papers and his after-dinner speeches. The dignity, weight, and eloquence of his scientific words manifest his life-long pioneering in chest surgery, and his droll humor reflects his Ozark heritage and chief avocation—farming.



The sequence of events of his boyhood life, the struggle in his rise to medical fame, and more particularly the pinnacle of his career—the Presidency of the American College of Chest Physicians—is an episode of "This is Your Life" caliber. Indeed, it is a modern Horatio Alger story.

Will, as Ralph Edwards would certainly call him, was born February 23, 1891, in Jasper, Arkansas, the Newton County metropolis with a population today of a very little more than 400. Jasper rests snugly in the picturesque Ozark Hills. It is in the Mystic Cavern region, near the Diamond Cave area, and only a short distance from Harold Bell Wright's "Shepherd of the Hills" country. The country is rugged; some of the winding old trails follow the tributaries of the Osage River which has sculptured and carved its way through the limestone and well-wooded hills to reach its level beside bounteous cornfields; while other trails lead ever upward until, as Harold Bell Wright so aptly phrases it—"They reach the higher sunlit fields where those who journey see afar and light lingers even when the sun is down."

It was in these cornfields on the lower trail that Will Hudson as a boy—the boy with a hoe, the boy with a cultivator—had his boyish dreams; dreams and hope for the higher trail "where those who journey see afar," and his medium for attainment of these dreams, he will tell you proudly, was "corn." Corn in Arkansas, as in Egypt, was and is an expression for "plenty" and Will used corn as a commodity for his education.

In the way of a sketchy and spotty biography, Will Hudson attended the public school in Newton County, Arkansas. Following his graduation from high school at Sedalia, Missouri, he entered Washington University at St. Louis, and for financial assistance he taught grade school in Newton County and later in State Teacher's Normal in Emporia. In 1918, he received his Bachelor of Science degree and in 1920 his Doctor of Medicine, followed two years later by his Master of Science degree. He served as intern and resident at the Royal Victoria Hospital in Montreal, Canada, on the service of Edward Archibald, M.D., that world-famed bronchoscopist and chest physician. It was under Dr. Archibald's mentorship that Will Hudson decided to make the study of diseases of the chest his medical career.

In 1923, Will Hudson came to Detroit as a member of the staff of the Henry Ford Hospital. And in 1925, he established at Grace Hospital in Detroit a Department of Thoracic Surgery as a separate and distinct unit from the Department of Surgery. This was one of the first of its kind in Michigan, and perhaps in the United States, and was also only one of the many Hudson firsts. At Grace Hospital, he collaborated with Hans A. Jarre, M.D., using the Jarre Cinex Camera to demonstrate the peristaltic contractions of the

bronchovesicular tree and the arrhythmic contractions during an asthmatic attack. Invitations for this demonstration were received from many parts of the world.

An amusing incident is related by Dr. Hudson's charming wife, Beneta, a trained nurse who has encouraged and stimulated Will to carry on his experimental efforts and to dedicate them to man: "Will had been invited back the second time to London, England, to give a lecture and to demonstrate the physiological contractions of the bronchovesicular tree as recorded on the x-ray films which were made with the aid of the Jarre Cinex Camera. Will was demonstrating the fine and delicate movements as registered on the films. Suddenly he was interrupted by a very stately London physician, garbed in the dignity of formal attire. 'Dr. Hudson, tell me and this august assembly, just how small those contractions of the bronchus are.' Will, though momentarily off balance because of the interruption, performed well. He held up his hand and with his index finger touched his thumb tightly and in true American style he replied—'They are the teeniest, weeniest contractions imaginable.' The stately British physician's face blanched in embarrassment. A round of applause broke the tension. Will is still wondering about the true interpretation of this applause."

Was it due to the confusion of the stately London physician or to Dr. Hudson's typical American description of small things?

Space does not permit the recording of the scientific papers that William Hudson has written and presented in various parts of the world. Neither does it permit mention of his activities in the teaching and training of the young chest surgeons and the influence he has exerted on their careers. He is known as the doctor's physician. Physicians and literally hundreds of children and adults in metropolitan Detroit are indebted—to the extent of living and enjoying a normal life—to his skill as a bronchoscopist and chest surgeon. He still makes house calls—night calls—even on holidays; and he readily accepts an emergency call to remove a foreign body from an infant's esophagus or lung.

He has dedicated his skill and life to humanity and in that interest he has played an active part in the local, national and international medical societies, not the least of which was his contribution to the formation of an International Congress of Broncho-esophagological Society. In recognition of his interest and activity in this group he was invited to be the speaker at the Third Congress International Broncho-esophagological Society which met in Lisbon, October 10, 1954. As Dr. Hudson sat at the balcony banquet table facing more than 2,000 guests, representing 84 different countries, his mind flashed back momentarily to the Ozarks, and in relating this episode he remarked—"It's a long, long road from the cornfields of the Ozarks to Lisbon."

Thus, in the life of William A. Hudson is exemplified the true meaning of those words—"They reach the higher sunlit fields where those who journey see afar and light lingers even when the sun is down." The light still lingers for Dr. Hudson and we hope it will linger for many, many years. But even when the sun is set his contributions to medical science and humanity will reflect the light that sees afar.

—Clyde K. Hasley, M.D.

COLLER-PENBERTHY CLINIC POSTPONED

The Coller-Penberthy Clinic, which was to have been held in Traverse City in July, has been postponed to August 25-26, 1955, as Fred Coller, M.D., Ann Arbor, and Grover C. Penberthy, M.D., Detroit, will be attending the International Surgical Association meeting in Stockholm, Sweden, on the original date. Dr. Coller is to present a paper at this meeting.

Leland I. Doan

Practical Business Judgment

Described by *Fortune* magazine as "outgoing, articulate, easy and relaxed," Dr. Leland I. Doan is a man who combines a large measure of practical business judgment with a keen sense of human values and a full awareness of industry's social responsibilities.

Just a few weeks ago, in his home community of Midland, he told a Chamber of Commerce gathering that he hoped a prolonged absence of war and an economic era free from extreme pressures would "give us a chance to iron some of the kinks out of our way of life and make the civilization of this planet a little more civilized.



"The material aspects of human civilization," he suggested, "can serve fully only when the soul of civilization advances along with its physical tools."

Nebraska-born Doan moved to Ann Arbor in his youth and received his education at Ann Arbor High School and the University of Michigan. Upon leaving the University in 1916, he went to work for the Michigan Bell Telephone Company, but after a year shifted to The Dow Chemical Company, of which he has been President since 1949.

The move to Dow was a natural one, since a college romance had resulted in his marriage, in 1917, to Ruth Alden Dow, daughter of Dr. Herbert H. Dow, founder of the Dow company. Mrs. Doan died quite suddenly a few years ago, and Doan subsequently married Mrs. Mildred Mellus, widow of a former Brighton physician.

After getting his indoctrination into the chemical business in chlorine production, Doan transferred to the company's sales department in 1918, and it was there that he found the bottom rung of his particular ladder.

He organized Dow's first advertising department in 1920, and showed so much executive ability that, two years later he was made assistant general sales manager. In 1929, he became general sales manager and continued to head the firm's sales organization until 1949, when he was elected to the presidency, following the death of Dr. Willard H. Dow.

On the way up, he had become a director in 1935, a vice president in 1938, a secretary of the corporation in 1941.

While Dow has a long record of pace-setting growth, it has come up almost fabulously in the relatively short span of Doan's leadership, more than doubling its sales and stepping into the ranks of the first five U. S. chemical companies. His explanation: "The most fundamental factor behind our growth is that the will to progress is an inherent part of the personality of the Dow company."

Better than many executives, Lee Doan knows when it is time for business and time for relaxation. He knows how to delegate responsibility,

Dr. Doan was principal speaker and special guest at the testimonial banquet honoring national medical leaders during the 1955 Michigan Clinical Institute in Detroit. As President of the Dow Chemical Company which sponsors the prize-winning television program "Medic" and which has been a leader in scientific research and health education, Dr. Doan was presented by the Michigan State Medical Society with a scroll at the March 10 dinner.

and does so, lending vigor and group thinking to the organization and, at the same time, sparing some of his own energy.

There are times when the views of different segments of a large corporation are inevitably divergent. Doan's diplomacy, objectivity and sense of proportion make him an excellent "balance wheel" in bringing multi-faceted problems into proper focus for judicious solution.

While acutely conscientious about his responsibilities to Dow Chemical, he believes a modicum of outside experience helps keep an executive from getting in a rut, broadens his outlook and better fits him for his primary task. It is this sort of thinking that led him to accept a directorship in the Michigan Bell Telephone Company. It also let him be persuaded in 1951 to take his first and only venture into politics. He ran successfully for Regent of the University of Michigan and took office in that position on January 1, 1952. He is also currently a director of the Manufacturing Chemists' Association and the Armed Forces Chemical Association.

Doan was honored for his achievements in 1952 when Case Institute of Technology conferred upon him the honorary degree of Doctor of Engineering. An outspoken believer in traditional American business principles and an unquenchable economic optimist, he has been much in demand as a speaker before business and civic organizations.

In recent years, he has appeared before such groups as the New York State Chamber of Commerce, Bankers Club of Detroit, California Manufacturers Association and the National Chamber of Commerce. He genuinely enjoys such appearances, but his corporate responsibilities take definite priority. Intensely community conscious, he is, if anything, more likely to accept an invitation from a "Dow community" group than from a large national organization.

"So long as our youth," he says, "are brought up to believe in the essential dignity of the individual . . . of the essential rightness of hard work and honest competition . . . they will grasp their opportunities and put them to work for financial profit to themselves and material benefit to others."

He can back up his contention, if necessary. He attributes much of his company's phenomenal success to its historic policy of "growing its own" executives. No capable and ambitious Dow man need worry about someone being "hired in" over his head. Among those well on their way up are two sons, Leland A. Doan, Dow's Western Sales Manager; Herbert D. Doan, a member of the executive research staff; and a son-in-law, Parker Frisselle, Manager of the Market Research Department.

University of Michigan
Postgraduate Course in Otolaryngology

The Department of Postgraduate Medicine of the University of Michigan Medical School announces the Otolaryngology Conference to be given at the University Hospital, Ann Arbor, Michigan, on April 14, 15 and 16, 1955, under the direction of Dr. A. C. Furstenberg, Chairman of the Department of Otolaryngology at the University of Michigan Medical School.

Guest Lecturers: Dr. John M. Converse, New York City, N. Y.
Dr. Julius Lempert, New York City, N. Y.
Dr. Alden H. Miller, Los Angeles, Calif.
Dr. Werner Mueller, Boston, Massachusetts
Dr. Henry L. Williams, Rochester, Minnesota

Resident Lecturers: Dr. A. C. Furstenberg
Dr. J. H. Maxwell
Dr. Walter J. Nungester
Dr. James L. Wilson
Dr. J. F. Holt
Dr. Isadore Lampe

For further information, address: Dr. John M. Sheldon, Director, Department of Postgraduate Medicine, University Hospital, Ann Arbor, Michigan.

Wayne University College of Medicine

Postgraduate Continuation Courses

March 14-June 11, 1955

These courses are open to all qualified persons. Veterans receiving benefits under the G. I. Bill should contact Dr. Arthur Johnson, Veterans Administrator at Wayne University, 666 Student Center Building, 5050 Cass. Registration for these courses should be made in the office of Postgraduate Medical Education at the College of Medicine, 1401 Rivard, *before March 12.*

ANATOMY			
Surgical Anatomy (Limited to 20 Surgical Residents)	College of Medicine	Tues. 1-5	$50.00
Regional Anatomy			
Head and Neck	College of Medicine	Fri. 1-5	$50.00
Thorax, Abdomen & Pelvis	College of Medicine	Wed. 1-5	$50.00
Back and Extremities (Regional Anatomy open to graduates of dentistry)	College of Medicine	Thur. 1-5	$50.00
Special Dissection (Depending upon availability of material—Contact Dr. Gardner)	College of Medicine	Tues. 1-5	$50.00
MICROBIOLOGY			
Parasitology and Medical Entomology	College of Medicine	M. & W. 2-5	$50.00
Microbiology Seminar	College of Medicine	Thur. 3:30-5	$15.00
PHYSIOLOGICAL CHEMISTRY			
Nutrition	College of Medicine	M. T. W. 11-12	$35.00
Methods and Metabolism	College of Medicine	T. W. Th. F. 8-12	$50.00
P. Chemistry Seminar	College of Medicine	Thur. 3:30-4:30	$15.00
Survey of Medical Chemistry	College of Medicine	Wed. 4-5	$15.00
PHYSIOLOGY AND PHARMACOLOGY			
Seminar	College of Medicine	Tues. 4-5	$15.00
PATHOLOGY			
Cytodiagnosis of Cancer	College of Medicine	Mon. 1-5	$50.00
Histopathology of Ear, Nose and Throat	College of Medicine	Fri. 3-5	$25.00
DERMATOLOGY			
Dermatology Seminar	Receiving Hospital	Wed. 10-12	$15.00
INTERNAL MEDICINE			
Therapeutic Conference (Seminar on new drugs)	Receiving Hospital 243 Farwell Annex	Fri. 5-6	$15.00
Gastroenterologic Clinic (Limit 10)	Receiving Hospital 243 Farwell Annex	Sat. 8-9	$15.00
Medical Seminar	Receiving Hospital 243 Farwell Annex	Mon. 5-6	$15.00
Medical X-Ray Conference (Limit 10)	Receiving Hospital 243 Farwell Annex	1st, 3rd, 5th Tues. 11-12	$15.00
Medical Pathologic Conf. (Limit 10)	Receiving Hospital 243 Farwell Annex	Wed. 11-12	$15.00
Hematology Clinic	Receiving Hospital Med. OPD Farwell Annex	Wed. 1-3	$15.00
ONCOLOGY			
Cancer Detection	Yates Clinic	Wed. 3-5	$25.00
SURGERY			
Surgery Seminar	645 Mullett, 4th Floor	Mon. 4-5	$15.00
COMPREHENSIVE UNIT COURSES			
Conference on Anesthesiology	College of Medicine	April 21, 22, 23 8:30-5:00	$40.00
Basic Ophthalmology	Kresge Eye Institute and Hospitals	Full Time (9 months)	$500.00

This class in Basic Ophthalmology will begin in September, 1955, and applications must be in immediately. Applications can be secured from the Postgraduate Department at the College of Medicine, 1401 Rivard, Detroit 7, Michigan.

Michigan State Medical Society

Annual Session of the Council

Detroit—January 28-29, 1955

HIGHLIGHTS

- The Auditor's Report for 1954, and the budgets for 1955, were approved. (See pages 357 and 360).
- Annual reports of Secretary, Treasurer, and Editor were presented and approved.
- Reports of the three standing committees of The Council, meetings of January 27, were accepted.
- Secretary L. Fernald Foster, M.D., Bay City, Treasurer Wm. A. Hyland, M.D., Grand Rapids, and Editor Wilfrid Haughey, M.D., Battle Creek, were re-elected for 1955.
- Progress Report on Michigan Medical Service was presented by R. L. Novy, M.D., Detroit, Blue Shield President.
- Annual reports of individual Councilors on condition of profession in their districts were presented.
- Monthly reports of Council Chairman William Bromme, M.D., Detroit; President R. H. Baker, M.D., Pontiac; Secretary L. Fernald Foster, M.D., Bay City; Rheumatic Fever Co-ordinator Leon DeVel, M.D., Grand Rapids; and Public Relations Counsel Hugh W. Brenneman, Lansing, were accepted.
- Michigan Health Commissioner A. E. Heustis, M.D., Lansing, presented mutual problems to The Councilors for their information and advice.
- Committee reports were presented by: Arbitration Committee, meeting of December 10; Mental Health Committee, December 15; Postgraduate Medical Education Committee, December 16; Committee on National Defense, January 5; Preventive Medicine Committee, January 6; Permanent Conference Committee, January 12; Industrial Health Committee, January 13; Liaison Committee with Michigan Department of Social Welfare, January 14; Legislative Committee, January 19; Committee on M.D. Placement Program, January 27. Report of January 20 meeting of Michigan Cancer Co-ordinating Committee and also of the January 12 meeting of the Committee on Arrangements for the March 10-11 Operating Room Nurse Conference were presented. Report of Chairman of Committee on Courses in Medical Economics and Ethics was received as information.
- Report on legal action of Wm. A. Kopprasch, M.D., of Allegan, against Michigan State Medical Society, Michigan Hospital Association, Allegan County Medical Society and Board of Trustees of Allegan Center Hospital, was given and appropriate defense by legal counsel et al was outlined.
- The name of A. E. Heustis, M.D., was recomended to Governor G. Mennen Williams for reappointment as Commissioner of Michigan Department of Health, for new term beginning July 1, 1955.
- Michigan Foundation for Medical and Health Education, Inc.: MSMS President R. H. Baker, M.D., urged a better informed profession regarding the excellent activities and services of this Foundation, especially the Student Loan Revolving Fund and the Michigan Rural Health Conference.
- Recent public relations meetings held by various county medical societies, sponsored by MSMS Public Relations Committee, were given praise by President Baker who urged that each Councilor keep his county medical societies and their individual members well informed on what the Michigan State Medical Society is doing. The matter was referred to the new Past Presidents' Club for study and recommendations.

- Appointments: To the Committee on Blood Banks (a Committee of The Council): R. L. Mainwaring, M.D., Allen Park, Chairman; J. H. Ahronheim, M.D., Jackson; G. R Backus, M.D., Flint; W. G. Gamble, M.D., Bay City; E. R. Jennings, M.D., Detroit; J. A. Kasper, M.D., Detroit; D. L. Kessler, M.D., Grand Rapids; R. E. Lininger, M.D., Benton Harbor; and L. W. Walker, M.D., Lansing.
  John G. Bielawski, M.D., Detroit, was made Chairman of the Periodic Health Appraisal Committee.
- Program for the Conference of Executive Secretaries of County Medical Societies in Michigan, to be held at MSMS headquarters, February 15, was approved.
- Joint meetings of the Executive Committee of the MSMS Council with the Executive Committee of the Board of Commissioners of the State Bar of Michigan; and also with the Executive Committee of the Michigan Hospital Association, were authorized.
- MSMS representatives: (a) A. Hazen Price, M.D., Detroit, to Eighth Annual Conference on Aging, June, 1955, Ann Arbor.
  (b) William Bromme, M.D., Detroit, to Council on Medical Service, February 19, Chicago.
  (c) K. H. Johnson, M.D., Lansing, to Adult Education Association meeting, East Lansing.
- 1958 MSMS Annual Session dates were changed to September 29 through October 2 to escape conflict with the feast of Yom Kippur.
- Criteria for selecting Michigan's Foremost Family Physician were outlined and approved.
- The matter of members practicing in one county and holding membership in a neighboring county medical society, as per MSMS By-Laws, Chapter 2, Section 2, was discussed. Michigan law requires that doctors be registered to practice in the county in which they reside (Section 4, Medical Practice Act). The Council recommended to the House of Delegates that membership requirements be reviewed in the light of legal requirements for residence as compared with the county in which member practices.
- New application for membership form, used by Wayne County Medical Society, was approved.
- Annual County Secretaries-Public Relations Conference: The Council approved the Secretary's recommendation that in future this meeting be a three-day seminar; The Council further approved notification to county societies that "the value of a good secretary increases as his tenure of office lengthens."

SECRETARY'S ANNUAL REPORT—1954

To: The Council of the Michigan State Medical Society:

I herewith submit the report of the Secretary for the year 1954.

MEMBERSHIP

The Michigan State Medical Society membership for 1954 showed a total of 5,787 members, including 289 Emeritus and Life Members, 62 Retired members and 273 Associate and Military members. The total paid membership was 5,239 with net dues of $102,100.00. The 1954 membership was once again at the highest peak in the history of the Society. The number of members with unpaid dues for 1954 was 33.

DEATHS DURING 1954

I regretfully must report a total of eighty-three deaths among members during the past year:

Bay County—William R. Ballard, M.D., Bay City; Arthur O. Boulton, M.D., Gladwin.

Berrien County—Ina M. Harper, M.D., Benton Harbor.

Calhoun County—Willard N. Putman, M.D., Battle Creek; Wilbur O. Upson, M.D., Oceanside, California.

Cass County—Otis E. Newsome, M.D., Cassopolis.

Delta-Schoolcraft County—Nancy R. Chenoweth, M.D., Peterborough, Canada; Nathan J. Frenn, M.D., Bark River.

Genesee County—Lee D. Harrison, M.D., Flint; James Houston, M.D., Swartz Creek; Edward J. Kaleta, M.D., Flint; Mahlon R. Sutton, M.D., Alden.

Houghton County—Isadore D. Stern, M.D., Houghton.

Ingham County—Henry S. Bartholomew, M.D., Harbor Beach; Frank S. Cross, M.D., Lansing; William E. McNamara, M.D., Lansing.

Jackson County—Jack L. Miller, M.D., Jackson.

Kalamazoo County—Wesley O. Jennings, M.D., Kalamazoo; Benjamin Nibbelink, M.D., Kalamazoo.

Kent County—Elton P. Billings, M.D., Grand Rapids; Alexander M. Campbell, M.D., Grand Rapids; James C. Droste, M.D., Grand Rapids; John T. Hodgen, M.D., Grand Rapids; Bert H. Shepard, M.D., Lowell; Harvard J. Van Belois, M.D., Grand Rapids.

Lenawee County—Esli T. Morden, M.D., Adrian.

MEMBERSHIP RECORD—1954

COUNTY MEDICAL SOCIETY	PAID 1953	PAID 1954	SPECIAL MEMBERS ELIGIBLE FOR RETIRED	SPECIAL MEMBERS ASSOCIATE	DEATHS 1953	DEATHS 1954	NET MEMBERSHIP 1953	NET MEMBERSHIP 1954	1954 GAIN	1954 LOSS	UNPAID 1953	UNPAID 1954
Allegan	22	22	1	—	1	—	23	23	—	—	—	—
Alpena, Alcona, Presque Isle	22	23	2	2	—	—	25	27	2	—	—	—
Barry	11	11	3	—	—	—	14	14	—	—	—	—
Bay, Arenac, Iosco	67	73	4	2	6	2	2	77	83	6	—	—
Berrien	76	77	1	1	7	1	1	83	86	3	—	—
Branch	21	25	3	—	—	—	—	24	27	3	—	—
Calhoun	102	103	13	1	3	2	2	125	118	—	7	—
Cass	10	10	2	—	—	—	1	11	11	—	—	—
Chippewa-Mackinac	22	23	3	1	—	—	—	26	27	1	—	—
Clinton	15	15	1	—	—	—	—	16	16	—	—	—
Delta-Schoolcraft	22	22	2	—	—	—	2	24	22	—	2	1
Dickinson-Iron	22	17	—	1	—	1	—	22	18	—	4	— 1
Eaton	18	19	—	—	2	—	—	20	21	1	—	—
Genesee	203	205	20	1	7	7	4	224	229	5	—	2 —
Gogebic	20	18	1	—	—	1	—	19	19	—	—	—
Grand Traverse, Leelanau, Benzie	40	40	1	3	2	—	—	45	46	1	—	2 1
Gratiot, Isabella, Clare	35	37	3	—	3	—	—	41	43	2	—	—
Hillsdale	16	13	5	—	1	—	—	19	19	—	—	—
Houghton, Baraga, Keweenaw	22	25	7	—	—	1	1	28	31	3	—	—
Huron	13	14	1	—	—	—	—	15	15	—	—	— 1
Ingham	182	190	7	8	7	—	3	200	209	9	—	—
Ionia-Montcalm	36	40	3	—	3	—	—	39	46	7	—	2 —
Jackson	99	100	13	1	5	1	1	113	118	5	—	—
Kalamazoo	139	142	7	3	5	3	2	149	155	6	—	1 —
Kent	304	323	22	2	27	6	6	340	368	28	—	2 1
Lapeer	15	15	4	—	—	1	—	17	19	2	—	— 1
Lenawee	40	40	2	1	1	1	1	42	43	1	—	— 2
Livingston	20	21	—	—	—	1	—	19	21	2	—	— 1
Luce	8	8	1	—	—	1	—	8	9	1	—	—
Macomb	53	60	1	1	—	—	2	55	60	5	—	1 1
Manistee	10	11	1	—	—	—	1	13	11	—	2	—
Marquette-Alger	36	35	4	2	1	1	—	40	42	2	—	—
Mason	11	11	1	—	—	—	—	12	12	—	—	—
Mecosta, Osceola, Lake	14	15	2	—	—	1	—	15	17	2	—	—
Menominee	18	17	—	—	—	1	—	18	17	—	1	—
Midland	28	29	—	—	—	1	—	27	29	2	—	—
Monroe	32	35	2	—	—	2	2	33	35	2	—	—
Muskegon	89	94	4	2	1	2	3	95	98	3	—	— 1
Newaygo	9	9	—	—	—	1	—	8	9	1	—	1 1
North Central	21	24	1	1	—	—	—	22	26	4	—	1 —
Northern Michigan	32	33	2	—	2	1	1	34	36	2	—	—
Oakland	232	254	16	—	7	3	1	251	276	25	—	2 4
Oceana	7	7	3	—	1	—	—	11	11	—	—	—
Ontonagon	4	4	1	—	—	—	—	4	5	1	—	—
Ottawa	43	50	2	—	2	—	—	47	54	7	—	—
Saginaw	125	124	8	6	4	1	2	137	140	3	—	—
St. Clair	59	60	2	4	6	—	2	66	70	4	—	—
St. Joseph	23	26	1	1	—	—	1	24	27	3	—	—
Sanilac	12	13	—	—	—	—	—	12	13	1	—	1 —
Shiawassee	27	26	1	—	1	—	1	28	27	—	1	1 1
Tuscola	16	18	2	—	—	—	2	19	18	—	1	—
Van Buren	22	22	2	—	—	1	1	24	23	—	1	—
Washtenaw	189	226	8	3	89	2	5	319	321	2	—	— 6
Wayne	2259	2351	91	17	78	32	33	2385	2504	119	—	14 11
Wexford-Missaukee	15	14	2	—	—			16	16	—	—	1 —
Honorary Members								7	7	—	—	— —
TOTALS:	5008	5239	289	62	273	79	83	5530	5787	276	19	32 33

Macomb County—Oswald F. Banting, M.D., Richmond; Victor Hugo Wolfson, M.D., Mt. Clemens.

Manistee County—Charles L. Grant, M.D., Manistee.

Monroe County—Silas V. Dusseau, M.D., Erie; Sara J. Long, M.D., Allen Park.

Muskegon County—William A. Hagen, M.D., Muskegon; Roy Herbert Holmes, M.D., Muskegon; Henry J. Pyle, M.D., Muskegon.

Northern Michigan—Harris V. Lilga, M.D., Petoskey.

Oakland County—Waldron W. Wellman, M.D., Holly.

Saginaw County—Arthur Grigg, M.D., Saginaw; Herodotus Roy Wilson, M.D., Saginaw.

St. Clair County—Charles F. Thomas, M.D., Port Huron; Mason E. Vroman, M.D., Port Huron.

St. Joseph County—George J. Sweetland, M.D., Constantine.

Shiawassee County—Roelof Lanting, M.D., Corunna.

Tuscola County—Harry A. Barbour, M.D., Mayville; Bernard H. Starmann, M.D., Cass City.

Van Buren County—Wilbur F. Hoyt, M.D., Paw Paw.

Washtenaw County—John Alexander, M.D., Ann Arbor; Andros Gulde, M.D., Chelsea; Helen F. Price, M.D., Ann Arbor; Harold W. Riggs, M.D., Ann Arbor; John A. Wessinger, M.D., Ann Arbor.

Wayne County—Carl C. Bailey, M.D., Detroit; Donald C. Beaver, M.D., Detroit; Louis Braitman, M.D., Detroit; Harold J. A. Brisbois, M.D., Flint; Benjamin F. Cooper, M.D., Detroit; Henry F. Crossen, M.D., Detroit; E. Nesbitt Dolman, M.D., Detroit; Simon S. Farbman, M.D., Detroit; Linus J. Foster, M.D., Detroit; Allan C. Fullenwider, M.D., Detroit; Arthur M. Gannan, M.D., Detroit; Julius R. Gitlin, M.D., Detroit; John M. Graff, M.D., Detroit; Simpson W. Green, M.D., Detroit; Elmer N. Hunter, M.D., Detroit; Ambrose T. Kibzey, M.D., Detroit; Paul A. Klebba, M.D., Detroit; Albert H. Krohn, M.D., Detroit; Maurice B. Landers, M.D., Detroit; Frederick E. Lapham, M.D., Detroit; Harold U. Mair, M.D., Detroit; Arthur B. McGraw, M.D., Detroit; Helmuth A. Meinecke, M.D., Detroit; Walter J. Muellenhagen, M.D., Detroit; William R. Olmsted, M.D., Detroit; Matthew D. Palevich, M.D., Detroit; Benjamin H. Priborsky, M.D., Detroit; Tom H. Robertson, M.D., Detroit; Stephen S. Skrzycki, M.D., Detroit; Lawrence H. Van Becelaere, M.D., Ecorse; Horace F. W. Warden, M.D., Detroit; Walter J. Wilson, M.D., Detroit; Frank C. Witter, M.D., Detroit.

THE JOURNAL

The following financial information relative to THE JOURNAL is found in the annual audit report of MaDan and Bailey:

Income was $77,515.69 which is $15,115.69 over the tentative budget for 1954. Expenses were $72,738.59 which was $11,132.59 over the tentative budget for 1954. However, a comparison of these figures indicates a net gain for the year 1954 of $4,777.10. This gain is due to the increased advertising rates which were in effect throughout the year and the increased number of advertising pages used during the past year.

THE JOURNAL, during 1954, continued the policy of special distinctive covers to emphasize some of the major activities of the Society, e.g., Cancer, Heart Disease, Michigan Medical Service, et cetera.

FINANCES

An audit of the books of the Society was completed by MaDan and Bailey as of December 24, 1954. This has been submitted to the Finance Committee for study and is available to any member of the society for perusal at the Executive Offices, 606 Townsend Street, Lansing, Michigan.

A brief summary of the audit produces the following information:

Assets:	
Cash	$ 67,639.18
Accounts Receivable	14,656.65
Investments	125,178.50
Property	55,017.47
Other Assets	11,102.50
Total Assets	$273,594.30
Liabilities:	
Accounts Payable	$ 15,533.47
Deferred Income	13,110.00
Total Liabilities	28,643.47
Society Equities	
Reserved for Special Purposes	
Public Education Reserve	30,000.00
Public Education Program	76,816.26
Public Service Account	3,330.00
Professional Relations Account	6,545.92
Rheumatic Fever Control Program	13,645.55
Contingent Fund	29,390.82
Building Fund	11,770.04
General Society Equity	72,893.41
Net Gain for Period	558.83
Total Liabilities and Equities	$273,594.30

From the income and expense statement, we find the total income was $110,500.49 with total expenses of $109,941.66, indicating a net gain of $558.83.

We note from the Income and Expense Summary of December 27, 1953 to December 24, 1954, that the total balance other than Beaumont Portion, was $197,-441.80, Income for the period was $367,688.94, Expenses for the period were $330,660.20, Net Gain is $37,028.74 with a balance on hand of $234,470.54

A review of the general finances of the society shows that the Public Relations Department activities fell well below the established budget. The greatest increase in expenditures occurred in the General Society Activities. This condition suggests that possibly a study should be made of the relative allocations to be made next year to these two departments.

1954 ANNUAL SESSION

We are happy to announce that the 1954 Annual Session broke all previous attendance records with a total of 3,904. This represents an increase of 299 over the previous high of 1948. The breakdown of attendance was as follows:

M.D.'s	2,295
Guests	534
Exhibitors	432
Woman's Auxiliary	171
Medical Assistants	372

The General Assembly type of program with discussion conferences was continued as in previous years.

The ninety-nine Technical Exhibitors received the usual generous attention of the registrants.

1954 HOUSE OF DELEGATES

The House of Delegates transacted the legislative business of the Society with dispatch and thoughtful deliberation. A summary of the proceedings is given herewith.

1. Adopted with thanks the Speaker's Address, the President's Address, the President-Elect's Address, the report of Delegates to the American Medical Association, the Annual Reports of The Council, including Annual Reports of Committees of The Council, and the Annual Report of the Woman's Auxiliary to the Michigan State Medical Society.
2. Adopted Annual Reports of all Standing Committees and of all Special Committees of the Society.
3. Elected Duncan J. McColl, M.D., Port Huron, as Michigan's Foremost Family Physician for 1954.
4. Elected L. Fernald Foster, M.D., Bay City, as President for a Day.
5. Adopted Resolutions concerning:
   (a) Honorary Membership to Don E. Johnson, Flint.
   (b) Migrant Workers (amended).
   (c) Panel with Medical School Deans on undergraduate medical education.
   (d) County Medical Society responsibility in medical civil defense (amended).
   (e) Traffic safety (amended).
   (f) Extension of MSMS Periodic Health Appraisal Program.
   (g) Memorial in JMSMS to the late E. D. Spalding, M.D.
   (h) Commendation to A. E. Heustis, M.D., Michigan Health Commissioner (amended).

   Referred to:
   (a) The Council, a resolution re periodic health examinations by hospital staffs.
   (b) Michigan's AMA Delegates a resolution re expansion of AMA administrative facilities.
   (c) Michigan's AMA Delegates a resolution to study by AMA of general practice.
   (d) Medical Advisory Committee to Michigan Medical Service, part II of a resolution re increase in fees for anesthetics.
   (e) Committee on Study of Basic Science Act, a resolution re greater uniformity by Basic Science Boards.

   Adopted substitute resolutions concerning:
   (a) Blue Shield fees for surgical assistants (in lieu of two resolutions introduced).
   (b) Information by Blue Cross-Blue Shield to contract holders.
6. Adopted amendments to MSMS By-Laws:
   (a) Affecting membership qualifications, in Chapter 5, Sec. 3-f; Chapter 5, Sec. 3-g; Chapter 5, Sec. 4; Chapter 5, Sec. 5, Sec; 8; Chapter 6, Sec. 6; Chapter 8, Sec. 1; and Chapter 15, Sec. 2.
   (b) Changing name of Mental Hygiene Committee to "Mental Health Committee," in Chapter 10, Sec. 3.

7. Disapproved resolutions concerning:
   (a) Request to insurance companies to study fees for anesthetics (part 1 of this resolution).
   (b) Study by hospital staffs of Blue Cross utilization.
   (c) Discontinuance of Veterans Administration home-town medical care program.
   (d) Public relations funds.
   (e) Liberalization of Blue Shield benefits.
   (f) Revision of Blue Shield fee schedule.
   (g) Division of fees.
8. Elected forty-one members to Special Memberships:
   (a) Seventeen members to Life Membership.
   (b) Thirteen members to Retired Membership.
   (c) Ten members to Associate Membership.
   (d) One member to Non-Resident Membership.
9. Elected the following officers:
   (a) B. M. Harris, M.D., Ypsilanti, as Councilor of the 14th District (1959).
   (b) William Bromme, M.D., Detroit, as Councilor of the 18th District (1959).
   (c) W. D. Barrett, M.D., Detroit (1956); W. H. Huron, M.D., Iron Mountain (1956); and R. L. Novy, M.D., Detroit (1956), as Delegates to the American Medical Association.
   (d) G. W. Slagle, M.D., Battle Creek (1956); C. I. Owen, M.D., Detroit (1956); and J. R. Rodger, M.D., Bellaire (1956), as Alternate Delegates to the American Medical Association.
   (e) W. S. Jones, M.D., Menominee, as President-Elect.
   (f) J. E. Livesay, M.D., Flint, as Speaker, House of Delegates.
   (g) K. H. Johnson, M.D., Lansing, as Vice Speaker, House of Delegates.

ORGANIZATIONAL ACTIVITIES

MICHIGAN CLINICAL INSTITUTE

The Eighth Michigan Clinical Institute was held in Detroit, March 10-11-12, 1954, with an attendance of 2,503—the all-time record registration. Innovations: (a) one was the use of color television, featured through the courtesy of Smith, Kline & French Laboratories, Philadelphia; (b) the new "Award for Excellence in Medical Reporting" was presented to Jack Pickering of the *Detroit Times*.

ANNUAL SECRETARIES-PUBLIC RELATIONS CONFERENCE

The Annual County Secretaries-Public Relations Conference was held in Detroit, January 31, 1954; the third annual meeting of Michigan's County Medical Society Executive Secretaries was held in Lansing on February 10, 1954. The programs of both these meetings stimulated greater organizational effort.

OTHER ORGANIZATIONAL ACTIVITIES

Conference for The Student AMA with residents and interns.

Honoring of Michigan Medical leaders who during the year were elected as Presidents of National Medical Organizations.

Organization of Michigan Cancer Co-ordinating Committee.

Continuation of Golden Goose Meetings re over-utilization of Blue Cross.

Especial commendation is due the Woman's Auxiliary and Medical Assistants Society for the development and execution of many worthy projects.

Continued friendly relations have been maintained with the many Governmental Agencies and the Voluntary Agencies and Organizations as in the past.

These have been previously reported in the Annual Report of The Council.

BEAUMONT MEMORIAL

The dedication of the Beaumont Memorial occurred July 17, 1954—a great event marking (a) the epochal discovery made by William Beaumont, M.D., on Mackinac Island in 1822 and (b) the generosity of Michigan's doctors of medicine in contributing thousands of dollars to erect this architectural gem as a Memorial to one of the great physiologists of all time. The Beaumont Memorial will stand for generations as a symbol to the honor and respect which Michigan medical men pay to their Scientific Great.

Sincere thanks are due and payable to the hard-working Beaumont Memorial Committee, especially to its zealous Chairman, Otto O. Beck, M.D., of Birmingham, for his tireless attention to the work of the Beaumont Memorial and the July 17 Dedication.

GROUP HEALTH AND ACCIDENT PROGRAM

This program which became effective Nov. 15, 1953, has continued to grow and a number of claims were processed during 1954.

The Officers of the MSMS feel that this group health and accident insurance program, the first and only insurance program endorsed by the MSMS, is one of the choice privileges of State Society Membership.

COMMITTEES

Limitation of time and space makes it impossible to detail in this report the many activities of all the committees contributing to the many splendid programs of the State Society. The accomplishments of the committees of the Society were achieved at the expense of many hours of personal sacrifice on the part of the personnel of the various committees. During 1954, forty-five committees of the Michigan State Medical Society held a total of one hundred seven meetings and practically every meeting was attended by your Executive Director or Secretary. A total of 441 fellow members of your State Medical Society gave freely of their time to attend these meetings and assist in the operational activities of the State Society. Too much commendation cannot be accorded the committee members who contributed their time and effort to develop and execute constructive programs—both scientific and economic—for the public welfare and to maintain the position of leadership enjoyed by the Michigan State Medical Society in the field of progressive medical planning.

SECRETARY'S LETTERS

As part of the Society's general educational program for individual members and for component County Societies there were issued during the year 1954, five Secretary's Letters, two to all members and three to County Secretaries and keymen. These informational circulars were in addition to the monthly issues of The Journal with its scientific articles and informative news items. In addition, eight Legislative Bulletins were issued to keymen during the 1954 Spring Legislative Session to keep the membership informed of activities in the State Legislature pertaining to the practice of medicine.

PUBLIC RELATIONS

The pattern of public relations activity was more objective in 1954 than in previous years due to the introduction of the brochure "Winning Friends for Medicine" which gave positive direction in twenty-six projects of major public relations importance. In accordance with the September, 1953, directive of the House of Delegates a great effort has been made, and is continuing, toward the integration of all county medical society PR programs among themselves and with the MSMS.

Keystone of the effort has been a series of sixteen PR Conferences held in the major communities of Michigan at which time officers of the MSMS—notably the President, the Secretary, the Public Relations Committee Chairman, Dr. Payne, and the MSMS executive personnel—have met with the members in all areas of the state whose responsibility it is to direct the public relations activities of the medical profession. The effect of these meetings and the plans formulated in them will be a major force for improvement of our public relations in 1955. (A recommendation on this subject follows.)

It is unnecessary for me to review each of the projects involving the use of communication media in this report for they are available for review in the PR Committee reports and the monthly reports of the PR Counsel. However, it can be said that TV, Radio, Motion Pictures, Newspaper Publicity, Exhibits, Conferences (state and national) were used most effectively and at the very minimal cost commensurate with our needs. Particular attention should be accorded the excellent publicity received from the Beaumont Memorial project and the services rendered by the University of Michigan in that effort. It is also noteworthy that a new sound and color 16 mm motion picture "Planning Your Career" was produced in 1954 at a phenomenally low cost and that the series of additional motion pictures planned in 1954 are now in the process of production: these include a film for doctors of medicine on the Periodic Health Appraisal and for the public on Epilepsy and on the cost of medical care. (A recommendation on the subject follows.)

Your officers and PR representatives have attended state and national conferences of all varieties in the PR field during 1954. Some of the subjects were Medical PR, Professional PR, Adult-Education, Educational TV, Rural Health, Citizens Public Health, Good Government, etc. From all of these and from other sources two important PR needs have become apparent:

(a) The necessity for all *publics* to *realize* that the medical profession is sincerely attempting to (and is succeeding in) extending medical service in step with a rapidly increasing population and, beyond that, to persons and areas not previously or presently receiving optional health service. Coupled with this fact is the expressed need for additional scholarship and loan funds for students at schools of medicine and nursing in Michigan.

(b) The necessity for clear and widely disseminated statements of policy—and the reasons *why* those policies have been adopted—on health questions of vital public interest.

(A recommendation on these subjects follows.)

Your attention is invited to the increasing assistance we are receiving in PR activities from persons and organizations outside of MSMS. This is reflected in the larger number of awards given each year, and particularly this year to newspapers (who have sponsored medical forums and given outstanding publicity to medical affairs) to corporations (such as Dow Chemical for its sponsorship of "Medic") and to individuals who have made outstanding contributions to health (such as those receiving awards at the 1955 MCI and as reflected in jointly sponsored conferences such as the Michigan Rural Heath Conference which had 122 co-sponsoring organizations). The assistance given has been most valuable.

It is becoming increasingly apparent that some forces of business and other representative groups are either unknowingly or purposefully making inroads upon the freedoms of professional people, generally, to practice their respective professions. In past years, and 1954 particularly, we have seen attempts made by business contracts and by legislation, (sponsored in some instances by business interests) to permit the corporate practice of law, medicine, engineering, architecture, etc. We have seen attempts made by legislation (in some cases sponsored by labor groups) to fix fees and services of professional people, thereby reducing the effectiveness of the professional man to serve and lessening the attraction of a professional career to prospective students. The MSMS has an obligation to its members to aid them in the protection of their professional rights and freedoms. Depending upon our action, we as professions can either be caught in the vise of the squeeze play between labor and business or we can be the balance of power between these two gigantic forces. (A recommendation on this subject follows.)

One word of explanation: I have departed from custom in this portion of my report from reviewing in some detail the *specific PR program* carried out. I have done so in order to invite to your attention specific ideas for 1955. In so doing I do not wish to leave the impression that many noteworthy accomplishments have not been made—quite the contrary—we have become so accustomed to outstanding work on the part of our PR Committee and personnel that we can permit ourselves to focus attention on matters of major policy secure in the knowledge that we have sound organizational machinery and well-equipped personnel to expedite its implementation.

LEGISLATION

In the report to the Mid-Summer Meeting of The Council and again in the Report to the September, 1954, Meeting of the House of Delegates, we reviewed our progress in legislation. The Congress and the Michigan Legislature have not been in session since that time prior to January, 1955, and so I shall not elaborate upon 1954 legislation but rather give you a few items that possibly will challenge our attention this year.

It may well be that legislation will be introduced to rectify the situation which threatens as a result of the recent Supreme Court decision in the so-called "Grand View Hospital Case" originating in Gogebic County. A Liaison Committee met with representatives of the Michigan Hospital Association on January 26 to explore possibilities.

There may be attempts to amend the provisions for hospital licensing adopted by the 1954 Legislature, and similarly, there may be action to place the licensing and supervision of convalescent homes in the hands of the State Health Department rather than the Department of Social Welfare. Budget increases no doubt will be sought by the Office of Hospital Survey and Construction.

The Michigan Legislature may be asked to relax its limitations upon the oral prescription of drugs to follow the trend set in a recent liberalization of the federal law.

The status of hospital outpatient departments in the practice of medicine may be considered in the current legislative session.

Several measures dealing with licensure and/or certification of certain groups bordering the practice of medicine, along with the usual legislation instigated by licensed sub-standard healing groups, are expected in the 1955 Legislature. Physical therapists and psychologists are the most frequently mentioned peripheral professions considering licensure or certification, and MSMS has established early liaison to work with them in their problems.

In Washington, Congress probably will consider many measures of direct interest to MSMS and the medical profession. These include such proposals as the doctor draft law extension, health re-insurance, increased medical benefits for the families of men in the armed services, the new standard voluntary health insurance for government employes, military medical scholarships, and federal aid to medical education. Of interest to the individual doctor of medicine may be the renewal of proposals to extend Social Security coverage and/or allow for tax postponement for self-employed persons setting up a pension program.

Mental health will be of importance on both the state and national levels.

The Michigan Legislature will be in session until May, while Congress will undoubtedly continue its deliberations into the summer.

Legislation affecting the practice of medicine, and the health and medical care of the people of Michigan, will be considered to a greater degree than ever before in both Washington and Lansing. To make sure that the people of Michigan and the nation continue to reap the benefits of the world's finest system of medical care, MSMS and its individual members must continue to be alert and increasingly active in analyzing legislative proposals and acting upon them. A sincere interest in legislative matters on the part of doctors of medicine, coupled with effective action, must continue to be a primary objective of MSMS.

EXECUTIVE OFFICE

During 1954, various improvements have been made to the headquarters building at 606 Townsend Street, among which was the furnishing of a reception room, exterior redecoration of the building and improved landscaping.

Several additions have been made to the stenographic staff at the headquarters office.

Mr. Warren Tryloff succeeded Mr. Dwight Jarrell as Field Secretary and was assigned to the Detroit office.

The Executive Office personnel has at all times discharged its duties with commendable loyalty and efficiency.

FOREMOST FAMILY PHYSICIAN AWARD

The Seventh Annual Award was accorded to Duncan McColl, M.D., of Port Huron and will be presented on the occasion of the MCI in March, 1955.

RECOMMENDATIONS

After a careful consideration of the continued successful operation of the MSMS and its many projects and activities, I believe the greatest need seems to be in the better organization of the county societies and I therefore respectfully submit the following recommendation for your consideration—

1. That a three-day meeting be held in January for all County Society secretaries, presidents, presidents-elect, and public relations committee chairmen and that this be a "down to earth" school to effect better liaison and greater follow-through between the MSMS and the County Medical Society—a program to develop a better understanding and co-operation between the State and County units.

2. That the brochure "Winning Friends for Medicine" continue in 1955 to be the PR program recommended to county medical societies (subject, of course, to supplementation and change, as need occasions, by The Council and the PR Committee) and that all county medical societies be urged to select from the projects listed therein those projects which in their aggregate can be expanded and carried out in the communities falling within the jurisdiction of the county medical societies; and further that there be appointed by the Chairman of the State PR Committee a member of that Committee to each Council District to assist the Councilor in supporting this effort in the county medical societies falling within the Councilor District.

3. That an allotment be made in the 1955 budget sufficient to properly produce the three motion pictures needed for professional and public viewing, said motion pictures already having received the approval of the Executive Committee of The Council during the past year. The amount needed for the production of these motion pictures should properly be allocated from PR reserves to the current PR budget of 1955. To repeat, these essential motion pictures are on the subjects of Periodic Health Appraisal, Costs of Medical Care and Epilepsy.

4. That steps be taken to insure the most effective effort toward (a) the maintenance of our professional status and (b) obtaining co-operation with other professions in a campaign to gain public understanding and acceptance of professional standards and practices.

5. That the MSMS schedule and sponsor at least two and not more than four TV and radio simulcasts (with material released in concert to the press) stating MSMS policy and the reasons therefor, on major topics of health importance. These programs to be broadcast on a netwok of TV and radio stations sufficiently large to cover all areas of Michigan.

6. That a study be made of allocation of dues to the PR Department and General Society activities as indicated in the auditors' report, and consistent with the needs of these two departments of the Society.

Your Secretary wishes to express to the members of this Council his sincere appreciation for the helpful co-operation they have accorded him during the past year.

Too much commendation cannot be accorded the members of the Executive office staff for their loyalty, splendid co-operation and efficiency.

We should all be especially grateful to Mr. Brenneman and his staff of exceptionally fine Field Secretaries who have done an unusual job, especially in legislative activities.

Your Secretary is especially appreciative of the constructive advice and services of Mr. Wm. J. Burns, Executive Director, Mr. J. Joseph Hebert, Legal Counsel, Wilfred Haughey, M.D., Editor, and Mr. Robert Roney, Asst. Exec. Director. To everyone who has aided so generously and willingly in the discharge of the duties of his office, your Secretary is most grateful.

Respectfully submitted,

L. Fernald Foster, M.D.

January 28, 1955. *Secretary*

TREASURER'S ANNUAL REPORT—1954

Mr. Chairman and members of The Council of the Michigan State Medical Society:

I herewith submit a report of the securities and cash belonging to the Michigan State Medical Society in my possession as duly elected Treasurer for the year January, 1954, to January, 1955.

The appended list of bonds totaling $67,000 face value are in lock box C, 131 Michigan National Bank Trust Department in Grand Rapids.

1.	Balance on hand as of January 15, 1954	$4,382.37	
2.	Received from bonds called March, 1954	3,024.65	
3.	Net gain due to interest received	1,445.00	
4.	Bonds purchased July 28, 1954	4,000.00	
5.	See Note below		$4.00
6.	Balance on hand as of December 31, 1955	4,848.01	

MICHIGAN STATE MEDICAL SOCIETY BONDS

$15,000	United States of America 1½% Treasury notes due March 15, 1955
$ 5,000	United States of America Series G. Savings Bonds dated May 1, 1946
$ 5,000	United States of America Series G Savings Bonds dated March 1, 1948
$30,000	United States of America Series G Savings Bonds dated August 1, 1946
$ 8,000	United States of America 2¾% Treasury Bonds Investment Series B1975-1980 due April 1, 1980
$ 4,000	United States of America Series K Savings Bonds dated July 28, 1954

Called as of spring 1954:

$ 3,000	United States of America 1⅜% Treasury Notes
	Money in Cash Balance

Respectfully submitted,

William A. Hyland, M.D.

January 28, 1955 *Treasurer*

Note: Paid to Michigan National Bank, to be returned and reported in 1955.

EDITOR'S ANNUAL REPORT

THE JOURNAL of the Michigan State Medical Society has completed its fifty-third year and has published 628 numbers. Its first issue was in September, 1902, with Andrew P. Biddle, M.D., of Detroit as Editor. The objective of the JOURNAL and its excuse for being was to furnish a more frequent, more intimate and sure method of interchanging of interests among the members and to bring to them the very latest in scientific and medical thought.

Items of general interest, of news value, have always received full consideration. In addition to the publication of scientific papers, we have kept the readers informed of the economic conditions affecting our profession. This material has been largely prepared from many sources and condensed from other material. We believe our efforts have contributed to the unquestionably high regard the Michigan profession holds in the nation.

During 1954, we honored six of our members for having gained national prominence as presidents of national medical organizations, and we have a list of eight now ready for honors during the year of 1955, to be used in our JOURNALS up to the month of August.

The size of THE JOURNAL has not significantly changed much over the past few years. In 1942 we published 1,092 pages; in 1943—1,022 pages; 1944—1,134 pages; 1945—1414 pages; 1946—1,692 pages; 1947—1,478 pages; 1948—1,446 pages; 1949—1,566 pages; 1950—1,526 pages; 1951—1,470 pages; 1952—1,654 pages; 1953—1,414 pages, and in 1954—1,454 pages, plus the 84 pages in the Roster. Since the socializing threat became acute immediately after the War, our JOURNAL increased in number of pages, but has not varied too much otherwise.

We have had many compliments on our publishing of the roster in a separate volume and believe it should continue. During 1954, we published papers by 138 different authors, twenty-six from out of state, three appearing twice, one appearing three times, and two appearing four times. J. C. Smith, M.D., of Bay City, has given us four very capable clinico-pathological conferences. We believe our members enjoy these efforts very much.

During the year, we have published sixty book reviews, fifty-two editorials, we have quoted thirteen editorials, and we have prepared seventy obituaries. The editorials during the past year have dealt mostly with economic, social, general, or legislative interest.

It is now at least ten years since we have used a formal cover design. Each month some special interest has been featured by special articles as well as kindred scientific papers, and the cover design has been changed to suit the context.

In January, 1954, we published the MCI number, with the large letters MCI in blue being superimposed on a map of Michigan. February featured the Easter seals in full color, while March was devoted to Epilepsy with four applicable pictures with the brain in color in the center. April for many years has been devoted to Cancer, the cover having the research, education, service dagger and three pictures in circles. May was devoted to the Beaumont Memorial with a picture of the restored building. June featured Robert L. Novy, M.D., and was devoted to Michigan Medical Service, while July, devoted to the Annual Session, was illustrated by the theme "working together" with an operating room scene and a lecture room.

The August cover was the new Michigan State Medical Society headquarters in Lansing, and September was devoted to Pediatrics with a group of children's pictures. Diabetes was especially featured in October, showing the active, hopeful life a diabetic may now enjoy. The roster number was published as a supplement with the number of members inserted in each county on a map of Michigan on the cover. November featured the Christmas seals and was devoted almost entirely to Tuberculosis. December announced the MCI program of 1955 "What's New, Doctor, That You Can Use?" with inserted scenes: laboratory, lectures, and exhibits. We believe the special interest features, as well as the covers, have upheld the high standards of the past years.

THE JOURNALS for 1955 are all tentatively assigned: January is a Heart number, February features Maternal Health (A. M. Campbell Memorial), March Arthritis and Rheumatism, and April, Cancer. May is devoted primarily to Geriatrics and Epilepsy and June to Michigan Medical Service. The Coller-Penberthy Clinic is to be featured in September, and the October issue will be a General Practice number. November will be devoted to Tuberculosis and December to MCI.

The Editor appreciates the wonderful co-operation and assistance he has received and expresses his thanks to the Publication Committee, to the Executive Committee, to The Council, and to the Officers for their co-operation and suggestions and encouragement which has been so freely given. Their loyalty throughout the years has been appreciated, and without it the work would have been a burden instead of a pleasure.

Respectfully submitted,
WILFRID HAUGHEY, M.D.
Editor

January 28, 1955

REPORT OF MADAN AND BAILEY, C.P.A.—1954

The Council, Michigan State Medical Society

In accordance with your request, we have examined the Statement of Financial Condition of the Michigan State Medical Society, Lansing, Michigan, as at December 24, 1954, and the related statements of income and expense and fund transactions for the period December 27, 1953, to December 24, 1954. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we deemed necessary in the circumstances.

In our opinion, the accompanying Statement of Financial Condition and related statements of income and expense and fund transactions of the Michigan State Medical Society, Lansing, Michigan, present fairly the position of the Society as at December 24, 1954, and the results of its operations for the period then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

The Michigan State Medical Society was organized on September 17, 1910, under the laws of the State of Michigan, as a non-profit corporation. The charter has been extended for a period of thirty years from September 17, 1940. The Society is affiliated with the American Medical Association, and it charters county medical societies within the State of Michigan. The purposes of the Society are the promotion of the science and art of medicine, the protection of the public health, and the betterment of the medical profession. In the furtherance of these purposes, the Society publishes THE JOURNAL.

The commercial account maintained at the Michigan National Bank, Lansing, Michigan, was reconciled by us as at December 24, 1954, and further confirmed by direct correspondence with the bank. The Treasurer's account was confirmed by direct correspondence with the Michigan National Bank, Grand Rapids, Michigan. Office cash in the amount of $36.61 in the Lansing Office was counted by our representative, and the ledger balance of $15.00 for the Detroit petty cash was not verified.

Accounts Receivable confirmations have been received from approximately 75% of the debtors with no discrepancies to date. We shall notify your office as to the remaining confirmations, should any variances occur. An aging of the accounts by month of charge is as follows:

October, November, December		$13,501.07
April, May, June		330.89
Employe Expense Advances		300.00
		$14,131.96

An analysis of the changes in investments during the period under review, together with interest income and amortization, is set forth in detail in Schedule 10. Series "K" bonds, in an amount of $45,000.00, were verified by actual count by our representative. The remaining securities were confirmed by direct correspondence with the Michigan National Bank of Lansing and of Grand Rapids, Michigan, who hold the securities under safe-keeping agreements.

In our audit report of 1952, and again in 1953, we suggested that a segregation be made between the cost of Land and Building so as to apportion depreciation on a more equitable basis. We are forced to repeat our recommendation, as good accounting dictates that land is never subject to depreciation.

Furniture and Fixtures for Resale, reflected in the Statement of Financial Condition, in an amount of $119.25, will be reduced upon issuance of bills to the purchasers of this furniture. We were advised that all but three or four pieces of furniture have been sold.

Office equipment, such as desks, typewriters, movie projectors and related items are charged to expense when purchased, but in reality constitute assets to the Society that are not reflected in the Financial Statement. We suggest an inventory of these items be maintained in order to determine the approximate asset value of these items.

A separate schedule of the income and expense of the Beaumont Memorial Restoration Fund is not included in this report. The Income and Expense Summary sets forth the gross receipts of contributions and the gross expenditures for the period under review, with a resulting loss of $738.13.

Your attention is directed to our letter of transmittal, under separate cover, which contains several suggestions for relieving your office of some of its time consuming details.

Membership dues for the period under review were reconciled to the 5,213 paying members. We also accounted for the 5,552 cards issued during the period, including those members who are not paying members of the Society.

Sales of booth space at the Annual Session and the Michigan Clinical Institute were traced through the books of account, as was JOURNAL advertising on a spot check basis at our discretion.

An overall net gain from all Society activities as set forth in Exhibit "C" was $37,028.74, including the Beaumont Fund.

Respectfully submitted,
MADAN & BAILEY
Certified Public Accountants

STATEMENT OF FINANCIAL CONDITION

December 24, 1954

ASSETS

CASH ON HAND AND IN BANKS:			
Michigan National Bank, Lansing, Michigan	$62,739.56		
Michigan National Bank, Grand Rapids, Michigan (Treasurer's Account)	4,848.01		
Office Cash (Lansing and Detroit, Michigan)	51.61		$ 67,639.18
ACCOUNTS RECEIVABLE:			
Advertising, Advances and Other Items	$14,131.96		
Services and Collection Expense	576.37		
Due from Employes	70.67		
	$14,779.00		
Less: Allowance for Doubtful Accounts	134.85		14,644.15
ACCRUED INTEREST RECEIVABLE			12.50
INVESTMENTS (Schedule 10) (Market or Redemption Value—$123,250.00)			125,178.50
PROPERTY AND EQUIPMENT (Schedule 11)			
Office Building and Land	$44,500.00		
Lot Adjoining Office Building	6,000.00		
Building Improvements	3,917.85		
Building Equipment	3,836.09		
Parking Lot	1,913.60		
		$60,167.54	
Less: Depreciation Allowance		5,150.07	55,017.47
OTHER ASSETS:			
Prepaid Expenses		$ 502.96	
Furniture and Fixtures for Resale		119.25	
Funds Advanced to the Beaumont Memorial Restoration Fund		10,480.29	11,102.50
TOTAL ASSETS			$273,594.30

LIABILITIES

ACCOUNTS PAYABLE:			
Federal Unemployment Tax		$ 185.60	
Michigan Unemployment Tax		192.22	
Withholding and O.A.B. Taxes		2,685.64	
Unpaid Invoices		11,185.87	
Refunds Due County Societies		1,284.14	$ 15,533.47
DEFERRED INCOME:			
1955 M.C.I. Booth Sales		$ 12,620.00	
1955 Membership Dues		490.00	13,110.00
TOTAL LIABILITIES			$ 28,643.47
SOCIETY EQUITIES:			
Reserved for Special Purposes			
Public Education Reserve	$30,000.00		
Public Education Program	76,816.26		
Public Service Account	3,330.00		
Professional Relations Account	6,545.92		
		$116,692.18	
Rheumatic Fever Control Program		13,645.55	
Contingent Fund		29,390.82	
Building Fund		11,770.04	
TOTAL RESERVED			$171,498.59
General Society Equity (12-27-53)	$72,893.41		
Net Gain for Period (Exhibit "B")	558.83		
		73,452.24	
TOTAL EQUITIES (Exhibit "C")			244,950.83
TOTAL LIABILITIES AND EQUITIES			$273,594.30

STATEMENT OF INCOME AND EXPENSE

December 27, 1953 to December 24, 1954

INCOME:			
Membership Dues		$102,100.00	
Miscellaneous		8.11	
Gain on Sale of Books		93.75	
Interest Income	$ 3,074.32		
Amortization	15.02		
		3,089.34	$105,291.20
OTHER INCOME:			
Annual Session (Schedule 2)		$ 473.42	
Michigan Clinical Institute (Schedule 3)		41.23*	
THE JOURNAL (Schedule 4)		4,777.10	5,209.29
TOTAL INCOME			$110,500.49
EXPENSES:			
Administrative and General (Schedule 1)	$49,592.65		
Society Activity (Schedule 1)	35,695.20		
Committee Expense (Schedule 1)	24,649.81		
		$109,937.66	
Treasurer's Unallocated Expense		4.00	109,941.66
NET GAIN			$ 558.83

*Loss

INCOME AND EXPENSE SUMMARY

December 27, 1953 to December 24, 1954

	Balance 12-27-53	*Income for the Period*	*Expenses for the Period*	*Net Gain or Loss**	*Balance 12-24-54*
Equity—General Fund	$ 72,893.41	$105,291.20	$109,941.66	$ 4,650.46*)	
Annual Session		22,600.00	22,126.58	473.42)	
Michigan Clinical Institute		12,460.00	12,501.23	41.23*)	$ 73,452.24
The Journal		77,515.69	72,738.59	4,777.10)	
Contingent Fund	21,729.67	7,661.15	0	7,661.15	29,390.82
Building Fund	13,002.15	10,214.50	11,446.61	1,232.11*	11,770.04
Beaumont Memorial Fund†	9,742.16*	3,908.63	4,646.76	738.13*	10,480.29*
Lecture Grant	100.00		100.00	100.00*	0
Public Education Reserve	30,000.00				30,000.00
Public Education Program	59,887.04	46,134.00	29,204.78	16,929.22	76,816.26
Public Service		22,942.14	19,612.14	3,330.00	3,330.00
Professional Relations		33,138.61	26,592.69	6,545.92	6,545.92
Rheumatic Fever Control Program	9,571.69	25,823.02	21,749.16	4,073.86	13,645.55
TOTALS	$197,441.80	$367,688.94	$330,660.20	$ 37,028.74	$234,470.54
†*Less:* Applicable to Beaumont Portion	9,742.16*	3,908.63	4,646.76	738.13*	10,480.29*
TOTAL OTHER THAN BEAUMONT PORTION	$207,183.96	$363,780.31	$326,013.44	$ 37,766.87	$244,950.83

Note: The debit balance in the "Beaumont Fund" indicates that all funds have been expended and in addition thereto the Society has advanced a total of $10,480.29.

*Loss

EXPENSES

December 27, 1953 to December 24, 1954

ADMINISTRATIVE AND GENERAL:	
Printing and Mailing	$ 2,029.36
Office Supplies	2,019.86
Postage and Express Charges	3,432.61
Insurance and Fidelity Bonds	4,298.45
Auditing	553.32
Salaries—Administrative	8,700.00
—General Office	17,615.52
General Counsel—Retainer	3,960.00
—Expense	239.22
Equipment and Repairs	1,119.57
Telephone and Telegraph	2,639.37
Payroll Taxes	1,843.96
Miscellaneous	841.41
Secretary's Office Expense	300.00
TOTAL ADMINISTRATIVE AND GENERAL EXPENSES	$ 49,592.65
SOCIETY ACTIVITIES:	
Council Expense	$ 13,588.03
Delegates and Alternates to A.M.A.	7,303.03
General Society Travel	5,730.49
Officers' Travel	4,257.96
Secretary's Letters	634.43
Woman's Auxiliary	1,187.05
Dues Collection Expense	2,294.21
Contributions	700.00
TOTAL SOCIETY ACTIVITY EXPENSES	$ 35,695.20
COMMITTEE EXPENSES:	
Legislative	$ 2,018.06
Postgraduate Medical Education	3,764.01
Preventive Medicine	80.47
Child Welfare	339.92
Geriatrics	389.52
Maternal Health	391.19
Mental Hygiene	865.82
Scientific Radio	39.60
Venereal Disease	103.91
Tuberculosis Control	429.33
Michigan Health Council	10,000.00
Rural Medical Service	155.80
Emergency Medical Service	599.03
Beaumont Memorial Restoration	3,476.18
Permanent Conference Committee	67.24
Sundry Committee Expense	861.32
Bi-Annual Report (Rheumatic Fever)	1,068.41
TOTAL COMMITTEE EXPENSES	$ 24,649.81
TOTAL EXPENSE	$109,937.66

ANNUAL SESSION INCOME AND EXPENSE

December 27, 1953 to December 24, 1954

INCOME:	
Booth Sales	$ 22,600.00
TOTAL INCOME	$ 22,600.00
EXPENSES:	
Scientific Meeting	$ 4,605.51
Registration	308.41
Exhibit Expense	2,551.23
Hotel Expense (M.S.M.S. Staff)	670.63
Officers' Night	146.89
State Society Night	3,794.21
Printing, Mailing and Postage	2,289.34
Press Expense	1,529.42
Scientific Work Committee	316.83
Salaries	4,551.76
House of Delegates	1,055.09
Miscellaneous	307.26
TOTAL EXPENSES	$ 22,126.58
GAIN ON ANNUAL SESSION	$ 473.42

MICHIGAN CLINICAL INSTITUTE INCOME AND EXPENSE

December 27, 1953 to December 24, 1954

INCOME:	
Booth Sales	$ 12,460.00
TOTAL INCOME	$ 12,460.00
EXPENSES:	
Scientific Meeting	$ 1,786.70
Registration	4.30*
Exhibit	3,106.79
Hotel and Entertainment	889.96
Printing, Mailing and Postage	2,207.03
Press Expense	1,002.65
Salaries	2,351.80
M.C.I. Committee Meetings and Miscellaneous	1,160.60
TOTAL EXPENSES	$12,501.23
LOSS ON M.C.I.	$ 41.23

*Loss

EDUCATION PROGRAM

INCOME:	
Allocation from Dues	$ 46,064.25
Miscellaneous	69.75
TOTAL INCOME	$ 46,134.00
EXPENSES:	
Clipping Service	$ 249.54
Committee Meetings	342.43
Equipment and Repairs	949.62
Postage and Mailing	1,384.90
Printing	420.32
Office Supplies	1,333.01
Salaries	13,896.94
Telephone and Telegraph	1,034.87
Travel and Entertainment	5,087.92
Cinema	2,158.13
Display Advertising	1,220.26
Publications and Pamphlets	586.83
Radio	40.66
Miscellaneous	107.04
TV and Radio Programs	392.31
TOTAL EXPENSES	$ 29,204.78
GAIN DURING PERIOD	$ 16,929.22

THE JOURNAL INCOME AND EXPENSE

December 27, 1953 to December 24, 1954

INCOME:	
Allocation from Dues	$ 7,660.60
Subscriptions of Others	827.30
Advertising Sales	62,406.72
Reprint and Cut Sales	5,811.06
Miscellaneous	810.01
TOTAL INCOME	$ 77,515.69
EXPENSES:	
Editor's Expense	$ 2,400.00
Printing, Mailing and Postage	41,903.87
Reprint and Cut	4,466.58
Salaries	10,327.06
Discounts and Commissions	13,262.94
Miscellaneous	188.19
Cash Discounts Allowed	189.95
TOTAL EXPENSES	$ 72,738.59
GAIN ON "THE JOURNAL"	$ 4,777.10

PROFESSIONAL RELATIONS ACCOUNT

December 27, 1953 to December 24, 1954

INCOME:	
Allocation from 1954 Dues	$ 33,138.61
TOTAL INCOME	$ 33,138.61
EXPENSES:	
Postage and Mailing	$ 80.86
Rent to Wayne County Medical Society	530.00
Salaries	13,896.95
Telephone and Telegraph	1,568.75
Travel and Entertainment	4,817.05
National Meeting Expense	1,249.38
Public Relations—County Secretary's Conference	3,032.67
County Society Meetings	398.87
Woman's Auxiliary	676.46
Miscellaneous	41.70
Field Secretary's Office	300.00
TOTAL EXPENSES	$ 26,592.69
GAIN DURING PERIOD	$ 6,545.92

SERVICE ACCOUNT

December 27, 1953 to December 24, 1954

INCOME:	
Allocation from 1954 Dues	$ 22,942.14
TOTAL INCOME	$ 22,942.14
EXPENSES:	
Committee Meetings	$ 33.50
Salaries	13,896.95
Telephone and Telegraph	1,067.56
Travel and Entertainment	4,360.34
Miscellaneous	25.00
Rural Health Conference	228.79
TOTAL EXPENSES	$ 19,612.14
GAIN DURING PERIOD	$ 3,330.00

RHEUMATIC FEVER CONTROL PROGRAM

December 27, 1953 to December 24, 1954

INCOME:	
Grant from Michigan Heart Association	$ 25,525.00
Refund—Pontiac Office	298.02
TOTAL INCOME	$ 25,823.02
EXPENSES:	
Committee Meetings	$ 320.72
Equipment and Repairs	35.00
Payroll Taxes	327.96
Postage	84.87
Printing and Mailing	1,347.99
Salaries—Administrative	9,999.96
—Office	514.64
Travel	688.38
Fellowships	1,500.00
Telephone and Telegraph	42.79
TOTAL CENTRAL OFFICE EXPENSES	$ 14,862.31
CONTROL CENTERS:	
Alpena	$ 208.70
Ann Arbor	400.00
Bay City	1,080.00
Benton Harbor	180.00
Detroit	62.06
Grand Rapids and Muskegon	2,976.00
Jackson	0
Kalamazoo	990.00
Lansing	0
Petoskey	0
Pontiac and Royal Oak	0
Saginaw	0
Saulte Ste. Marie	0
Traverse City	990.09
TOTAL CONTROL CENTERS	$ 6,886.85
TOTAL EXPENSES	$ 21,749.16
GAIN DURING PERIOD	$ 4,073.86

BUILDING AND MAINTENANCE FUND

December 27, 1953 to December 24, 1954

INCOME:	
Allocation from 1954 Dues	$ 10.196.50
Dues—Prior Years	18.00
TOTAL INCOME	$ 10,214.50
EXPENSES:	
Decorating (Exterior) Sandblast and Point	$ 800.00
Painting Exterior	979.00
Landscaping Lot	464.25
Heating	643.21
Lighting	349.25
Water	31.26
Janitor—Salary	3,162.18
—Supplies	51.13
Taxes—Property	753.93
Insurance	449.96
General Repairs	429.59
Depreciation	1,577.69
Window Cleaning	240.00
Miscellaneous	134.82
Reception Room Furnishings	1,380.34
TOTAL EXPENSES	$ 11,446.61
LOSS FOR PERIOD	$ 1,232.11

PROPERTY AND DEPRECIATION ALLOWANCE

December 24, 1954

	Date Acquired	*Cost*	*Depreciation Allowance Prior Years*	*Remaining Cost 12-26-53*	*Estimated Life (Years)*	*Depreciation Expense 1954*	*Depreciation Allowance 12-24-54*
LAND AND BUILDING (Note)	1951	$44,500.00	$2,900.00	$41,600.00		$1,000.00	$3,900.00
BUILDING IMPROVEMENTS:							
New Building Entrance	1953	$ 3,917.85	$ 65.30	$ 3,852.55	30	$ 130.60	$ 195.90
BUILDING EQUIPMENT							
Lighting	1952	$ 2,121.50	$ 282.76	$ 1,838.64	15	$ 141.43	$ 424.29
Boiler	1952	1,714.59	228.54	1,486.05	15	114.30	342.84
		$ 3,836.09	$ 511.40	$ 3,324.69		$ 255.73	$ 767.13
PARKING LOT	1953	$ 1,913.60	$ 95.68	$ 1,817.92	10	$ 191.36	$ 287.04
LOT ADJOINING OFFICE BUILDING		$ 6,000.00	.....	$ 6,000.00		.....	.....
TOTAL		$60,167.54	$3,572.38	$56,595.16		$1,577.69	$5,150.07

Note: No allocation has ever been made to segregate the cost of land and building, hence only an estimate of depreciation is made until such allocation is determined, because the land is not subject to depreciation.

MICHIGAN STATE MEDICAL SOCIETY

1955 BUDGET ESTIMATES

GENERAL FUND

ACCOUNT TITLE	1955 Estimates
INCOME	
5,000 members @ $45.00	$225,000.00
Less:	
Allocation to THE JOURNAL @ $1.50	7,500.00
Allocation to Public Education @ $6.25	31,250.00
Allocation to Public Service @ $3.50	17,500.00
Allocation to Professional Relations @ $5.25	26,250.00
Allocation to Contingent Fund @ $1.50	7,500.00
Allocation to Building Fund @ $2.00	10,000.00
Balance to General Fund @ $25	$125,000.00
Interest Income	2,500.00
Miscellaneous Income	0
TOTAL FUNDS AVAILABLE	$127,500.00
EXPENSES	
Administrative and General:	
Printing and Mailing	$ 2,000.00
Office Supplies	2,000.00
Postage and Express Charges	3,500.00
Insurance and Fidelity Bonds	5,500.00
Auditing	550.00
Salaries—Administrative	10,200.00
Salaries—Office	26,199.06
General Counsel	7,200.00
General Counsel Expense	250.00
Equipment and Repairs	1,600.00
Telephone and Telegraph	2,700.00
Payroll Taxes	2,000.00
Miscellaneous Expense	900.00
Secretary's Office Expense	300.00
Employes' Retirement Trust	7,700.00
Residents and Interns Conference	350.00
Total Administrative and General Expense	$ 72,949.06
Society Activities:	
Council Expense	$ 13,000.00
AMA Delegates and Alternates	7,000.00
General Society Travel and Entertainment	5,700.00
Officers Travel	4,200.00
Secretary's Letter	600.00
Woman's Auxiliary	600.00
Dues Collection Expense	2,300.00
Contributions (World Medical Assn., SAMA)	700.00
Total Society Expense	$ 34,100.00
Committee Expense:	
Cancer Co-ordinating Committee	$ 2,000.00
Child Welfare	300.00
Civil Defense	600.00
Geriatrics	400.00
Industrial Health	200.00
Legislative	2,000.00
Maternal Health	400.00
Mental Health	400.00
Michigan Health Council	10,000.00
Postgraduate Medical Education	4,000.00
Preventive Medicine	100.00
Permanent Conference Committee	300.00
Rural Medical Service	200.00
Scientific Radio	50.00
Tuberculosis Control	200.00
Venereal Disease	200.00
Beaumont Memorial Restoration	500.00
Highway Accident Committee	500.00
Sundry Committee Expense	1,000.00
Total Committee Expense	$ 23,350.00
TOTAL GENERAL FUND EXPENSES	$130,399.06
GAIN OR LOSS FOR THE YEAR (LOSS)	$ 2,899.06
BALANCE FROM PRIOR YEARS	73,456.24
	$ 70,557.18
NET GAIN OR LOSS FROM ANNUAL SESSION, MCI, JOURNAL (GAIN)	1,354.37
BALANCE TO 1956	$ 71,911.55

CONTINGENT FUND (SURPLUS)

INCOME	
Allocation from Membership Dues	$ 7,500.00
Balance from Prior Years	29,390.82
TOTAL	$ 36,890.82

BUILDING MAINTENANCE FUND

INCOME	
Allocation from Membership Dues	$ 10,000.00
EXPENSES	
Decorating	$ 500.00
Landscaping	200.00
Heating and Hot Water) Utilities	650.00
Lighting) Utilities	350.00
Water)	50.00
Salary—Janitor	3,318.00
Supplies—Janitor	100.00
Property Taxes	750.00
Insurance	450.00
General Repairs	500.00
Depreciation	1,600.00
Window Cleaning	250.00
Furnish Reception Room	100.00
Miscellaneous Expense	200.00
TOTAL EXPENSES	$ 9,018.00
GAIN OR LOSS FOR THE YEAR (GAIN)	982.00
BALANCE FROM PRIOR YEARS	11,770.04
BALANCE TO 1956	$ 12,752.04

ANNUAL SESSION

INCOME	
Booth Sales (125 spaces)	$ 25,000.00
EXPENSES	
Scientific Meeting Expense	$ 5,500.00
Exhibit Expense	4,000.00
Registration	300.00
Hotel Expense (MSMS Staff)	600.00
Officers Night	250.00
State Society Night	4,000.00
Printing, Mailing and Postage	2,300.00
Press Expense	1,500.00
Scientific Work Committee	500.00
Salaries	4,407.33
House of Delegates	1,000.00
Miscellaneous Expenses	500.00
TOTAL EXPENSES	$ 24,857.33
GAIN OR LOSS ON ANNUAL SESSION (GAIN)	142.67

MICHIGAN CLINICAL INSTITUTE

INCOME	
Booth Sales (74 spaces)	$ 12,600.00
EXPENSES	
Scientific Meeting	$ 2,000.00
Exhibit Expense	3,200.00
Registration	200.00
Hotel Expense (Including Entertainment)	500.00
Printing, Mailing and Postage	2,100.00
Press Expense	1,000.00
Salaries	2,307.33
MCI Committee Meetings	100.00
Miscellaneous Expense	300.00
Television Expense	510.00
TOTAL EXPENSES	$ 12,217.33
GAIN OR LOSS ON MCI (GAIN)	382.67

PUBLIC EDUCATION ACCOUNT

INCOME	
Allocation from Membership Dues	$ 31,250.00
TOTAL INCOME	$ 31,250.00
EXPENSES	
Clipping Service	$ 220.00
Committee Meetings	300.00
Equipment and Repairs	500.00
Postage and Mailing	1,500.00
Printing	500.00
Office Supplies	1,600.00
Salaries	16,500.00
Telephone and Telegraph	500.00
Travel and Entertainment	1,500.00
Cinema	2,500.00
Display Advertising	1,000.00
Publications and Pamphlets	2,500.00
Radio and Television	8,500.00
Miscellaneous Expenses	200.00
TOTAL EXPENSES	$ 37,820.00
GAIN OR LOSS FOR THE YEAR (LOSS)	6,570.00
BALANCE FROM PRIOR YEARS	76,816.26
TOTAL TO 1956	$ 70,246.26

THE JOURNAL

INCOME

Allocation from Membership Dues	$ 7,500.00
Subscriptions—Non-Members	700.00
Advertising Sales	59,000.00
Reprint and Cut Sales	3,500.00
Miscellaneous Income (Incl. Cash Disc.)	700.00
TOTAL INCOME	$ 71,400.00

EXPENSES

Editor's Expense	$ 3,000.00
Printing, Mailing and Postage	39,000.00
Reprint and Cut Expense	3,000.00
Salaries	12,770.97
Discounts and Commission on Advertising Sales	13,000.00
Cash Discounts Allowed	200.00
Miscellaneous Expense	200.00
TOTAL EXPENSES	$ 71,170.97
GAIN OR LOSS ON THE JOURNAL (GAIN)	229.03

PUBLIC SERVICE ACCOUNT

INCOME

Allocation from Membership Dues	$ 17,500.00

EXPENSES

Committee Meetings	$ 100.00
Salaries	16,500.00
Telephone and Telegraph	1,000.00
Travel and Entertainment	3,000.00
Rural Health Conference	250.00
Miscellaneous Expense	1,000.00
Legislative Bulletin	300.00
TOTAL EXPENSES	$ 22,150.00
GAIN OR LOSS FOR THE YEAR (LOSS)	4,650.00
BALANCE FROM PRIOR YEARS	3,330.00
BALANCE TO 1956 (LOSS)	$ 1,320.00

RHEUMATIC FEVER CONTROL PROGRAM

INCOME

Michigan Heart Association	$ 30,050.00
TOTAL INCOME	$ 30,050.00

EXPENSES (Central Office)

Committee Meetings	500.00
Equipment and Repairs	200.00
Payroll Taxes	300.00
Postage	200.00
Printing and Mailing	800.00
Office Supplies	200.00
Publications and Pamphlets (Purchased)	100.00
Salaries—Administrative	11,000.00
Salaries—Office	600.00
Travel	1,500.00
Fellowships	3,000.00
Special Equipment	500.00
Furniture and Fixtures	250.00
Laboratory Aid Plan	1,000.00
Telephone and Telegraph	100.00
Miscellaneous Expense	0
TOTAL CENTRAL OFFICE EXPENSE	$ 20,250.00

Control Center Expense

Alpena	$ 300.00
Ann Arbor	300.00
Bay City	1,000.00
Benton Harbor	200.00
Detroit	1,000.00
Grand Rapids and Muskegon	4,000.00
Jackson	100.00
Kalamazoo	1,000.00
Lansing	100.00
Petoskey	100.00
Pontiac and Royal Oak	200.00
Saginaw	200.00
Sault Ste. Marie	100.00
Traverse City	1,200.00
TOTAL CONTROL CENTER EXPENSE	$ 9,800.00
TOTAL EXPENSES	30,050.00
GAIN OR LOSS FOR THE YEAR	0
BALANCE FROM PRIOR YEARS	13,645.55
BALANCE TO 1956	$ 13,645.55

PROFESSIONAL RELATIONS ACCOUNT

INCOME

Allocation from Membership Dues	$ 26,250.00

EXPENSES

Committee Meetings	$ 300.00
Postage and Mailing	250.00
Printing	500.00
Rent to Wayne County Medical Society	700.00
Salaries	16,500.00
Telephone and Telegraph	1,200.00
Travel and Entertainment	3,000.00
National Meeting Expense	2,500.00
County Secretaries—PR Conference	3,000.00
County Society Meetings	500.00
Woman's Auxiliary	1,000.00
Field Secretary's Office Expense	500.00
Field Secretary's Meetings	500.00
Miscellaneous Expenses	200.00
Awards Committee and Dinner	1,000.00
TOTAL EXPENSES	$ 31,650.00
GAIN OR LOSS FOR THE YEAR (LOSS)	5,400.00
BALANCE FROM PRIOR YEARS	6,545.92
BALANCE TO 1956	$ 1,145.92

The following items have been authorized by The Council MSMS for expenditure during 1954. Work has been started on some of these projects although delivery and payment has not yet been completed. Therefore, these items should not be charged to the 1955 expenses but should be charged to reserves. Thus the gain as indicated in 1954 would have been smaller had the work been completed and paid during the past year.

Medical Associates Pamphlets	$ 2,000.00
Safety in the Home Pamphlets	1,000.00
Slides for Television	1,000.00
TV and Radio Programs*	5,000.00
Cinema (three films to be produced)	15,000.00
Purchase of Film Library (seven films to be purchased)	500.00
Display Cards for Doctors Offices	1,000.00
Handbook (Michigan State Medical Society)	1,150.00
Handbook (Michigan State Medical Assistants Society)	200.00
	$ 26,850.00

*Not used because TV and Radio broadcast of MSMS policy was free due to the public interest.

POLITICS AND MEDICAL CARE

Someone mailed Dr. F. J. L. Blasingame, AMA Trustee from Texas, the following clipping entitled "Private Security," from the *Dallas Morning News:*

"Ninety-five of every 100 workers are now covered by some kind of private—not government—benefit program. This is not the brag of private business. It is a government figure.

"Nine of ten have life insurance. Eight of ten have hospital insurance, and more than half of those have surgical policies. Six of ten are covered for sickness and accident. Five of ten have medical care. Six of ten have their own company pension coverage.

"Yet, there is growing pressure in Washington for the Federal Government to get into the medical business. It makes just as much sense as the government going into the automobile business so that those who don't have a car can have one—at taxpayers' expense. That pressure is for political 'care,' not medical care."—*AMA Secretary's Letter.*

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

USE OF SALK VACCINE PLANNED

Plans for use of the Salk vaccine in Michigan, if it is proved effective and is licensed, were discussed at the Commissioner's Conference of Directors of Full-time Local Health Departments in Lansing on February 2, 3 and 4.

Dr. Heustis urged each health officer to confer at once with his local physicians, school and community officials and representatives of the local Chapter of the National Foundation for Infantile Paralysis to draw up a plan suitable for their local situation.

The National Foundation will distribute to state health officers sufficient Salk vaccine (if and when it is licensed) for injection of all children enrolled in the first and second grades of all public, private and parochial schools in the continental United States, Alaska and Hawaii. Included in the Michigan program also will be all children in the 1954 field trial areas who received only the placebo.

The dosage schedule that was observed in the 1954 field trial will be followed in the 1955 program. This was 1 cc. of vaccine in each of the three doses, given intramuscularly, the second inoculation one week after the first and the third inoculation four weeks after the second.

In addition to the vaccine to be distributed by the National Foundation sufficient for 9,000,000 children, it is anticipated that vaccine for 10,000,000 additional persons will be available through regular commercial channels.

The need for early planning, even before the results of the evaluation study are known, arises from the shortness of time anticipated between the decision of the Evaluation Center and the closing of schools and beginning of the polio season. It is considered wiser to have plans in readiness that are not used than to be unprepared if the decision should be favorable.

TB AND VD EXAMINATIONS OF MIGRANT WORKERS

Plans are being drawn up for TB and VD examinations of migrant laborers in seven counties in the spring. The counties to be included in the program are in the Thumb area, Saginaw, Bay, Midland, Isabella, Tuscola, Sanilac and Huron.

DOUGLAS H. FRYER, NEW CHIEF OF LOCAL HEALTH SERVICES

Douglas H. Fryer, M.D., D.P.H., became Chief of the Section of Local Health Services of the Michigan Department of Health on February 1, filling the position left vacant several months ago by the resignation of Dr. Arthur B. Baker.

Dr. Fryer was with the Department in 1943 and 1944, leaving to accept a position in the East. He returned to Michigan in 1953 to become Director of the Lansing-Ingham County Health Department. He left that position to join the State Health Department staff.

Dr. Fryer's medical degree and his public health degree are from the University of Toronto. He is a Diplomat of the American Board of Preventive Medicine and Public Health.

INFECTIOUS HEPATITIS

Cases of infectious hepatitis reported in Michigan in 1954 were 63.5 per cent higher than the number reported in 1953. Deaths for the two years remained fairly constant, however, indicating that some of the increase could be due to more complete reporting. The Michigan record for the past five years follows:

Year	Cases	Deaths
1950	48	20
1951	325	23
1952	285	23
1953	868	25
1954	1,419	23

Figures for the United States as a whole show a slightly lower increase. Cases reported in 1953 totaled 33,363 in comparison with the 1954 total of 49,727. This is an increase of 49 per cent.

Immune globulin is available from the state or local health departments for all household contacts of cases of infectious hepatitis.

VD REGIONAL MEETING PLANNED

Tentative agenda are available from the department for the Venereal Disease Control Seminar for Mid-Western States in Omaha, Nebraska, March 9 and 10. The Seminar is sponsored by the Public Health Service. Physicians interested are invited to attend.

"BETTER CARE THROUGH BETTER TEACHING"

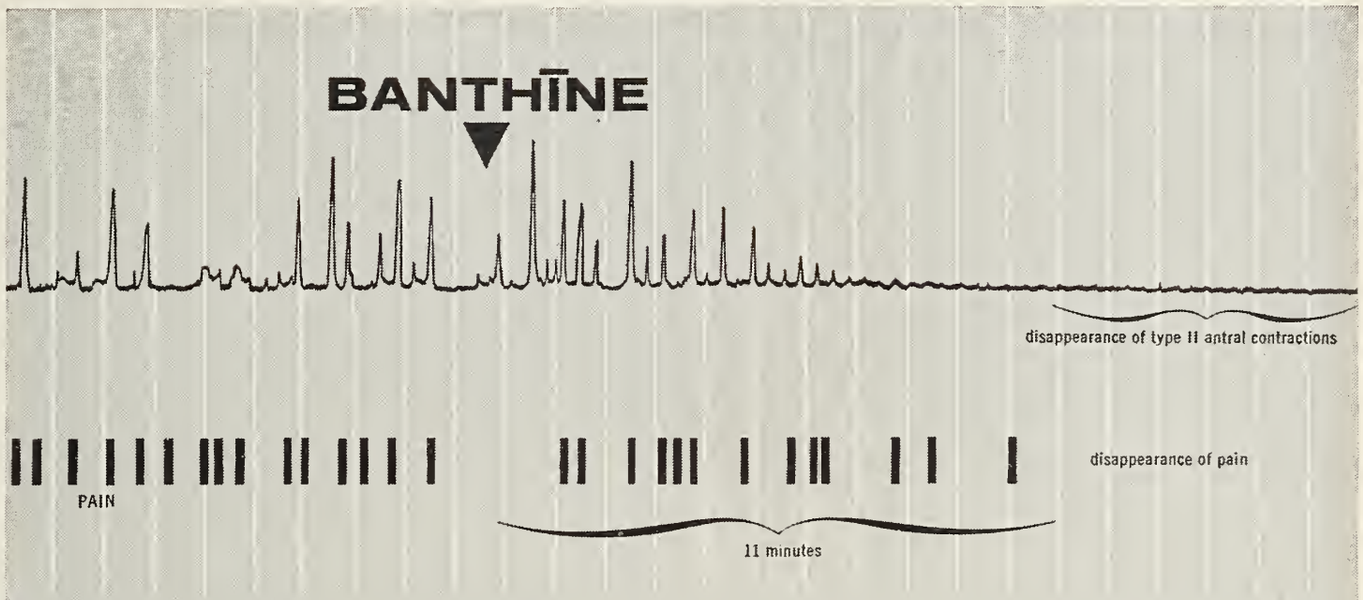
The Michigan Department of Health is co-operating with the University of Michigan School of Nursing in an Institute for obstetrical supervising nurses on "Better Care Through Better Patient Teaching." The Institute will be held at Women's Hospital, University of Michigan, April 11 through April 15.

In order that the nurses may have an opportunity for maximum participation, the course will be limited to a few nurses at one time and will be repeated. Application should be made to Mrs. Rella H. Maxwell, Research Assistant, University of Michigan, Women's Hospital, Ann Arbor.

EXPECTANT PARENT EDUCATION

A "Workshop on Expectant Parent Education" for nurses with experience in teaching expectant parents will be sponsored by the Michigan Department of Health at Haven Hill Lodge, April 19, 20 and 21. Application should be made to the Maternal and Child Health Section of the department.

(Continued on Page 390)



Effect of 100 mg. of Banthine administered orally on antral gastric motility and duodenal ulcer pain.

Hightower, N. C., Jr., and Gambill, E. E.: Gastroenterology 23 : 244 (Feb.) 1953.

Hypermotility and Hyperacidity

A recent evaluation of anticholinergic therapy in peptic ulcer emphasizes the fact that now the profession has at its disposal agents that are "effective in reducing both secretory and motor activity of the stomach."

The effect on motor activity is generally more pronounced and less variable than on secretion; pain relief is usually prompt; a high degree of effectiveness is noted in ambulatory ulcer patients.

Ruffin, J. M.; Texter, E. C., Jr.; Carter, D. D., and Baylin, G. J.: J.A.M.A. 153 :1159 (Nov. 28) 1953.

With its proved anticholinergic effectiveness, Banthine has been found extremely useful in the medical management of active peptic ulcer, whether duodenal, gastric or marginal.

The immediate increase in subjective well-being and the simplicity of the Banthine regimen assures patient cooperation. The recommended initial therapeutic dose is 50 or 100 mg. (one or two tablets) every six hours around the clock, with subsequent individual adjustment. The usual measures of diet regulation, rest and relaxation should be followed.

Banthine is effective in other conditions caused by excess parasympathetic stimulation. These include hypertrophic gastritis, acute and chronic pancreatitis, biliary dyskinesia and hyperhidrosis. Banthine is contraindicated in the presence of glaucoma and should be used with caution in the presence of severe cardiac disease or prostatic hypertrophy.

Banthine bromide (brand of methantheline bromide) is supplied in scored tablets of 50 mg. and in ampuls of 50 mg. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE

Say you saw it in the Journal of the Michigan State Medical Society



. . . . . NEWS MEDICAL

MICHIGAN AUTHORS

Sherwin J. Lutz, M.D., Detroit, is the author of an article entitled "Primary Tumors of the Ureter," published in the *Harper Hospital Bulletin,* November-December, 1954.

J. R. Van der Veer, M.D., Detroit, is the author of an article entitled "Changes in Serologic Procedures: The Differential Heterophile Antibody Test," published in *Harper Hospital Bulletin,* November-December, 1954.

Irving Feller, M.D., Ann Arbor, is the author of an article entitled "Control of Nausea and Vomiting after Ether Anesthesia in Obstetrics," published in *University of Michigan Medical Bulletin,* December, 1954.

Nancy Furstenberg, M.D., Ann Arbor, is the author of an article entitled "The Treatment of Pulmonary Ether Anesthesia in Obstetrics," published in *University of Michigan Medical Bulletin,* December, 1954.

Paul Firnschild, M.D., Detroit, is the author of an article entitled "Splenectomies at Harper Hospital—1947-1953," published in the *Harper Hospital Bulletin,* November-December, 1954.

Perry B. Miller, M.D., and David J. Sandweiss, M.D., Detroit, are the authors of an article entitled "Perforation of a Post-Gastrectomy Stomal Ulcer during Cortisone Therapy," published in *Harper Hospital Bulletin,* November-December, 1954.

Clyde Spencer, M.D., Ann Arbor, is the author of an article entitled "The Physical Diagnosis of Heart Disease," presented before the Victor Vaughan Society and published in the *University of Michigan Medical Bulletin,* December, 1954.

Dwight C. Ensign, M.D., and John W. Sigler, M.D., Detroit, are the authors of an article entitled "Osteoarthritis and Rheumatoid Arthritis, published in *GP,* January, 1955.

Wayne L. Whitaker, Ph.D., Ann Arbor, is the author of an article entitled "Evaluation of the Foreign Trained Physician in Michigan," published in *The Journal of Medical Education* by the Association of American Medical Colleges, November, 1954.

Charles Sellers, M.D., Detroit, is the author of an article entitled "The Problem of Mental Illness" published in the *Detroit Medical News,* and reprinted in *The West Virginia Medical Journal,* January, 1955.

Paul De Kruif, Ph.D., Holland, is the author of an article entitled "Rauwolfia," presented at the annual meeting of the Northern Minnesota Medical Association, September 10 and 11, 1954, and published in *Minnesota Medicine,* December, 1954.

Windsor S. Davies, M.D., Detroit, is the author of an article entitled "Idiopathic Lipemia Retinalis," published in the A.M.A. *Archives of Ophthalmology,* January, 1955.

Sherwin J. Lutz, M.D., Detroit, is the author of an article entitled "Primary Tumors of the Ureter," published in *Harper Hospital Bulletin,* November-December, 1954.

V. K. Volk, M.D., Dr. P.H., F.A.Ph.A., Saginaw County Health Commissioner, Franklin H. Top, M.D., M.P.H., F.A.Ph.A., former Detroit Health Commissioner, and William E. Bunney, Ph.D., F.A.Ph.A., are the authors of an article entitled "Significance of 'Cysts' Following Injections of Antigens," published in *American Journal of Public Health,* October, 1954.

Frederick Stenn, M.D., Chicago, is the author of an article entitled "Medical Maxims of An Internist," published in THE JOURNAL of the Michigan State Medical Society, April, 1954, a digest of which is published in the *Current Medical Digest,* December, 1954.

Ivan J. Mader, M.S., M.D., and Lloyd T. Iseri, M.D., Detroit, are the authors of an article entitled "Biochemical Changes in Uremia Treated by the Artificial Kidney," published in *Wayne University College of Medicine and Detroit Receiving Hospital Bulletin,* December, 1954.

Charles S. Stevenson, M.D., Detroit, is the author of an article entitled "Obstetric Analgesia and Anesthesia—A Current Concept" published in THE JOURNAL of the Michigan State Medical Society, August, 1954, an abstract of which is published in the *Wayne University College of Medicine and Detroit Receiving Hospital Bulletin,* December, 1954.

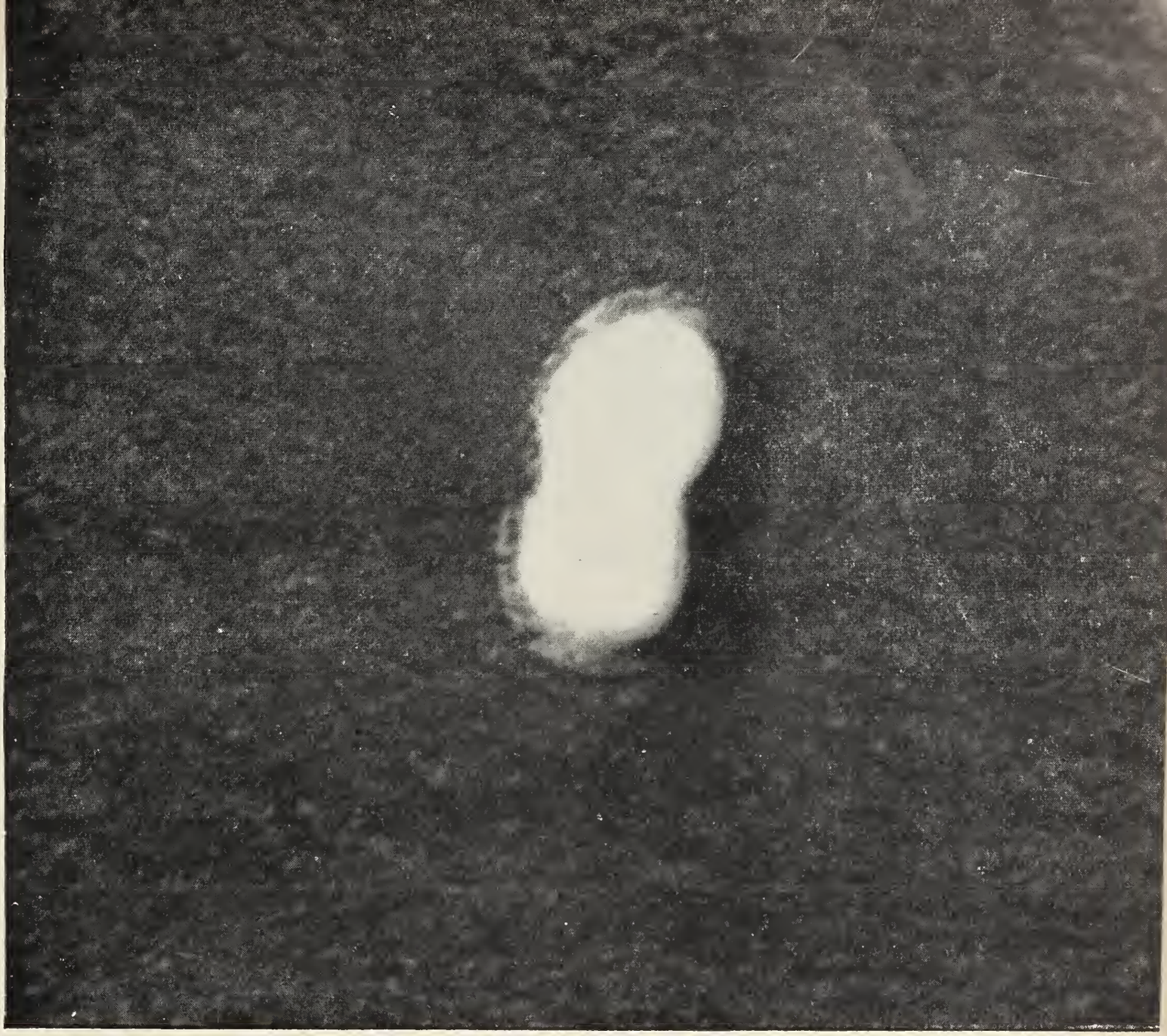
Harold Christian Zweng, M.D., Detroit, is the author of an article entitled "A Case of Retinoblastoma and Congenital Absence of Schlemm's Canal in the Same Eye," published in *Kresge Eye Institute Bulletin,* February, 1954.

Edward F. Purcell, M.D., and David Schane, M.D., Detroit, are the authors of an article entitled "Diamox in the Management of Glaucoma," published in *Kresge Eye Institute Bulletin,* February, 1954.

A. M. Riazi, M.D., and James Marshall, M.D., Detroit, are the authors of an article entitled "Bilateral Retinal Detachment Associated with Bilateral Uveitis" published in the *Kresge Eye Institute Bulletin,* February, 1954.

Robert C. Antle, M.D., Detroit, is the author of an article entitled "Diffuse Malignant Melanoma of the

(Continued on Page 366)



ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 44,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

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(Continued from Page 364)

Choroid" published in the *Kresge Eye Institute Bulletin,* February, 1954.

Thomas Geoghegan, M.D., and Brock E. Brush, M.D., F.A.C.S., Detroit, are the authors of an article entitled "The Effect of ACTH on the Integrity of Anastomoses of the Colon," published in *Surgery, Gynecology and Obstetrics,* January, 1955.

J. L. Wilson, M.D., and D. G. Dickinson, M.D., Ann Arbor, are the authors of an article entitled "Studies in Respiratory Insufficiency. II. Clinical Evidence of Early Respiratory Insufficiency," published in *American Journal of Diseases of Children,* 87/5:594-599, 1954.

Robert H. Hume, M.D., and Robert W. Buxton, M.D., Ann Arbor, are the authors of an article entitled "Postcholecystectomy Amputation Neuroma" published in *The American Surgeon,* and condensed in the *American Practitioner and Digest of Treatment,* December, 1954.

H. M. Pollard, M.D, Ann Arbor, is the author of an article entitled "Hemorrhage from the Upper Gastrointestinal Tract," presented before the General Asesembly, 112th Annual Meeting of the Illinois State Medical Society, May, 1954, and published in the *Illinois Medical Journal,* January, 1955.

* * *

Nur M. Malik, M.D., formerly of Detroit, has accepted a position as Chief Surgeon, Male Division, and Medical and Surgical Director, Male Division, of Holy Family Hospital at Rawalpindi, Pakistan, effective March 1, 1955.

* * *

The annual Beaumont Lecture of the Wayne County Medical Society, now recognized as a leading Michigan event in medicine, was given this year by Dr. Carl V. Weller, professor of pathology and chairman of the University of Michigan's Department of Pathology on February 7.

His subject was "Causal Factors in Cancer of the Lung." Dr. Weller said, "In view of the real and alarming increase in cancer of the lung, search for possible causal factors has become extremely active. The background for such investigations can be found in medical history and in a biologic consideration of the interaction between intrinsic and extrinsic factors." . . . "Knowledge of this background is essential to a proper appreciation of the interest of the present day in the smoking of tobacco and in the exhaust from internal combustion engines as relatively new factors in human environment."

* * *

At a recent meeting of the Detroit Board of Commerce Committee, Cyrus H. Maxwell, M.D., Assistant Director of the American Medical Association, made the

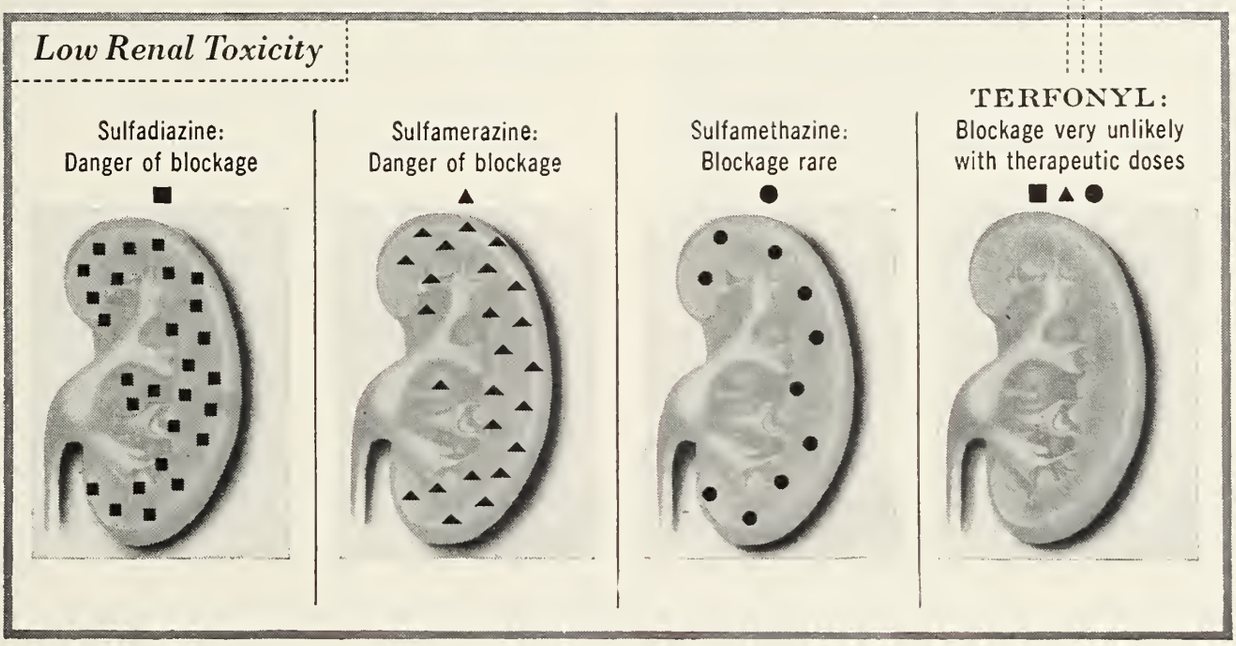
(Continued on Page 368)

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Sulfamerazine
Sulfamethazine

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With usual doses of Terfonyl the danger of kidney blockage is virtually eliminated Each of the three components is dissolved in body fluids and excreted by the kidneys *as though it were present alone.* The solubility of Terfonyl is an important safety factor.

Terfonyl contains equal parts of sulfadiazine, sulfamerazine and sulfamethazine, chosen for their high effectiveness and low toxicity.

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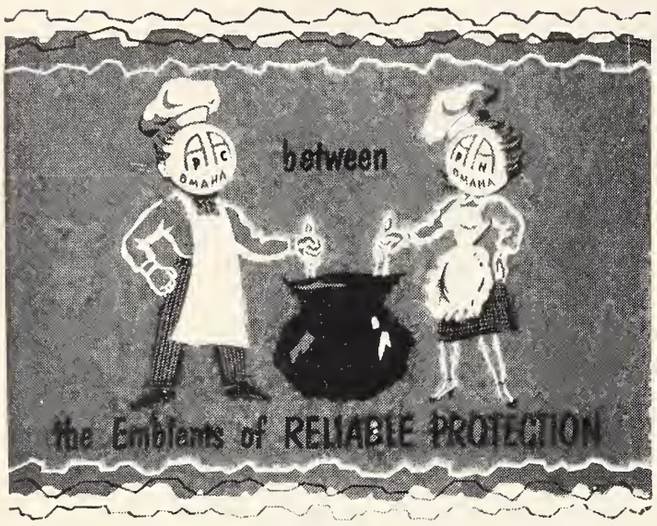
Terfonyl Suspension, 0.5 Gm. per 5 cc.
Appetizing raspberry flavor • Pint bottles

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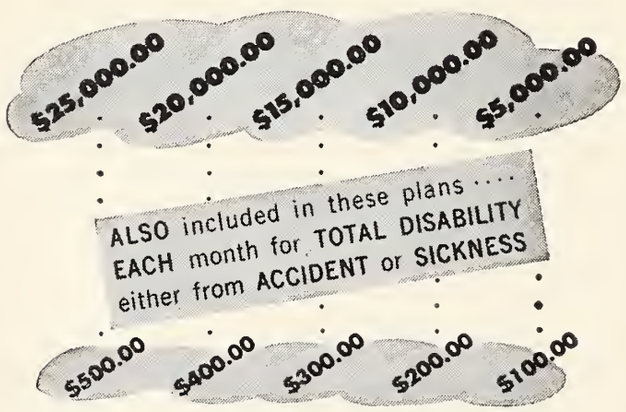
Say you saw it in the Journal of the Michigan State Medical Society

Something NEW is Cooking



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think! HOW THESE AMOUNTS WOULD HELP IN PAYING ESTATE TAXES IN CASE YOU ARE ACCIDENTALLY KILLED . . .



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HOSPITAL INSURANCE ALSO FOR OUR MEMBERS AND THEIR FAMILIES

$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

(Continued from Page 366)

statement that 175 hospitals throughout the country have been provided for medical care of veterans. These hospitals cost more to build than private hospitals and three-fourths of the patients were admitted for non-service disabilities.

He called attention to the fact that now, since World War II, more and more veterans will be asking for this service and present hospitals will be overcrowded. He said that 17,000 patients every day are waiting to get into hospitals; that a great percentage of those admitted were mental cases; that there was not enough investigation; and that if a strict investigation were made many of the hospitals would be empty. He stated that in one check of patients, out of 22,600 only three were hospitalized for service disabilities. He said also that in a check it was found a large percentage of legitimate veterans were against hospital service to veterans who had only non-service disabilities.

Dr. Maxwell stated that one-sixth of the money spent for medical care in the United States is appropriated by Congress and that the time is coming when a check will have to be made on non-service disability so that at least those patients who are admitted to hospitals will pay part of the bill.

* * *

A joint meeting of the Western Michigan Pediatric Society and the Sunshine Sanatorium of Grand Rapids was held Wednesday, March 16, at Grand Rapids at the Sunshine Hospital. The meeting was under the co-chairmanship of H. D. Ireland, M.D., Grand Rapids, and John W. Thomson, M.D., Grand Rapids.

* * *

The Eighth Annual Michigan Rural Health Conference was held at Kellogg Center, East Lansing, on January 20, 21, and 22, 1955. This annual conference is financially sponsored by the Michigan Foundation for Medical and Health Education, and co-sponsored by more than 100 Michigan organizations interested in rural health improvement.

* * *

The University of Michigan School of Public Health offered the second Citizens Public Health Conference on March 3, 4, and 5, 1955. The meeting which took place at the School of Public Health in Ann Arbor was planned with the assistance of Citizens Groups and Official Agencies.

* * *

The Sixteenth Annual Clinic Day of the Mt. Carmel Mercy Hospital in Detroit was held Wednesday, January 26, 1955.

* * *

An editorial written by Harold Swanberg, M.D., Editor of the *Mississippi Valley Medical Journal*, concerns the appointment of J. P. Gray, B.A., M.D., M.P.H., of Detroit as Visiting Lecturer on Medical Writing of the American Medical Writers' Association.

(Continued on Page 370)



ELECTRON PHOTOMICROGRAPH

Escherichia coli 36,000 X

Escherichia coli ("colon bacillus") is a Gram-negative organism
commonly involved in
urinary tract infections and peritonitis,
and is an important etiologic agent of otitis media, mastoiditis, enteritis,
and septicemia in infants.

It is another of the more than 30 organisms susceptible to

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(Continued from Page 368)

This editorial appeared in the January, 1955, issue of the *Mississippi Valley Medical Journal.*

* * *

F. Bruce Fralick, M.D., Ann Arbor, was a guest speaker at the Eighteenth Annual Meeting of the New Orleans Graduate Medical Assembly, in the field of Ophthalmology, held March 7-10, 1955.

* * *

Mobilization and Health Manpower.—In spite of expanding educational facilities to train health personnel, our national population growth and the rising level of demands for health services will cause a continuing shortage of health personnel "for many years to come," a health advisory committee to the Federal Government has predicted.

The report points out that the number of medical school graduates increased from 5,100 in 1940 to 6,800 in 1954 and is expected to reach 7,000 by 1960. The national population increase, however, has been so rapid that the overall 1960 ratio of physicians to population, the report predicts, will be 133 per 100,000 population as compared to 137 in 1950.

In view of this, the report concludes, it is probable that the total number of graduates will not increase materially for another five years.

* * *

A regional meeting of the Southern Region of the American College of Gastroenterology will be held in Memphis, Tennessee, on Sunday afternoon, April 24, 1955. The Scientific Session will be held in The Skyway, at the Hotel Peabody, commencing at 2:00 p.m., following the semi-annual meeting of the Board of Trustees of the College.

Lynn A. Ferguson, M.D., F.A.C.G., Grand Rapids, President of the American College of Gastroenterology, will preside.

* * *

The Professional Bureau of the American College of Radiology, directed by S. W. Donaldson, M.D., of Ann Arbor, assisted by Vincent C. Johnson, M.D., of Detroit, was created by the Board of Chancellors of the College to assist young members and residents in training in obtaining locations. This service, in contradistinction to that of commercial agencies, is 100 per cent free.

Briefly, the objectives of the Bureau are two: first, to aid the young radiologist to locate; and second, to assist the established radiologist in securing an associate.

* * *

A short intensive course on the laboratory diagnosis and pathology of parasitic infections will be presented August 15-27, 1955, at the Louisiana State University School of Medicine in New Orleans.

The course is designed primarily for pathologists and technologists. However, general practitioners, internists, pediatricians, gastroenterologists and physicians engaged in the practice of public health and tropical medicine who are interested in the laboratory diagnosis of parasitic infections are welcome to attend. The instruc-

tion and training will be of assistance to pathologists who are preparing for board examinations, to pathologists and physicians who are responsible for the diagnosis of parasitic infections in their laboratories and to technologists engaged in this specialty. Persons interested in attending this course may write to: Dr. Clyde Swartzwelder, Department of Microbiology, Louisiana State University School of Medicine, 1542 Tulane Avenue, New Orleans 12, Louisiana.

* * *

The American Board of Obstetrics and Gynecology announces that the next scheduled Examinations (Part II) oral and clinical for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board from May 12 through May 28, 1955. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Further details may be procured from the Secretary, Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio.

CONFERENCE ON RHEUMATIC DISEASES
Wednesday, October 5, 1955
Ford Hospital, Detroit

A full day of meetings will be devoted entirely to the discussions of arthritis and allied diseases.

The meeting in sponsored by the Michigan Chapter, Arthritis and Rheumatism Foundation and Michigan Rheumatism Society.

The University of Illinois Department of Otolaryngology announces its Annual Assembly in Otolaryngology, September 19-October 1. For full information, write Francis L. Lederer, M.D., 1853 West Polk Street, Chicago 12, Illinois.

* * *

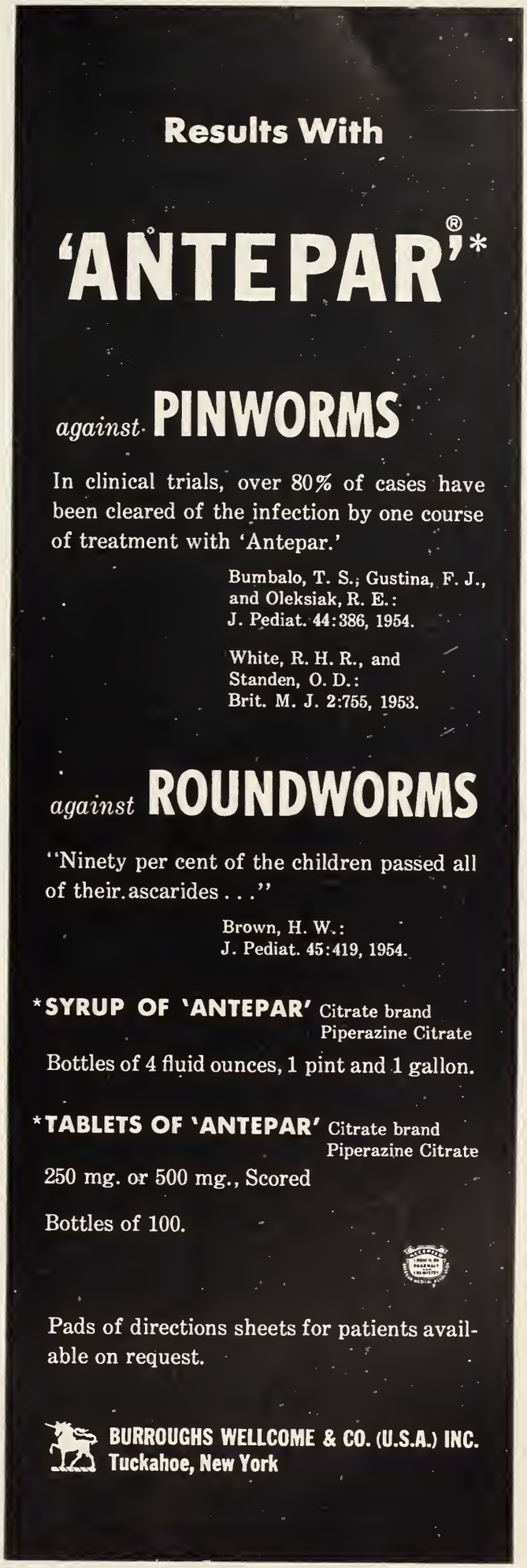
Duane L. Block, M.D., has been appointed physician in charge of medical services at the Ford Motor Company's Rouge plant, Dearborn, Michigan, succeeding Harley L. Krieger, M.D., who has been named special assistant to the medical director.

* * *

The American Academy of General Practice and Wyeth Laboratories, Inc., of Philadelphia, sponsored an international closed-circuit television symposium on "Management of Streptococcal Infection and its Complications" in fifty-eight cities of the United States and Canada on February 24. The Michigan outlet was Detroit. W. B. Hildebrand, M.D., Menasha, Wisconsin, AAGP President, moderated the panel of distinguished doctors of medicine.

* * *

Edgar E. Poos, M.D., Detroit, was guest speaker at the Aero Medical Association annual meeting, Washington, D. C., March 21-23. His subject was "Otological Problems Met in Aviators."



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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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MICHIGAN WEEK—MAY 15-21, 1955

Dan Gerber of Gerber Products Company, Fremont, Chairman of the Michigan Economic Development Commission, recently stated: "Michigan Week will mean much to Michigan for the rest of the country to see Michigan people working together. It marks the beginning of a new era of pride and enthusiasm for Michigan on the part of Michigan people.

"The call to all Michigan citizens to take part in Michigan Week was made in a resolution by the Legislature adopted on the day Michigan Week was announced last February."

Doctors of medicine particularly are urged to become especially civic-minded during the weeks immediately preceding 1955 Michigan Week.

The Trudeau School of Tuberculosis will hold its forty-first annual session June 1-29. The course will cover all aspects of pulmonary tuberculosis and also certain phases of other chronic chest diseases, including those of occupational origin. The tuition fee is $100.00. For complete program write the Trudeau School, Box 200, Trudeau, New York.

* * *

THE JOURNAL of the Michigan State Medical Society totaled 1,586 pages in the year 1954, compared to 1,536 during the previous year. The increase was due mainly to additional advertising pages. The popularity of JMSMS continues to rise year after year, not only among its medical subscribers, but with the profession's friends in the advertising field.

* * *

W. Earl Posser has been appointed Executive Director of the United Health and Welfare Fund of Michigan, with headquarters at 474 Hollister Building, Lansing 8. Mr. Posser was chosen for this important job by the Personnel Committee of the Fund, of which Warren B. Cooksey, M.D., Detroit, is chairman.

* * *

The International College of Surgeons, through its Woman's Auxiliary, offers a scholarship to a young American or Canadian surgeon who wishes to study abroad. The scholarship totals $3,000 to pay for living expenses and transportation for a period of twelve months. For information and application blank write the Scholarship Committee, 1516 Lakeshore Drive, Chicago 10.

* * *

The American Goiter Association will hold its 1955 Annual Meeting at the Skirvin Hotel, Oklahoma City, Oklahoma, April 28-30. For program write John C. McClintock, M.D., Secretary, 149½ Washington Avenue, Albany, New York.

* * *

Carl V. Weller, M.D., Ann Arbor, Professor of Pathology and Chairman of the University of Michigan Department of Pathology, presented the annual Beaumont Lecture of the Wayne County Medical Society on

(Continued on Page 374)



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The pathologist in direction is recognized by the Council on Medical Education and Hospitals of the A.M.A.

(Continued from Page 372)

February 7 in Detroit. The WCMS Beaumont Lecture, in memory of Dr. William Beaumont, was established in 1922.

* * *

The Michigan Academy of General Practice presented its Second Symposium on Office Procedures for the General Physician at the Sheraton-Cadillac Hotel, Detroit, on February 9. This year's symposium was co-sponsored by the Wayne County Academy of General Practice and the Wayne County Medical Society and included the following speakers: Walter A. Fansler, M.D., Minneapolis; George D. Geckeler, M.D., Philadelphia; Edwin W. Burton, M.D., Charlottesville, Va.; E. J. McCormick, M.D., Toledo; Sherman Little, M.D., Buffalo; Isadore Dyer, M.D., New Orleans; and Philip A. Tumulty, M.D., Baltimore. Kenneth W. Toothaker, M.D., of Lansing is President of the MAGP.

* * *

Speakers on cancer control, arranged under the auspices of the Michigan Cancer Co-ordinating Committee, include:

J. Clinton Foshee, M.D., Grand Rapids, before the Allegan County Medical Society, December 14. Subject. "Early Recognition and Management of Cancer of the Stomach."

Richard A. Rasmussen, M.D., Grand Rapids, before

(Continued on Page 376)

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(Continued from Page 374)

the Bay-Arenac-Iosco County Medical Society, November 10. Subject: "Early Recognition and Management of Tumors of Thoracic Cavity."

Mahlon S. Sharp, M.D., Lansing, before the Shiawassee County Medical Society, January 11. Subject: "Cancer of the Uterus."

James H. Beaton, M.D., Grand Rapids, before the Gratiot-Isabella-Clare County Medical Society, February 15. Subject: "Management of Carcinoma of the Uterine Cervix."

* * *

Theodore G. Klumpp, M.D., President of Winthrop-Stearns, Inc., of New York City, and guest speaker at the 1955 Michigan Clinical Institute on the title "Pharmaceutical Manufacturer and Physician—Partners in Progress," has just been appointed to the twelve-member National Advisory Council on Vocational Rehabilitation, established under the Vocational Rehabilitation Act (Federal) of 1954.

Congratulations, Dr. Klumpp!

* * *

A summer camp for diabetic children will be opened for the seventh season under the auspices of the Chicago Diabetes Association, Inc., from July 17 to August 7, 1955, at Holiday Home, Lake Geneva, Wisconsin.

In addition to the regular personnel of the camp, the Chicago Diabetes Association will furnish a staff of

(Continued on Page 378)

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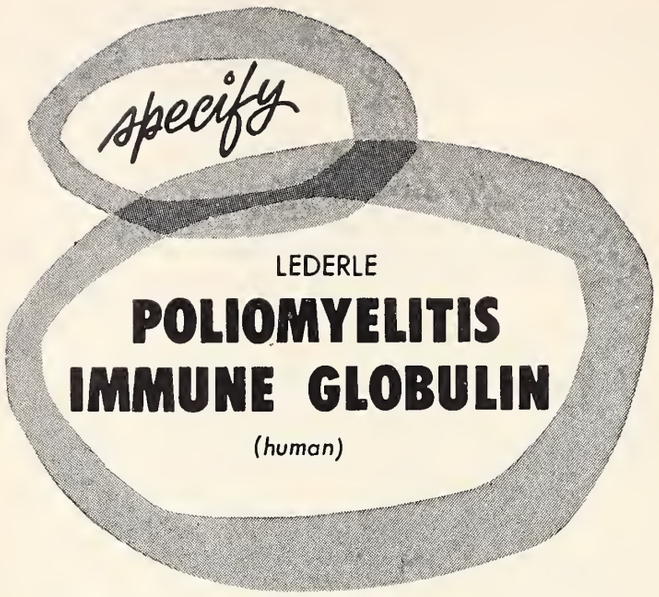


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(Continued from Page 376)

resident physicians and dietitians, trained in the care of diabetic children.

Boys and girls, ages eight through fourteen years, are eligible. For further information regarding fees, interested persons should be directed to write or phone the office of the Chicago Diabetes Association. Fees will be set on a sliding scale to meet individual circumstances.

Physicians are requested to notify parents of diabetic children and to supply the names of children who would like to attend camp. Applications may be obtained from, and inquiries should be addressed to: The Chicago Diabetes Association, 5 South Wabash Avenue, Chicago 3, Illinois. Telephone Andover 3-1861.

Limited capacity requires prompt application.

* * *

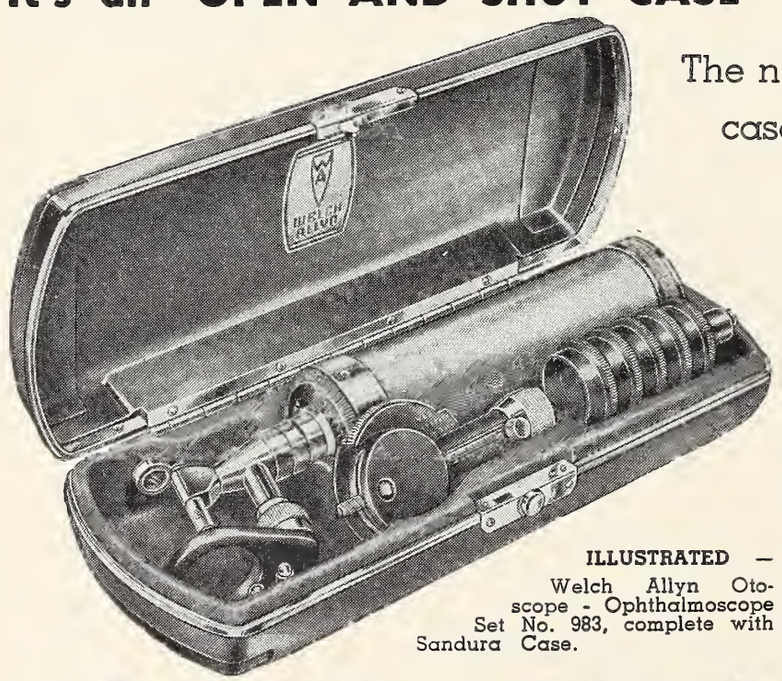
Wm. M. LeFevre, M.D., of Muskegon, Councilor of the MSMS Eleventh District, addressed the Barry County Medical Society on "Periodic Health Appraisal" on March 15, as representative of the MSMS Periodic Health Appraisal Committee

* * *

John R. Rodger, M.D., Bellaire, spoke on "Periodic Health Appraisal and What It Means to You and Your Patients" before the Delta-Schoolcraft County Medical Society, Escanaba, March 29, as official representative of the MSMS Committee on Periodic Health Appraisal

(Continued on Page 380)

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(Continued from Page 378)

Plan. Dr. Rodger was chairman of this MSMS committee in 1954.

* * *

"Family Doctor—Model 1955" is the title of an interesting and informative article by Dr. Paul deKruif of Holland, Michigan, which appeared in the February *Reader's Digest*. The story is a digest of a deKruif article which appeared originally in "GP," the official publication of the American Academy of General Practice, issue of January, 1955.

The RD "Model" mentioned the following Michigan practitioners: J. R. Rodger, M.D., Bellaire; G. B. Saltonstall, M.D., Charlevoix; and J. S. DeTar, M.D., Milan.

* * *

The Philadelphia Regional Committee on Trauma of the American College of Surgeons announces a three-day Fracture Course by Dr. Lorenz Bohler, Vienna, Austria, and Dr. Jorg Bohler, Linz, Austria, on April 21, 22 and 23, 1955, at the College of Physicians of Philadelphia, 19 South 22d Street, Philadelphia 3, Pa. Each day's sessions will last from 9 A.M. to 12 noon and 2 P.M. to 5 P.M. The course will be supplemented with discussions by outstanding American fracture surgeons.

Reservations for the course will be strictly limited to

(Continued on Page 382)

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(Continued from Page 380)

400. The fee for practicing physicians will be $50.00 and for residents, interns and medical students $25.00. Application blanks may be secured by writing to William T. Fitts, Jr., M.D., Secretary-Treasurer, Philadelphia Regional Committee on Trauma, 301 South 21st Street, Philadelphia 3, Pa.

* * *

The Eleventh Annual Congress and Graduate Instructional Course in Allergy of The American College of Allergists will be held at the Morrison Hotel in Chicago, Illinois, April 25 through the 30th. The first three days will be devoted to 40 hours of intensive teaching of the basic facts in this field of medicine. These courses will be conducted by 45 specialists well known for their teaching ability and mostly chosen from the medical college faculties throughout the nation. These courses are designed to guide and stimulate physicians beginning to recognize the importance of applying present-day knowledge to their practices. This instruction will attract and hold the interest of physicians in general practice who are finding that more than 5 per cent of the people who consult them do have an allergic component in their illness.

The growing importance of drug and serum allergies will be emphasized that the more severe and fatal cases may be avoided. Those who attend will be taught how to be on the lookout for the more severe reactions in the hypersensitive patient and the danger that is ever present when chemical therapeutic agents are used.

The last two days will be devoted to more advanced clinical papers and to reports of research and investigations. The Annual Oration of the College will be given this year by Robert A. Cooke, M.D., Director of The Institute of Allergy at The Roosevelt Hospital, New York City, and one of the great pioneers in the field. His subject will be: "Medical Research in the Field of Allergy."

Michigan doctors participating are George Waldbott, M.D., Detroit; L. Dell Henry, M.D., Ann Arbor; Rudolf E. Wilhelm, M.D., Dearborn. Co-authors with Dr. Wilhelm are Osborne A. Brines, M.D., Detroit, and Elmer R. Jennings, M.D., Detroit.

Any member in good standing of his local county medical society is cordially invited to attend. Further details and the program may be obtained by writing American College of Allergists, LaSalle Medical Building, Minneapolis 2, Minnesota.

* * *

Conference on Anesthesiology.—Wayne University College of Medicine offers a comprehensive unit course in anesthesiology on April 21-23, 1955. The course, a series of didactic preparations and panel discussions and related subjects, is intended primarily for the part-time anesthetist or general practitioner seeking anesthesia.

(Continued on Page 384)

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(Continued from Page 382)

Experts in the field of anesthesiology will present the lectures; adequate time will be allowed for discussion. The last day of the session will be devoted to a round table dealing with particular problems in anesthesiology presented by the registrants. Fee $40. For complete program and further information, write F. E. Greifenstein, M.D., Professor of Anesthesiology, Wayne University College of Medicine, 1401 Rivard, Detroit.

* * *

The Northern Tri-State Medical Association (Michigan, Indiana, Ohio) will hold its 82nd annual meeting at Fort Wayne, Indiana, on April 5. Speakers include: T. T. Meyers, M.D., of Rochester, Minnesota; Albert Stump, Indianapolis, Indiana, attorney for Indiana State Medical Association; J. P. Revenaugh, Chicago, Illinois, public relations expert; Robert Kark, M.D., Chicago; and Leon J. Witkowski, M.D., Chicago.

Herbert Philbrick, author of the book "I Led Three Lives," will address the Association on "Red, Pink, and White." For program and detailed information, write T. D. Armstrong, M.D., 120 West Ninth Street, Michigan City, Indiana.



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* See MORRISON: Rev. of Gastroent., Oct. 1953.

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The Michigan Alcoholic Rehabilitation Foundation is a non-profit organization devoted to the proper hospitalization of alcoholics seeking to stop drinking.

Contributions to the Foundation are deductible and should be sent to 2379 National Bank Bldg., Detroit 26, Michigan.

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

FLUID AND ELECTROLYTE THERAPY. By Franklin L. Ashley, B.S., M.S., M.D., Assistant Professor of Surgery, University of California Medical Center, Los Angeles, and Horace G. Love, B.S., M.D., Dallas, Texas. Philadelphia, London, Montreal: J. B. Lippincott Company, 1954. Price $3.00.

ENDEMIC GOITER. The Adaption of Man to Iodine Deficiency. By John B. Stanbury, M.D., Gordon L. Brownell, Ph.D., Douglas S. Riggs, M.D., and Hector Perinetti, M.D., Juan Itoiz, Ph.D., and Enrique B. Del Castillo, M.D. Cambridge, Massachusetts: Harvard University Press, 1954. Price $4.00.

THE ATOM STORY. Being the Story of the Atom and the Human Race. By J. C. Feinberg, M.Sc. Illustrations by Lewis. Foreword by Frederick Soddy, F.R.S. New York: Philosophical Library, 1954. Price $4.75.

SURGICAL CARE — PREOPERATIVE AND POSTOPERATIVE. By Raymond W. McNealy, M.D., and Jacob A. Glassman, M.D.

CLINICAL DIAGNOSIS BY LABORATORY METHODS A WORKING MANUAL OF CLINICAL PATHOLOGY. Twelfth Edition. By James Campbell Todd, Ph.B., M.D., late Professor of Clinical Pathology, University of Colorado School of Medicine; Arthur Hawley Sanford, A.M., M.D., Emeritus Professor of Clinical Pathology, the Mayo Foundation, University of Minnesota; Emeritus Member, Division of Clinical Laboratories, the Mayo Clinic; Director of Laboratories, Rochester State Hospital; and Benjamin B. Wells, M.D., Ph.D., Professor of Medicine, Department of Medicine, School of Medicine, University of Arkansas. 946 illustrations: 197 in color, on 403 figures. Philadelphia: W. B. Saunders Co., 1953. Price $8.50.

BALLISTOCARDIOGRAPHY. The Application of the Direct Ballistogardiograph to Clinical Medicine. By William Dock, B.S., M.D., F.A.C.P., Professor of Medicine, State University Medical Center at New York City, College of Medicine; Visiting Physician, Kings County Hospital, Brooklyn; Consultant in Medicine, Veteran's Administration Hospital at Brooklyn; Harry Mandelbaum, M.D., F.A.C.P., Lecturer, State University Medical Center at New York City, College of Medicine; Associate in Medicine, The Jewish Hospital of Brooklyn; Physician in Charge, Hypertension and Nephritis Clinic at the Jewish Hospital of Brooklyn; Attending in Medicine, The Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn; Attending in Medicine, Brooklyn Hebrew Home and Hospital for the Aged, Brooklyn and Robert A. Mandelbaum, B.A., M.D., Assistant in Medicine, the Jewish Hospital of Brooklyn; Adjunct in Medicine, The Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn; Assistant in Cardiology, Beth-El Hospital, Brooklyn. With 153 illustrations. St. Louis: The C. V. Mosby Co., 1953. Price $9.50.

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(Continued from Page 386)

THE RAUWOLFIA STORY. From Primitive Medicine to Alkaloidal Therapy. 64 pages. Summit, New Jersey: Ciba Pharmaceutical Products, Inc., 1954.

This very readable little book tells of the recognition and introduction into usage of a drug very much in demand.

THE SCOURGE OF THE SWASTIKA. A Short History of Nazi War Crimes. By Lord Russell, Liverpool C.B.E., M.C. 16 pages of half-tone illustrations. New York: Philosophical Library, 1954. Price $4.50.

This book is a very exact and descriptive treatise on the subject of mass murder, extermination of whole groups and some experimental work. It depicts scenes in many death chambers in areas where hundreds of thousands were put to death.

CLINICAL ASPECTS OF THE AUTONOMIC NERVOUS SYSTEM. By L. A. Gillilan, Ph.D., M.D., Associate Professor of Anatomy, Graduate School of Medicine, University of Pennsylvania. With 42 illustrations by the author. Boston-Toronto: Little, Brown and Company, 1954. Price $6.50.

Though books and papers on the autonomic nervous system have been of some interest to the man in active clinical practice, their appeal has not been great. Part of this has been due to the fact that they were expositions of the anatomy or reviews of the physiology with little emphasis on the clinical aspect. This volume is an exception to the usual rule. That portion of the book which presents the anatomy is written with a view to the clinical approach.

The second portion of the book is quite frankly and directly clinical and can be used easily and quickly for reference.

On the whole, the book is well written, easy to read and well arranged for reference. It should be of considerable value in the handling of psychosomatic symptoms and disorders.

F.O.M.

GERIATRIC MEDICINE, Medical Care of Later Maturity. Edited by Edward J. Stieglitz, M.S., M.D., F.A.C.P., Consulting Internist, Suburban Hospital, Bethesda, Maryland and Washington Home for Incurables; Chairman of Staff, 1945-1947. Suburban Hospital Bethesda, Maryland; Consultant in Geriatrics, Chestnut Lodge, Rockville, Maryland, St. Elizabeth's Hospital and Veterans Administration; Associate, Washington School Psychiatry; Lecturer in Industrial Medicine, New York University—Bellevue Post-Graduate Medical School; Chairman, Advisory Council on Professional Education, Commission on Chronic Illness; Consulting Editor, *Geriatrics;* Formerly Associate Clinical Professor of Medicine, Rush Medical College, University of Chicago. Third Edition, 205 Figures. Philadelphia, London, Montreal: J. B. Lippincott Company. Price $15.00.

This book on geriatrics is well organized. The problems of the aging are discussed under eight sections and each

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section is subdivided into special fields in the practice of medicine.

The forty-eight contributors to this volume stress the fact that geriatric medicine covers a much broader field than the care of senile people; it covers the management and care of the senescent patients, and senescence begins at forty.

Section one is devoted to the basic considerations of the aging; section two takes up disorders of metabolism; three, four, and five deal with disorders of the nervous, respiratory, and circulatory systems; sections six, seven and eight give a discussion of the disorders of the alimentary, genitory, and skeletal systems.

Particularly interesting are chapters six, seven, and eight of Section 1, which deal with the medical care of normal senescent mental hygiene in later maturity and medical care of normal aged, as are Chapters 27 and 28, Section V dealing with angina pectoris, myocardial infarction, acute coronary failure, and arteriosclerosis.

This book deserves a place in any doctor's library, regardless of his specialty.

CORRELATIVE NEUROSURGERY. By Edgar A. Kahn, Robert C. Bassett, Richard C. Schneider, Elizabeth Caroline Crosby. Contributors: Basu K. Bagchi, Jere M. Bauer, John M. Converse, William T. Correa, Russell N. DeJong, Robert G. Farris, David G. Freeman, John F. Holt, Tryphena Humphrey, Henry R. Pantek, Carl F. List. Foreword by Kenneth G. McKenzie, M.B., Toronto, F.R.C.S.(C), Consulting Senior Surgeon to the Toronto General Hospital; recently in charge of the Division of Neurosurgery in the Toronto General Hospital. Springfield, Illinois: Charles C Thomas, 1954. Price $19.50.

A medical book occasionally appears which gives the reader the impression that it is the product of a very rich and varied clinical experience on the part of the author or authors. Such a book is Correlative Neurosurgery by Dr. E. A. Kahn and associates at the University of Michigan. The various problems in neurosurgery are discussed concisely and with admirable simplicity and honesty. The authors are to be commended particularly for the manner in which they have emphasized the practical rather than the theoretical elements in the various neurological problems. This reviewer has never seen more striking illustrations and diagrams that are so distinct and easily understood. Another outstanding feature is the result obtained by the close cooperation of the anatomists with the clinician in this work. Each has benefited and so helped attain a better product for the reader. Considering all of the elements in this outstanding work, one cannot help but think that this book should be on the shelf of every young neurosurgeon entering private practice.

Dr. Max M. Peet, with his brilliant and infinitely fine technique, was the mentor of the author and most of his associates, and it is to Dr. Peet that the book is dedicated. He would be proud if he could return and see what his erstwhile pupil and associates have accomplished. The pupil who once learned at the master's knee, so to speak, has reached the stature of the master.

R.L.M.

Say you saw it in the Journal of the Michigan State Medical Society

TUBERCULOSIS HOSPITALS LIST EMPTY BEDS

Michigan has 740 vacant beds for tuberculosis patients and 2,976 unhospitalized cases of active tuberculosis known to local health officers, according to a report from the Health Department.

The hospital-patient census December 31, 1954, listed 4,331 victims being treated. There were 101 Detroit patients awaiting admission to hospitals.

The state has a total of 4,565 acceptable beds in hospitals already staffed, mostly in areas remote from Detroit. The Health Department listed 506 additional beds which would be acceptable for patients if the hospitals were properly staffed and remodeling were completed.

The department reported that the number of "unacceptable" beds had dropped from 840 to 430 in the last year. It will be reduced further when the Detroit Chest and General Hospital is closed to tuberculosis cases.

The showing of unoccupied "acceptable" beds at a time when there are 2,976 unhospitalized active cases emphasized criticism that the hospital building program has followed pork-barrel patterns.

It indicates also that little use has been made of the law passed in the last legislative session providing for compulsory hospitalization of "active" tuberculosis cases where the patient may be regarded as exposing others to infection.

Communications

Dr. William M. LeFevre
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Dear Bill:

Thank you for sending me THE JOURNAL of the Michigan State Medical Society. This really gives diabetes an excellent boost, and I congratulate you on your efforts.

I trust that I shall see you sometime in the near future. Perhaps you are going to the Postgraduate Clinic in Philadelphia. I hope so.

With best wishes for the New Year, I am

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University of Virginia
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(Continued from Page 362)

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A summary of the main points stressed at the Weight Control Colloquium held at Iowa State College on January 18 to 20 are available from the Michigan Department of Health to any physicians interested.

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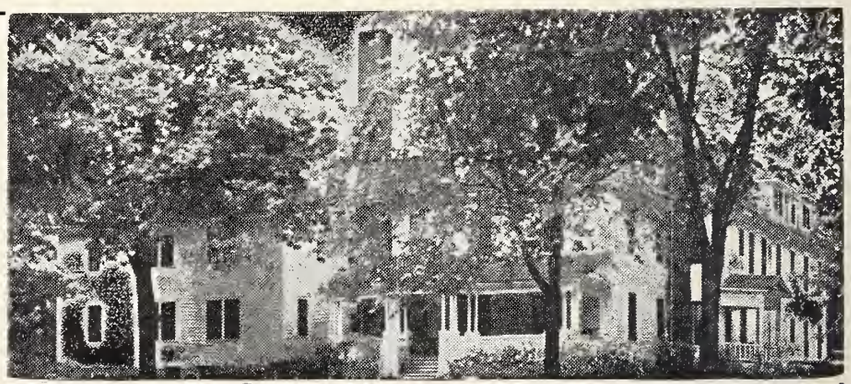
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*Pratt, R., & Dufrenoy, J.: Texas Rep. Biol. & Med. *12*:145, 1954.

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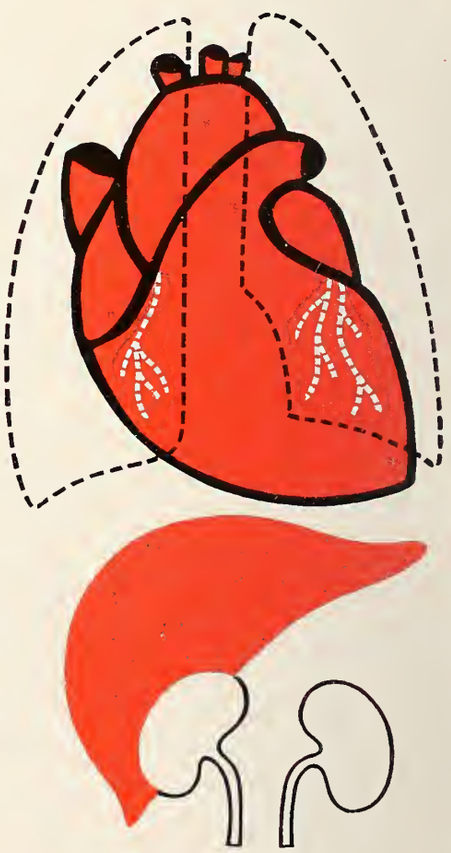
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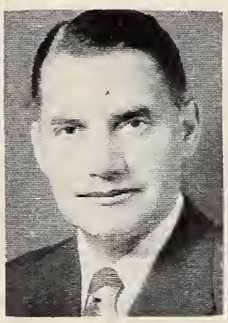
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R. F. Fenton, M.D.....Detroit
Chairman
J. E. Wentworth, M.D.....Flint
Secretary

Ophthalmology and Otolaryngology

G. H. Mehney, M.D.....Grand Rapids
Chairman (Ophth.)
J. D. Flynn, M.D.....Grand Rapids
Co-Chairman (Oto.)
C. W. Lepard, M.D.....Detroit
Secretary (Ophth.)
H. M. Blackburn, M.D.....Grand Rapids
Co-Secretary (Oto.)

Urology

B. W. Dovitz, M.D.....Detroit
Chairman
H. V. Morley, M.D.....Detroit
Secretary

Public Health and Preventive Medicine

W. B. Prothro, M.D.....Grand Rapids
Chairman
V. K. Volk, M.D.....Saginaw
Secretary

Nervous and Mental Diseases

I. A. LaCore, M.D.....Pontiac
Chairman
C. H. Ward, M.D.....Detroit
Secretary

Gastroenterology and Proctology

James A. Ferguson, M.D.....Grand Rapids
Chairman
R. C. Connelly, M.D.....Detroit
Secretary

DELEGATES TO A. M. A.

Delegates

W. A. Hyland, M.D., *Chairman*.....1955
W. D. Barrett, M.D.....1956
J. S. DeTar, M.D.....1955
W. H. Huron, M.D.....1956
R. A. Johnson, M.D.....1955
R. L. Novy, M.D.....1956

Section Delegate

G. C. Penberthy, M.D.....Detroit

Alternates

W. W. Babcock, M.D.....1955
O. J. Johnson, M.D.....1955
C. I. Owen, M.D.....1956
E. F. Sladek, M.D.....1955
J. R. Rodger, M.D.....1956
G. W. Slagle, M.D.....1956

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1955 Action Program Gets Sendoff



H. G. Benjamin, M.D.

A host of problems and opportunities facing the county medical society and its individual members were discussed thoroughly at the annual MSMS County Secretaries-public Relations Conference at the Sheraton-Cadillac Hotel, Detroit, on Sunday, January 30. More than 150 persons with a direct interest in the future of the medical profession participated.

Howard G. Benjamin, M.D., of Grand Rapids, Secretary of the Kent County Medical Society, was elected Chairman of the county secretaries conference and will head up the event in 1956.

So successful were the dramatic skits—presented with a light touch—in provoking discussion when introduced at the 1954 conference, a similar technique was used this year with added improvements. These additions were under the direction of Dr. Don Phillips, President of Hillsdale College and originator of the "Phillips 66" discussion technique, who performed outstanding services as moderator in the first afternoon session.

A group of M.D.'s once again had the opportunity to display their histrionic talents in the five skits which laid the discussion groundwork for practical problems faced by county medical societies. Topics for the skits were:

1. County Medical Society Programs
2. Advantages and Availability of MSMS Health and Accident Insurance Program
3. Patient Relations by the Office Secretary
4. Blue Cross Utilization
5. MSMS Periodic Health Appraisal Plan

An unusual Public Relations Program was presented during the morning, beginning with a legislative forum at 10:00 a.m. moderated by Jackson E. Livesay, M.D., of Flint, Speaker of the MSMS House of Delegates. Frank E. Wilson, M.D., Director of the AMA Washington office, discussed pending national legislation. State legislation was covered by L. A. Drolett, M.D., Lansing, Chairman of the MSMS Legislative Committee, and Representative Harry J. Phillips, Port Huron, 1954 Majority Floor Leader, Michigan House of Representatives.

The report of a survey of Public Relations activities within county medical societies completed the morning program. E. H. Fenton, M.D., Detroit, President of the Wayne County Medical Society, discussed PR activity in large societies; N. W. Scholle, M.D., Muskegon Heights, Past President of the Muskegon County Medical Society, the medium-sized county medical societies and B. L. Masters, M.D., Fremont, Chairman, MSMS Rural Medical Service Committee, small county medical societies.

The program closed with a spirited panel discussion on non-service-connected disabilities for veterans, moderated by Ralph A. Johnson, M.D., Detroit, MSMS Delegate to the AMA. G. W. Slagle, M.D., of Battle Creek, Alternate Delegate, and J. Joseph Herbert, LL.B., of Manistique, MSMS Legal Counsel, served on the panel.

Genesee, Wayne, Saginaw, and Kent, in that order, were the counties with the largest number of representatives registered.

Those present included:

County Secretaries.—J. E. Mahan, M.D., Allegan (Allegan); Harold Kessler, M.D., Alpena (Alpena-Alcona-Presque Isle); L. Fernald Foster, M.D., Bay City (Bay-Arenac-Iosco); E. M. Chandler, M.D., Battle Creek (Calhoun); T. B. Mackie, M.D., Sault Ste. Marie (Chippewa-Mackinac); J. B. Rowe, M.D., Flint (Genesee); C. L. Hoogerland, M.D., Alma (Gratiot-Isabella-Clare); W. O. Michel, M.D., Hillsdale (Hillsdale); C. F. Wible, M.D., Sebewaing (Huron); R. H. Trimby, M.D., Lansing (Ingham); H. W. Porter, M.D., Jackson (Jackson); E. O. Pearson, M.D., Kalamazoo (Kalamazoo); H. G. Benjamin, M.D., Grand Rapids (Kent); J. R. Doty, M.D., Lapeer (Lapeer); R. M. Duffy, M.D., Pinckney (Livingston); Alec Whitley, M.D., St. Clair Shores (Macomb); L. G. Glickman, M.D., Menominee (Menominee); J. P. Klein, M.D., Fremont (Newaygo); E. F. Crippen, M.D., Mancelona (Northern Michigan); G. N. Petroff, M.D., Pontiac (Oakland); R. V. Bucklin, M.D., Saginaw (Saginaw); C. D. Selby, M.D., Port Huron (St. Clair); E. W. Blanchard, M.D., Deckerville (Sanilac); E. S. Austin, M.D., Owosso (Shiawassee); D. K. Morgan, M.D., South Haven (Van Buren); B. C. Payne, M.D., Ann Arbor (Washtenaw); M. L. Lichter, M.D., Detroit (Wayne).

County Presidents.—Bert Van Der Kolk, M.D., Hopkins (Allegan); E. P. Griffin, Jr., M.D., Flint (Genesee); A. J. Stein, M.D., Hillsdale (Hillsdale); C. A. Payne, M.D., Grand Rapids (Kent); D. W. Martin, M.D., Ypsilanti (Washtenaw); E. H. Fenton, M.D., Detroit (Wayne).

County Bulletin Editors.—V. B. Lancaster, M.D., Battle Creek (Calhoun); P. K. Stevens, M.D., Flint (Genesee).

County Society Public Relations Chairmen.—O. J. Johnson, M.D., Bay City (Bay-Arenac-Iosco); G. E. Anthony, M.D., Flint (Genesee); E. S. Oldham, M.D., Breckenridge (Gratiot-Isabella-Clare); David Kahn, M.D., Lansing (Ingham); R. E. Campbell, M.D., Ionia (Ionia-Montcalm); H. C. Bodmer, M.D., Kalamazoo (Kalamazoo); H. R. Moore, M.D., Newaygo (Newaygo); J. H. Kitchel, M.D., Grand Haven (Ottawa); G. H. Bauer, M.D., Ann Arbor (Washtenaw).

(Continued on Page 400)

Every nurse quickly understands



Feeding Directions

Baker's Modified Milk (Liquid)

FIRST FIVE DAYS OF LIFE—1 part Baker's to 2 parts cool water, previously boiled.

SECOND FIVE DAYS—1 part Baker's to 1½ parts cool water, previously boiled.

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(Continued from Page 398)

MSMS Council.—R. H. Baker, M.D., Pontiac; R. S. Breakey, M.D., Lansing; William Bromme, M.D., Detroit; Wilfrid Haughey, M.D., Battle Creek; W. S. Jones, M.D., Menominee; W. M. LeFevre, M.D., Muskegon; J. E. Livesay, M.D., Flint; B. T. Montgomery, M.D., Sault Ste. Marie; G. B. Saltonstall, M.D., Charlevoix; Ralph W. Shook, M.D., Kalamazoo; G. W. Slagle, M.D., Battle Creek; T. P. Wickliffe, M.D., Calumet; D. B. Wiley, M.D., Utica.

Woman's Auxiliary Representatives.—Mrs. A. F. Milford, Ypsilanti; Mrs. D. M. MacGregor, Flint; Mrs. A. C. Stander, Saginaw; Mrs. C. A. Payne, Grand Rapids.

Michigan State Medical Assistants Society Representatives.—Miss Charlotte Ash, Kalamazoo; Miss Matilda Brechting, Grand Rapids; Miss Hallie Cummins, Caro; Miss Marie A. Erickson, Saginaw; Miss Phyllis Marquardt, Kalamazoo; Miss Lorine Nuechterlein, Saginaw; Mrs. Elizabeth E. Peck, Detroit; Miss Margaret E. Thompson, Saginaw.

Executive Secretaries of County Medical Societies.—Mrs. Sarah M. Warren, Flint; Carl G. King, Saginaw; James O. Devereaux, Pontiac.

MSMS Public Relations Committee.—R. A. Johnson, M.D., Detroit; R. W. Teed, M.D., Ann Arbor; F. C. Brace, M.D., Grand Rapids; W. G. Gamble, Jr., M.D., Bay City; A. B. Gwinn, M.D., Hastings; S. W. Hartwell, M.D., Muskegon; W. J. Herrington, M.D., Bad Axe; J. L. Leach, M.D., Flint; E. C. Long, M.D., Detroit; A C. Pfeifer, M.D., Mt. Morris; W. Z. Rundles, Sr, M.D., Flint; C. K. Stroup, M.D., Flint; C. L. Weston, M.D., Owosso.

Past Presidents.—W. E. Barstow, M.D., St. Louis; O. O. Beck, M.D., Birmingham; G. C. Penberthy, M.D., Detroit.

Guests.—Mrs. G. E. Anthony, Flint; Mrs. Eugene S. Austin, Owosso; H. F. Becker, Battle Creek; Mrs. R. S. Breakey, Lansing; Arthur Clements, Detroit; Verne Collett, Detroit; Richard M. Cosgrove, Lansing; G. V. Conover, M.D., Flint; L. A. Drolett, M.D., Lansing; J. R. Foster, Detroit; Mrs. W. G. Gamble, Bay City; Mrs. L. G. Glickman, Menominee; L. G. Goodrich, Detroit; Mrs. E. P. Griffin, Flint; W. F. Grimshaw, Detroit; J. Joseph Herbert, Manistique; John B. Kantner, Mt. Clemens; Robert O. Kinsman, Grand Rapids; Peter E. Klein, Detroit; Mrs. Jackson E. Livesay, Flint; Henry A. Luce, M.D., Detroit; B. L. Masters, M.D., Fremont; H. A. Meier, M.D., Coldwater; A. F. Milford, M.D., Ypsilanti; J. A. Millard, M.D., Middleville; Robert Morris, Detroit; Anton Patti, Jr., Detroit; Don Phillips, Hillsdale; Mrs. Don Phillips, Hillsdale; Rep. Harry J. Phillips, Port Huron; Mrs. Harry Phillips, Port Huron; P. E. Prather, M.D., Saginaw; Helen Schick, Detoit; L. O. Shantz, M.D., Flint; Allen Shoenfield, Detroit; A. C. Stander, M.D., Saginaw; Miss Grace Teed, Ann Arbor; R. L. Warnshuis, Grand Rapids; Mrs. Ruth C. Weston, Owosso; E. H. Wiard, Lansing; Mrs. Dorothy Willert, Saginaw; Frank E. Wilson, M.D., Washington, D. C.; A. R. Young, M.D., Pontiac; George A. Zindler, M.D., Battle Creek.

Methods employed to relieve the pain in cancer should be pursued with the aggressiveness attendant upon curative therapy. An air of optimism and confidence on the part of the physician can do much, because "a healthy mental attitude raises the threshold of pain."

* * *

The control of cancer depends upon the time that elapses between the occurrence of a lesion and its diagnosis. Much of the time lost before adequate diagnosis and treatment sometimes results from the fact that the physician consulted did not suspect cancer, did not do a biopsy, or was inadequately prepared to make the diagnosis. In short, the clinical impression was misjudged.

In Lansing

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Fireproof

400 ROOMS

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PLAINWELL, MICHIGAN

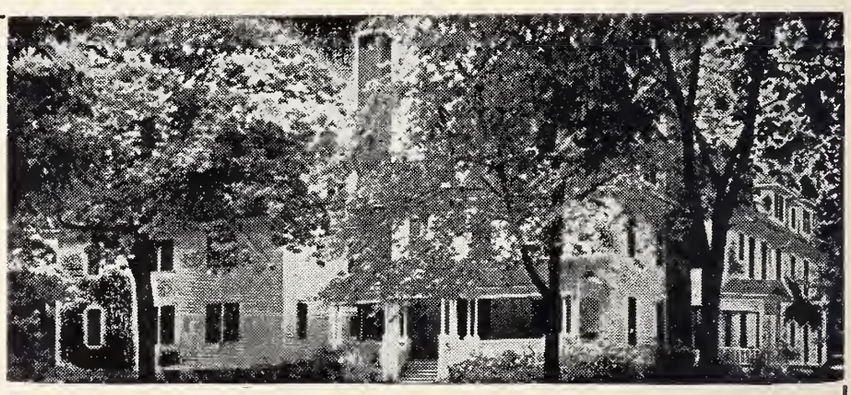
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Only a flawless pedigree — a long and illustrious ancestry of purebreds — can produce a champion show dog.

Only **audivox** in the hearing-aid field can trace an ancestry that includes both Western Electric and Bell Telephone Laboratories. **audivox** lineage springs from the pioneer experiments of Dr. Alexander Graham Bell, furthered by the development of the hearing aid at Bell Telephone Laboratories, brought to fruition by Western Electric and **audivox** engineers.



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new:

audivox presents a versatile new tool in the psychological and somatic management of hearing loss — the Model 72 "New World." Because it departs completely from conventional hearing-aid appearance, this tiny "prosthetic ear" may be worn as a barrette, tie clip, or clasp without concealment. Resultant benefits include new poise and new aural acuity for the wearer through free-field reception without clothing rustle.

MANY DOCTORS rely on career Audivox dealers for conscientious, prompt attention to their patients' hearing needs. There is an Audivox dealer — chosen for his interest, ability, and integrity — in your vicinity. He is listed in the Hearing Aid section of your classified telephone directory, under Audivox or Western Electric.

the pedigreed hearing aid.

Cancer Comment

CANCER STUDIES

Statistics and tabulating machines, as well as test tubes and x-ray therapy, may prove effective weapons against cancer.

In their Ninth Clinical Report on Cancer published in the *University of Michigan Medical Bulletin,* Drs. Howard B. Latourette, Isadore Lampe, and Fred Jenner Hodges wrote, "The gradual accumulation of information about the variety of neoplasms that make up the complex field of 'cancer' is important in trying to anticipate their growth characteristics, pattern of spread, and their natural course."

The University of Michigan Cancer File covers the period between February 27, 1936, through December 31, 1950.

It represents the clinical experiences which University of Michigan doctors have had with patients suffering from malignant neoplasms. Exactly 21,523 patients with 21,875 neoplasms have been recorded on individual IBM cards. These cards represent the University of Michigan Cancer File.

The report is unique because it contains an unusually high proportion of the less common forms of neoplastic disease. For example, 231 different kinds of cancer have been observed, treated, and tabulated at University Hospital.

The report also reveals that:

1. The most commonly observed forms of cancer involve the female genital system, cancer of the large intestine, and lymphoblastoma (cancer of the blood) in that order;
2. The least commonly observed involves the upper respiratory tract;
3. Of the patients at the closing date of the current report 76.9 per cent had not been treated prior to admission to University Hospital.

Detailed analysis of the Ninth Report reveals that early treatment as well as the type of cancer treated influence recovery and survival. Patients who showed the highest survival rates (70 to as much as 100 per cent of them) averaged 38.7 years of age when first examined and treated.

Better than 30 per cent of patients with cancer of the rectum and colon, previously considered to be one of the most difficult kinds of cancer to manage, can expect to survive a minimum of five years after treatment.

The highest survival rate, as far as type of cancer is concerned, was found among patients who had neoplasms either of the male genital system, of the breast, of the skin, or of the salivary glands and neck. As many as 50 to 58 per cent of these survived a minimum of five years after treatment.

Patients with cancer of the abdomen, stomach region, of the blood, the urinary system, or of the upper and lower respiratory tracts appeared to have the lowest survival rate. In this group and with one of the lowest survival rates is the so-called "metastatic neoplasm." Over the past 15 years many patients successfully treated for a neoplasm often died of other causes. The report emphasized that the survival rates in all categories of cancer were "necessarily only rough approximations," because of the mixture of previously treated and untreated patients.

Dr. Hodges, who is chairman of the Medical School's Department of Radiology, called the University of Michigan Cancer File a "hope chest" of valuable and detailed information for students and researchers in the field of cancer. Each case, each kind, each course of treatment and its results is carefully tabulated on a coded IBM card.

The writers of the current report expect to publish a separate analysis, in the near future, of their experiences with lung cancer. Widespread public interest in the smoking problem convinced the University of Michigan investigators to delete lung cancer statistics from the current report for later, more detailed publication.

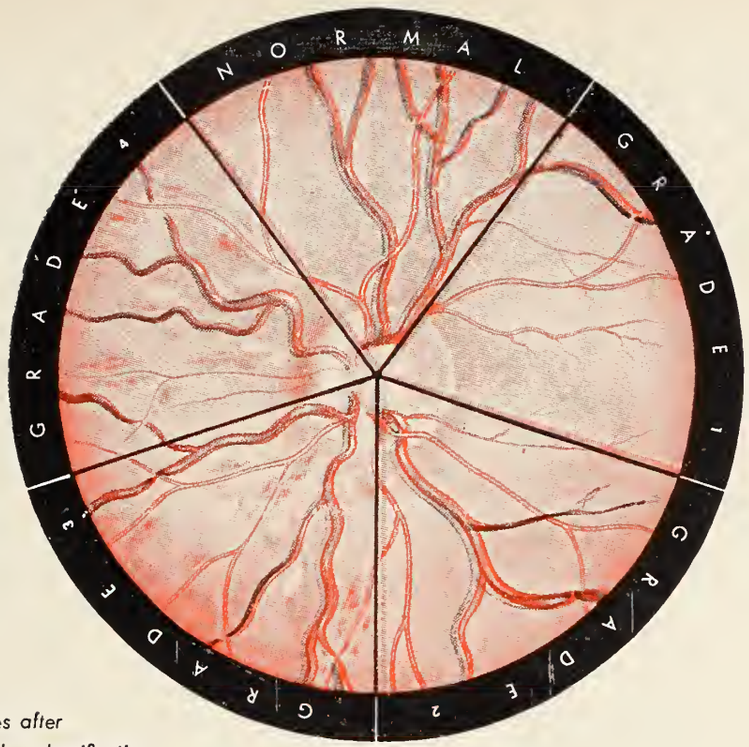
Inadequately treated cancer is a fatal disease.

* * *

Any decision that a given cancer case is incurable while still operable should be made only after long and serious thought.

* * *

Osteogenic sarcoma and Ewing's tumor are distinct pathological entities but clinical differentiation between them is not always possible.



Eye ground changes after Keith-Wagener-Barker classification

In hypertension, effective reduction of blood pressure is assured in 90% of appropriate cases when dosage is fitted to the requirements of the individual patient. Response is reliable, uniform, prolonged. By-effects are minimal. Convenient t.i.d. oral tablet medication.

There is usually regression in retinal vascular changes, resorption of exudates, subsidence of papilledema, and improvement in vision.

For a clinical supply of 20 mg. Ansolysen Tablets, sufficient to initiate therapy for two patients, write on your prescription blank to Wyeth Laboratories, Professional Service Department A-6.

Supplied in scored tablets of 20, 40, and 100 mg., bottles of 100. Also available: Injection, 10 mg. per cc., vials of 10 cc.

ANSOLYSEN®

TARTRATE (Pentolinium Tartrate)



ALWAYS LOWERS BLOOD PRESSURE

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Philadelphia 2, Pa.

John Castellucci Moves Up



John W. Castellucci was appointed Executive Director of the Blue Shield Commission—national co-ordinating agency of the seventy-seven Blue Shield voluntary, non-profit, medical care plans on March 1, 1955, as announced by Dr. L. Howard Schriver, President of the Blue Shield Commission.

John, well known to thousands of Michigan M.D.'s has served as assistant director of Michigan Medical Service (the Michigan Blue Shield Plan) since 1943. He was active both in organizing Plans throughout the United States and in establishing programs to assure the efficient operations of Blue Shield Plans.

In 1945, Mr. Castellucci helped establish and organized the Veterans' Home-Town Care Plan. The program permits wounded veterans a free choice of doctors when receiving medical care. John worked closely with the Veterans Administration in Washington, D. C., to establish the plan which has enabled thousands of veterans to be attended by their own family doctors.

John Castellucci also has guided Blue Shield personnel in a unique physician relations program. The program gives doctors of medicine necessary information concerning activities of their Blue Shield Plans and helps doctors work more closely with their sponsored prepayment program.

"We are proud to have a man so competent and with so many years of experience in Blue Shield become Executive Director of the Commission. The Blue Shield Plans and the Blue Shield Commission pledge full co-operation toward helping Mr. Castellucci find his new position both successful and gratifying," said Dr. Schriver in the announcement.

Blue Shield nationally now protects more than 32 million Americans against surgical and medical expense through prepayment.

Camping for Epileptic Children

For the past several years, epileptic children in and around Detroit have been attending Camp Crile each summer. However, since this camping service is available to epileptic children from all over Michigan, we want all doctors to be aware of it.

In 1938, the Michigan Society for Epileptic Children was organized by a group of public-spirited women in Detroit. This society incorporated under the laws of Michigan and established Camp Crile, for epileptic children only, on a 28½ acre farm on Joslyn Lake Road near Chelsea, Michigan. The society is guided by an executive committee consisting of twelve elected members and an advisory board of outstanding professional and businessmen.

There is no lake or stream at Camp Crile, since swimming and boating are hazardous for the child with seizures. Camping activities consists of ball games, hikes, picnics, cookouts, nature study and handicraft such as leather work, weaving, and finger painting. The program is varied to fit both boys and girls from 8 through fourteen years of age. Slow learning children in this age group are also accepted if they are able to feed and dress themselves and enter into organized activities.

Camp Crile is staffed by a qualified director, three counselors, a cook and cook's helper, and two doctors from Chelsea, Michigan, are on call at all times.

Camp is operated each summer for eight weeks. The first four weeks, June 28 to July 26, is for boys, and July 26 to August 23 is for girls.

Because Camp Crile is supported by contributions from private individuals and organizations who recognize the needs of this handicapped group, we are able to keep our fees low, so as not to exclude anyone. Camp fees are $15.00 a week or $60.00 for four weeks. From our past experience, we have learned that four weeks is the minimum time a child should spend at camp to reap the maximum benefit.

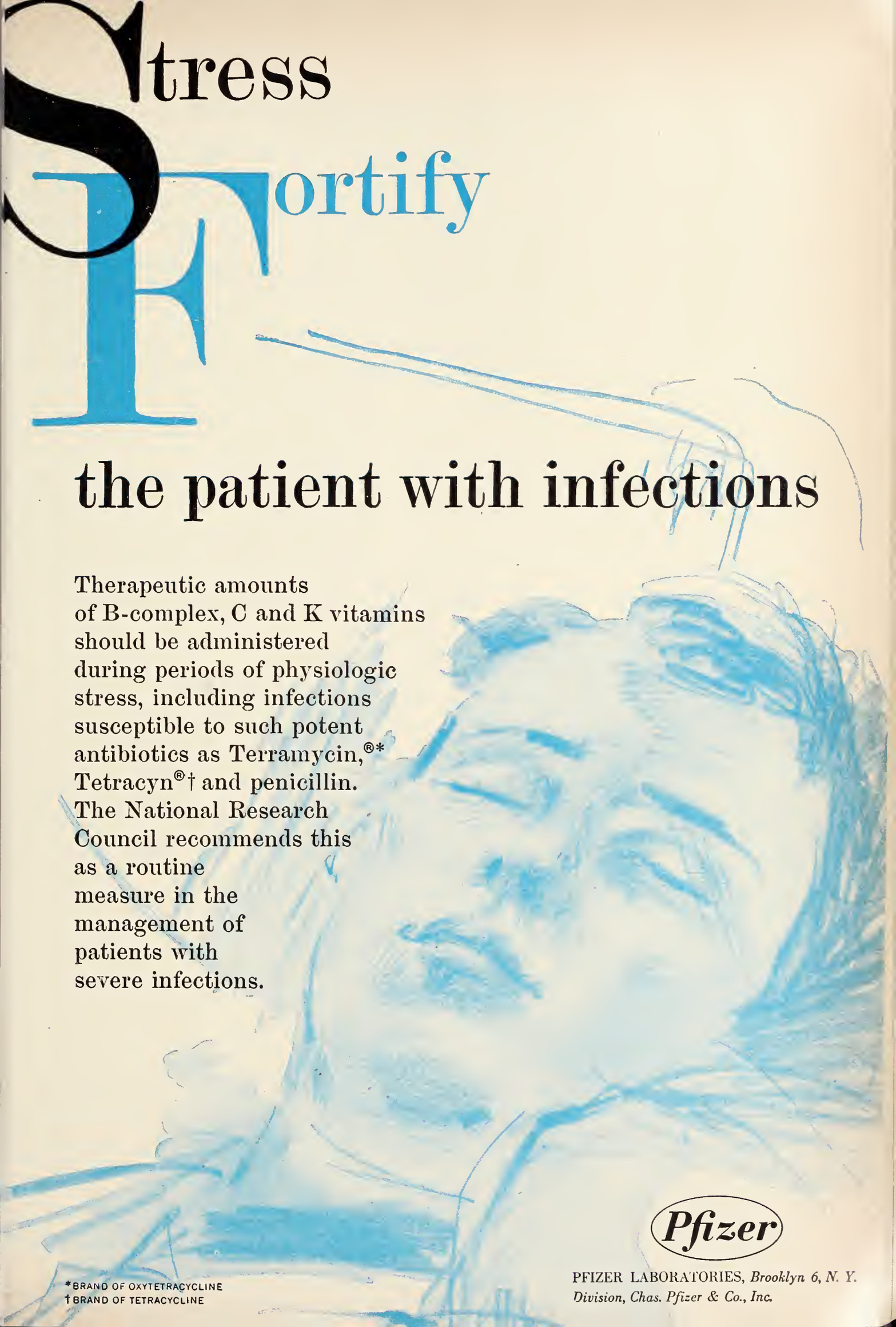
Children are accepted on the recommendation of their doctor and school. Applications or more information may be obtained by writing the registration chairman for Camp Crile, Mrs. Christine DeWeerd, 10034 Lincoln Drive, Huntington Woods, Michigan.

Stress

Fortify

the patient with infections

Therapeutic amounts of B-complex, C and K vitamins should be administered during periods of physiologic stress, including infections susceptible to such potent antibiotics as Terramycin,®* Tetracyn®† and penicillin. The National Research Council recommends this as a routine measure in the management of patients with severe infections.



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You and Your Business

AMA APPROVES SIMPLIFIED INSURANCE CLAIM FORM

Approval has been granted by AMA's Council on Medical Service to a simplified insurance claim form drafted by a special committee of the Health Insurance Council. AMA's Committee on Prepayment Medical and Hospital Service collaborated with the HIC committee. The form is designed for use in administering surgical expense benefits under group insurance. Physicians who practice in areas where this type of insurance coverage is prevalent should be particularly interested in this development.

Eventually the Health Insurance Council hopes to have about six insurance blanks available to accommodate the various types of benefits. Only this form (GS-1) has been approved by AMA to date although the Council on Medical Services has suggested certain modifications in a second which has been approved "in principle."

The form, approved by companies writing approximately 85 per cent of the group accident and health premium volume in the United States, is as follows:

APPROVED FORM

(COMPANY NAME)

SURGEON'S STATEMENT
(GROUP INSURANCE)

**(This form should be completed immediately and returned to the patient or, employer, or company, as appropriate)*

(1) Patient's Name ..... Age .....
(2) Nature of surgical or obstetrical procedure (Describe fully) .....
.....
Charge for this procedure $..... Date performed ..... 19.....
Where performed .....If in hospital, in-patient ☐ out-patient ☐
(3) *Was procedure due to pregnancy? Yes ☐ No ☐
If "Yes," what was approximate date of commencement of pregnancy? ..... 19.....
(4) *Is further operative procedure anticipated? Yes ☐ No ☐
If "Yes," explain .....
(5) *Was surgery due to injury or sickness arising out of patient's employment? Yes ☐ No ☐
If "Yes," explain .....
Remarks: .....
.....
.....
.....

Signed ..... *M.D.
Address .....
Date.....19..... *Phone .....

AUTHORIZATION TO PAY SURGEON

(To be completed by the insured employe if payment is to be made directly to the surgeon)

I hereby authorize payment directly to.....
(PRINT—Name of Surgeon)
of the Group Surgical benefits otherwise payable to me but not to exceed the charge stated above. I understand I am financially responsible to the surgeon for charges not covered by this authorization.

Date.....19..... Signed .....
(Insured Employe)

*To be included at company's option
(GS-1)

HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

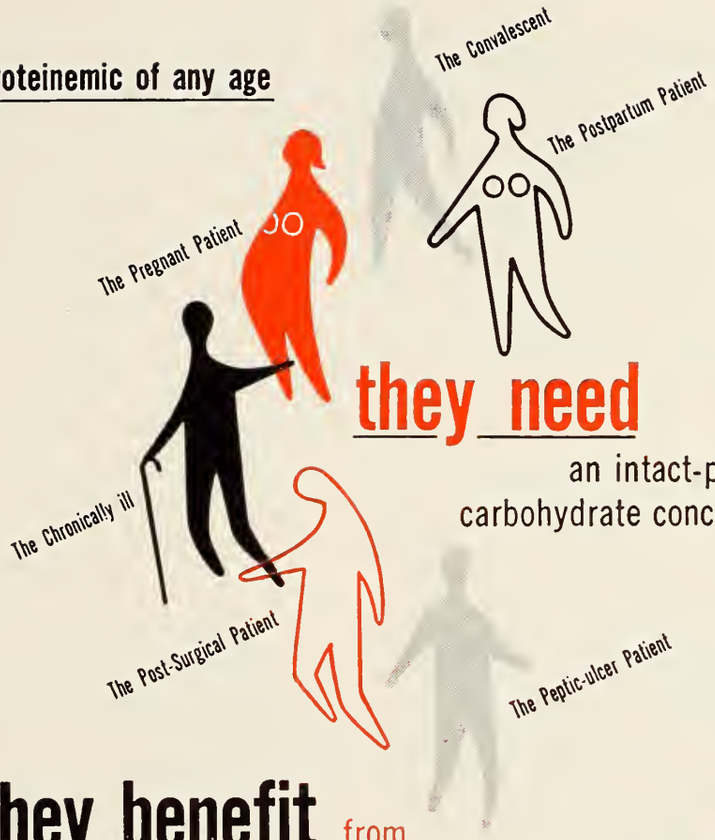
Meeting of February 23, 1955

Seventy-one items were presented to the Executive Committee of The Council at its February 23 meeting in Lansing. Items of chief importance were:

- **Annual report of Michigan Hospital Service** (Blue Cross) as developed by President John W. Paynter of Detroit, was presented and received with thanks.
- **Legal case of Kopprasch vs. MSMS et al:** Progress report was presented by Legal Counsel J. Joseph Herbert.
- **Proposed amendments to Act 350** of the Public Acts of 1913 (County Hospital Act) were presented by Mr. Herbert. These amendments will be presented to the 1955 Legislature by the Michigan Hospital Association.
- **Committee reports.**—The following committee reports were presented: (a) Public Relations

(Continued on Page 408)

The hypoproteinemic of any age



they need

an intact-protein,
carbohydrate concentrate

they benefit from

Protinal*

NATIONAL

Micropulverized casein powder (61.25%), Carbohydrate (30%)
to maintain protein/carbohydrate equilibrium essential for tissue regeneration.

COMPLETE PROTEIN

COMPLETELY PALATABLE

VIRTUALLY FAT AND SODIUM FREE (Less than 0.03% Na / Less than 1.0% Fat)

The National Drug Company Philadelphia 44, Pa.

Available: Delicious in either vanilla or chocolate flavors, in bottles of 8 oz., 1 lb., 5 lb., and 25 lb. containers.

*VI-PROTINAL—Palatable whole protein-carbohydrate-vitamin-mineral mixture of high biological value

HIGHLIGHTS OF THE COUNCIL

(Continued from Page 406)

Committee, meeting of January 29; (b) Rheumatic Fever Control Committee, February 2; (c) Study on Prevention of Highway Accidents, February 17; (d) Venereal Disease Control Committee, February 20.

- **Report on Successful Executive Secretaries Conference,** held February 15 at MSMS headquarters in Lansing, was reported by Secretary L. Fernald Foster, M.D., Bay City. Seven Michigan county medical societies sent their representatives to this Conference. Special honor was accorded Else Kolhede, Wayne County Medical Society's Executive Secretary, commemorating her tenth anniversary with WCMS.
- **Beaumont Memorial.** Gift of the St. Louis Medical Society of Dr. Beaumont's bed, for housing in the Beaumont Memorial on Mackinac Island, was accepted with sincere thanks.
- **A plaque,** to be processed by Michigan Medical Service (Blue Shield) for distribution to all MSMS members, was approved—with thanks to Blue Shield for this professional relations project; also a folder entitled "To All My Patients" was approved as a leaflet to be supplied MSMS members by Michigan Medical Service.
- **Committee Appointments:** Charles Howard Ross, M.D., Ann Arbor, was appointed Chairman of MSMS Committee for American Medical Education Foundation; E. F. Sladek, M.D., Traverse City, was appointed a member of the Special Committee on Mediation, Ethics and Grievance.

  V. G. Chabut, M.D., Northville, was made Chairman of Subcommittee on School Health Problems (of Child Welfare Committee), with E. H. Watson, M.D., Ann Arbor, as a member thereof; Albin Swengle, M.D., Ann Arbor, as a member of the Industrial Health Committee.

  H. W. Longyear, M.D., Detroit, and J. E. Weber, M.D., Grand Rapids, were appointed MSMS representatives to the American Academy of Pediatrics' Committee on Welfare of the Fetus and Newborn.
- **Karl A. Menninger, M.D.,** Topeka, Kansas, was approved as the 1955 Biddle Lecture, upon nomination of President Baker.
- **MSMS Representtives:** Frank Van Schoick, M.D., Jackson, was appointed as official MSMS representative to attend the Third Children's Service Forum, East Lansing, March 9; Otto O. Beck, M.D., Birmingham, R. L. Novy, M.D., Detroit, and John M. Wellman, M.D., Lansing, were nominated as MSMS representatives to the Board of Michigan Medical Service; W. A. Stryker, M.D., Chairman, MSMS Committee on Blood Banks, was appointed as MSMS Representative to the Board of Directors of the Northern Illinois Blood Bank, Inc.; F. C. Swartz, M.D., Lansing, Otto Van der Velde, M.D., Holland, and H. W. Woughter, M.D., Flint, were appointed as official MSMS representatives to the Conference on Aging, Ann Arbor, June, 1955; John R. Rodger, M.D., Bellaire, and R. W. Teed, M.D., Ann Arbor, were appointed as Delegate and Alternate Delegate, respectively, of MSMS to the Michigan Health Council.
- **Report on Congress** on Industrial Health, meeting in Detroit, as presented by MSMS representative, Max R. Burnell, M.D., Detroit, was accepted with sincere thanks.
- **Annual Session dates** for 1957 (September 25-26-27) were approved.
- **J. E. Livesay, M.D.,** Flint, Speaker of the MSMS Honse of Delegates, was appointed as Moderator of Panel on Undergraduate Medical Education, scheduled for Monday, September 26, Grand Rapids (luncheon), with the Deans of the two medical schools in Michigan, as participants.
- **C. A. Payne, M.D.,** Grand Rapids, and H. M. Nelson, M.D., Detroit, were appointed as Chairman and Vice Chairman, respectively, of "Cancer Control Day" during Michigan Clinical Institute (March 9, 1955).
- **Further publicity** in JMSMS and in the Secretary's Letter for the Michigan Foundation for Medical and Health Education and its Student Loan Revolving Fund was authorized.
- **Felicitations** to Dean A. C. Furstenberg, M.D., on receipt of the Bene Merente Medal from Pope Pius XII were spread upon the minutes, with the Secretary instructed to so notify Dr. Furstenberg.
- **Report on recent meeting** of American Medical Education Foundation Board, held in Chicago, as presented by MSMS representative Gilbert B. Saltonstall, M.D., of Charlevoix, was approved with sincere thanks to Dr. Saltonstall.
- **Matters of mutual health interest** were discussed with A. E. Heustis, M.D., Michigan Health Commissioner.
- **The County Secretaries-Public Relations Seminar** (three days) was scheduled to be held at the Sheraton-Cadillac Hotel, Detroit, Friday, Saturday, Sunday, January 27-29, 1956. The Annual Meeting of The Council will precede this Seminar.
- **Report of H. B. Fenech, M.D.,** Detroit, on Rome meeting of World Medical Association, at which Dr. Fenech served as official MSMS representative, was presented and approved with sincere thanks to Dr. Fenech.
- **William Bromme, M.D.,** Detroit, reported on Chicago meeting at American Medical Association headquarters on its Committee on Federal Medical Services, February 19.



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AMA Washington Letter

THE MONTH IN WASHINGTON

Before Congress, and getting some attention but almost no action, is the Hoover Commission's report on federal medical services. Most controversial question is how much medical care the Federal Government should give to veterans whose disabilities are not a result of their military service. This is ground that has been well plowed before, by the first Hoover Commission, by various studies and reports and most recently by the AMA's campaign to educate the profession on the non-service-connection situation.

Apathy of Congress may be explained in part by decision of the White House, the week after release of the Commission report, to appoint a commission to inquire into the whole field of veterans' benefits. The group, headed by Gen. Omar Bradley, former VA administrator, is not expected to complete its study until next fall.

A Medical Task Force (fourteen physicians and one dentist) did most of the spadework for the Hoover Commission. Publication of its report showed that not all the recommendations of the Task Force were accepted by the full Commission. The most notable differences came in veterans' medical care. The Task Force concluded that what is most urgently needed is a firm legal basis for determination of eligibility for medical care. Its solution would be to end eligibility for non-service-connected care three years after separation from service. The Task Force declared that "the very normal incident of fulfilling the duties required of every citizen" should not entitle part of the population to lifelong medical care. The three-year limit, according to the Task Force, would reduce the potential VA patients from 17.5 million to 3 million, at an annual saving of $150 million. The Commission would not go along with this on the theory that "the sentiment of the American people is that a sick and really indigent veteran should be provided care in VA hospitals." Instead it recommended that:

(1) the inability-to-pay statement for non-service care be "subject to verification," (2) a veteran assume an interest-free liability to pay for such care at some future date "if he can do so," (3) the VA close down 20 hospitals, mostly general medical and surgical, (4) outpatient care be furnished indigent veterans with non-service disabilities, and (5) all veterans laws be brought together into a single code.

The American Legion labeled the Hoover Commission recommendations as "heartless," and "unworthy of serious consideration by informed people." Through Secretary and General Manager George F. Lull, the American Medical Association made these points: (1) closer screening of financial statements already has proved to be ineffective, (2) rejecting the Task Force plan for a three-year cutoff while offering outpatient care would skyrocket costs and defeat the commission's goal of eliminating wasteful spending and unnecessary intrusion by the government in private affairs.

The Commission has other equally important, if not as controversial, proposals. Among them are:

Closing down of general medical hospitals of the Public Health Service, elimination of free medical care for merchant seamen, extension of contributory health insurance to military dependents and other U. S. beneficiaries along lines of the proposed program for federal civilian employes, regionalization of military hospitals with one department in command of all hospitals in each area, creation of a Federal Advisory Council of Health and physician and lay members who would advise the President on both governmental and national health problems, and creation of a National Medical Library out of the present Armed Forces Medical Library. Copies of both Commission and Task Force reports are available at the Government Printing Office, Washington 25, D. C.

Secretary Hobby of the Department of HEW, testifying on all the administration's proposals, opened a series of health hearings before the House Interstate and Foreign Commerce Committee. Pressed to make a choice, she indicated that the two most important parts of the six-part omnibus health bill were reinsurance of health plans and federal guarantee of mortgages for health facilities.

But the committee decided that first priority should go to mental health proposals. Accordingly the following week it started hearings on that part of the omnibus bill calling for a five-year program of grants to states for mental health projects. Also before the committee was the chairman's bill for a national study of mental illness problems, to be financed by the U. S. but conducted by private groups.

Holding priority on the Senate side was legislation for a five-year, $250 million program for aid to medical schools, sponsored by Chairman Hill of the Labor and Public Welfare Committee.

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*Bunim, J. J.: Research Activities in Rheumatic Diseases, Pub. Health Rep. *69*:437, 1954.



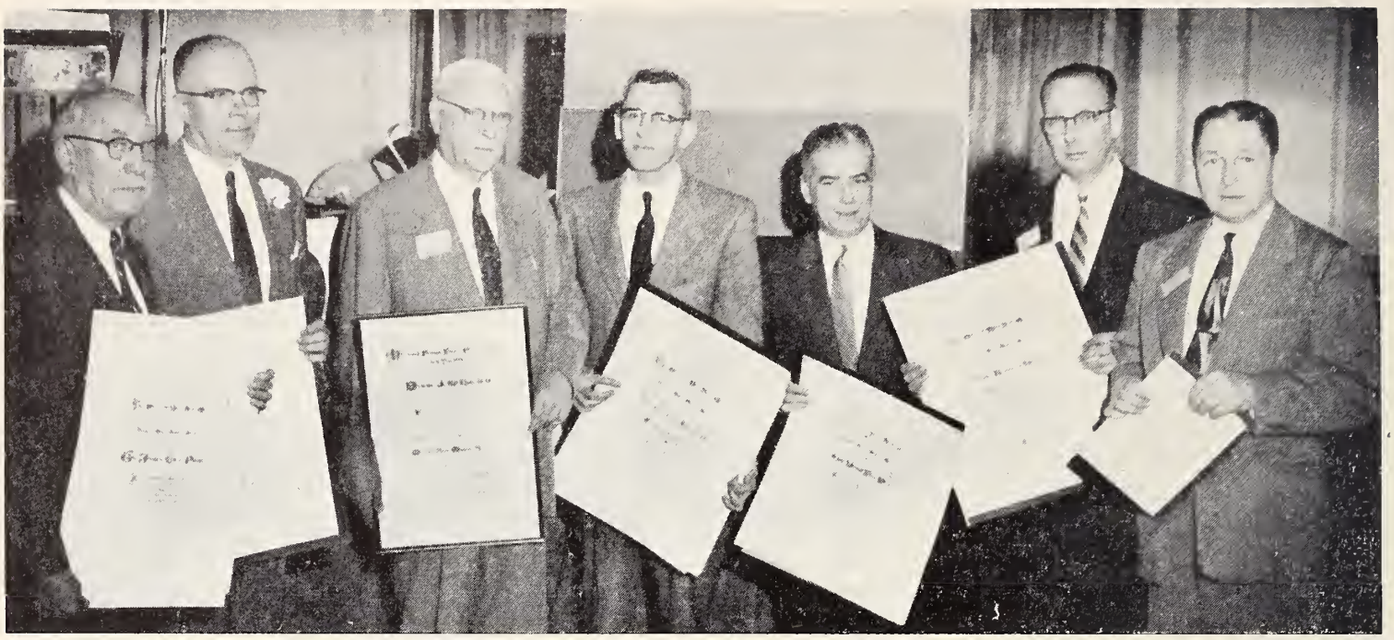
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PR REPORT



THIS SNAPSHOT, taken after presentation ceremonies at the Michigan Clinical Institute, symbolizes the spirit of public service and community co-operation which is the keystone to good public relations, particularly for the medical profession. Pictured are representatives of six Michigan daily newspapers that conscientiously have promoted within their own areas better understanding of medical progress and the private practice of medicine. The seventh man, of course, is Duncan J. McColl, M.D., of Port Huron, currently "Michigan's Foremost Family Physician," whose selection for that honor in itself indicates a devotion to the ideals which earned friends for Medicine for many generations before the phrase "public relations" was coined.

In the photograph (left to right) are:

Carl M. Saunders, Editor, *Jackson Citizen-Patriot;* Lee M. Woodruff, Editor, *Grand Rapids Press;* Dr. McColl; Arthur Gallagher, Editor, *Ann Arbor News;* Frank Angelo, Managing Editor, *Detroit Free Press;* Jack Bell, Editorial Writer, *Kalamazoo Gazette,* and Merle Oliver, Science Writer, *The Detroit News.*

MERLE OLIVER shared in the MSMS Award for Excellence in Medical Reporting, which was presented to *The Detroit News* primarily on the basis of his work in "reporting problems and progress of Medicine and Health in Michigan" and that of his colleague Allen Shoenfield, of Ann Arbor, who covers scientific activities on a national level for *The News.* The general award, second to be presented since the honor was inaugurated in 1953, was presented to Warren S. Booth, publisher of *The News,* at an informal dinner preceding the opening of the Michigan Clinical Institute.

EACH OF THE FIVE other dailies represented was presented with an MSMS special award for distinguished service to health in Michigan for co-sponsoring a local medical forum in co-operation with the county medical society in its community during 1953 and/or 1954. These forums, which originated in Michigan through a joint effort of Wayne County Medical Society and the *Detroit Free Press,* have proven to be among the most valuable educational activities undertaken by county societies. Several forum series have already been staged this year, with others planned for the fall.

Beyond the obvious benefits of giving up-to-date medical information to members of the community, the forums have been helpful in emphasizing the rapid progress of medical science and in demonstrating the excellent quality of medical care available throughout Michigan.

TWO SPECIAL EVENTS of interest and possible PR value to Medicine will be observed in Michigan in May. Number one, National Hospital Week, is sponsored in our state by the Michigan Hospital Association and is scheduled for May 8 to 14. The 1955 theme: "Your Hospital . . . A Tradition of Service." In Michigan, the 15,000 members of hospital auxiliaries (a great percentage of whom are physicians' wives) have taken the initiative to make the project a success, but the observance offers a fine opportunity to county medical societies and their individual members for PR cooperation.

The second—and "bigger"—event is Michigan Week, May 15 to 21. The theme: "I'm Glad I Live in Michigan." This special week is a period set aside for all people of Michigan to become better acquainted with their state, its resources, heritage, and opportunities. Michigan's health facilities and high standards of medical care and service are among the state's great assets. It is fitting that the medical profession take cognizance and participate in Michigan Week.

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County Executive Secretaries' Conference

Executive Secretaries of county medical societies spent a full day February 15 at MSMS headquarters in Lansing discussing common problems, with an eye to improving services offered by county societies. At present the number of county societies with a headquarters executive office staffed by non-M.D.'s has risen to seven.

Co-operation with ancillary groups was stressed, and staff representatives of five organizations with which MSMS works closely, were present for the afternoon discussion session.

Topics on the morning program, which was moderated by L. Fernald Foster, M.D., MSMS Secretary, were:

Membership Matters

Blue Cross-Blue Shield—Up to Date

Good Mediation Through an Active Committee

Value of Twenty-four Hour Telephone Coverage Service

County Society Employment Service to Help M.D. Offices

County Medical Bulletins, Exchanges, Et Cetera

The afternoon session was built upon the MSMS public relations handbook "Winning Friends for Medicine," which contains the basic 26 point PR program for county societies. Hugh W. Brenneman, MSMS Public Relations Counsel, served as moderator, with other staff members and L. H. Freye, representing Blue Cross, as panel members.

The luncheon period was devoted to a "surprise party" honoring Else Kolhede of Detroit, on her 10th anniversary as Executive Secretary of the Wayne County Medical Society.

County medical societies represented at the conference were: Wayne, Miss Kolhede; Genesee, Mrs. Sara Warren; Muskegon, Mrs. Lucy W. Bartlett; Washtenaw, Mrs. Flora Mayer; Saginaw, Carl G. King; Oakland, James Devereaux; Kent, R. L. Warnshuis, and Robert O. Kinsman.

Ancillary groups and their representatives present were: Michigan Epilepsy Center, W. F. Grimshaw; Michigan Heart Association, Ernest T. Guy; Michigan Health Council, Eugene H. Wiard; Michigan Medical Service, Louis H. Freye; Michigan State Dental Society, H. Leon Snow.

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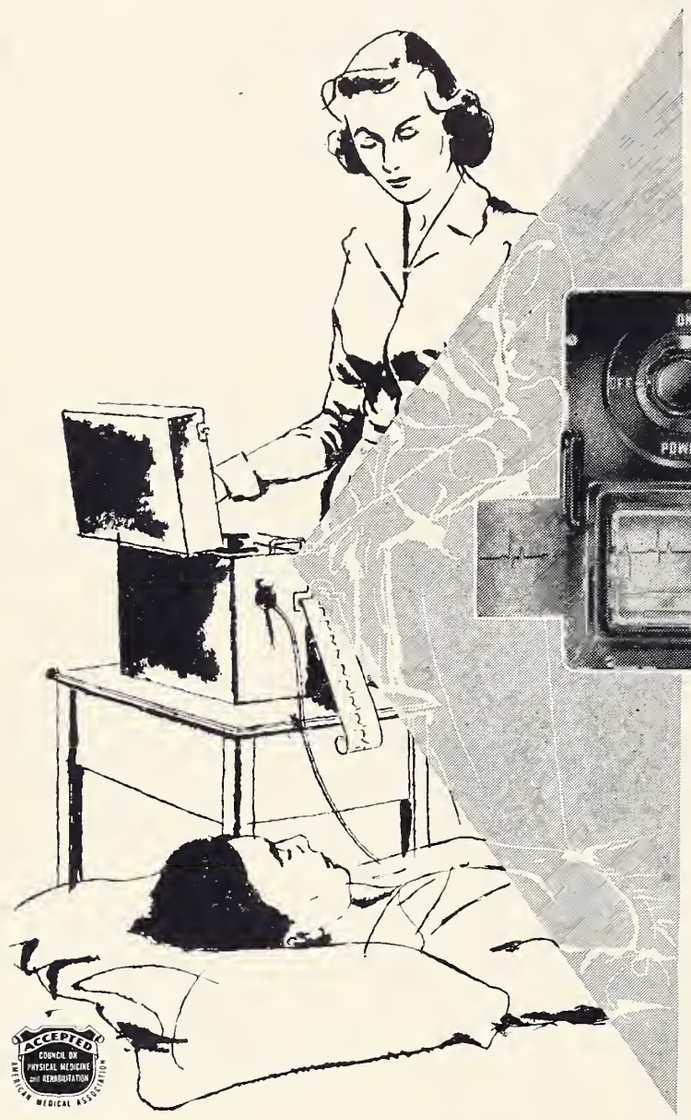
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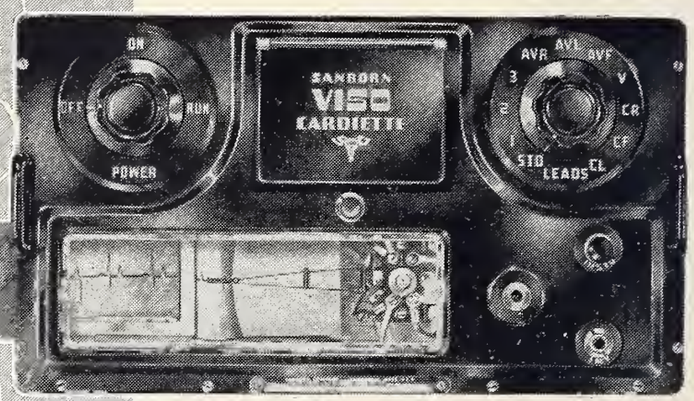
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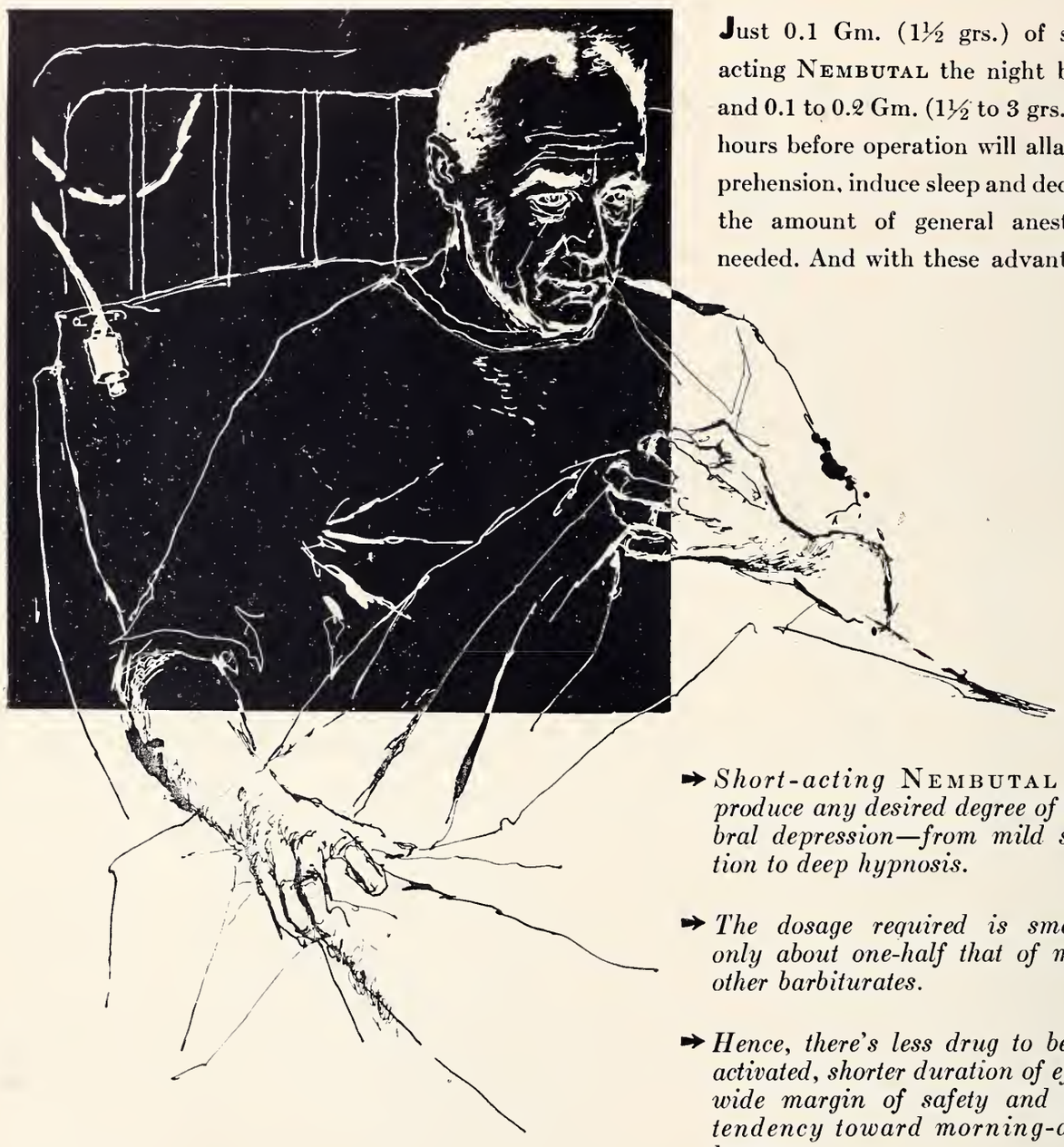
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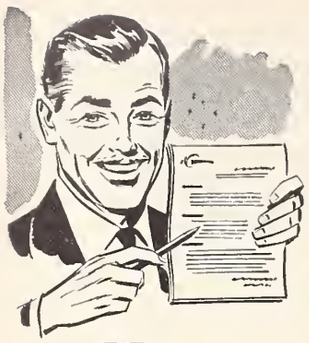
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REFERENCES: 1. Kroop, I. G., *N. Y. State J. Med.* **54**:2699, Oct. 1, 1954. 2. Heffer, E. T. *et al.*, *J. Pediatrics* **44**:630, June 1954. 3. Massell, B. F., *New England J. Med.* **251**:263, Aug. 12, 1954.



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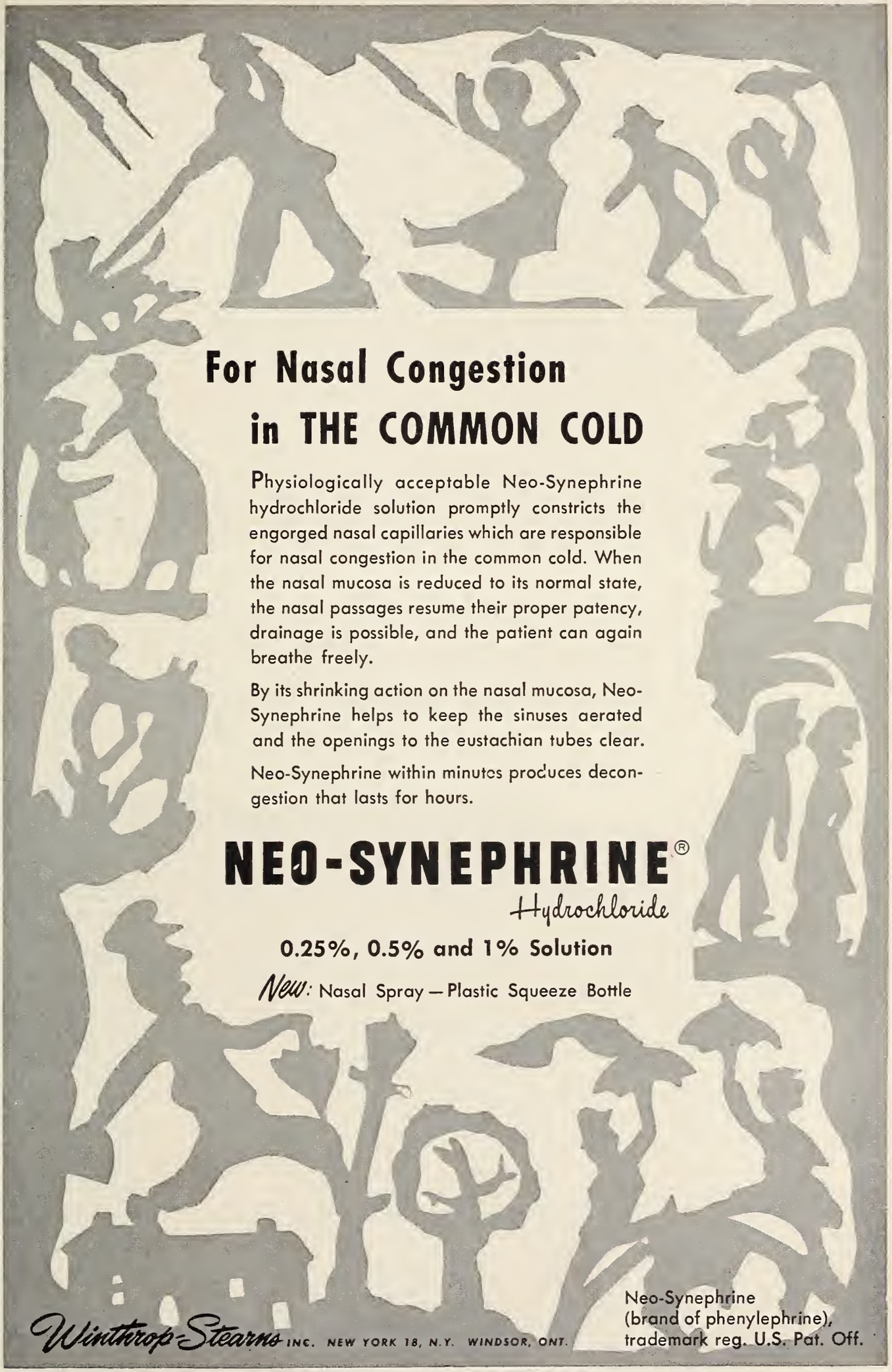
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1. Bunim, J. J.; Pechet, M. M., and Bollet, A. J.: J.A.M.A. *157*:311 (Jan. 22) 1955.

2. Waine, H.: Bull. Rheumat. Dis. *5*:81 (Jan.) 1955.

3. Herzog, H. L., and others: Science *121*:176 (Feb. 4) 1955.

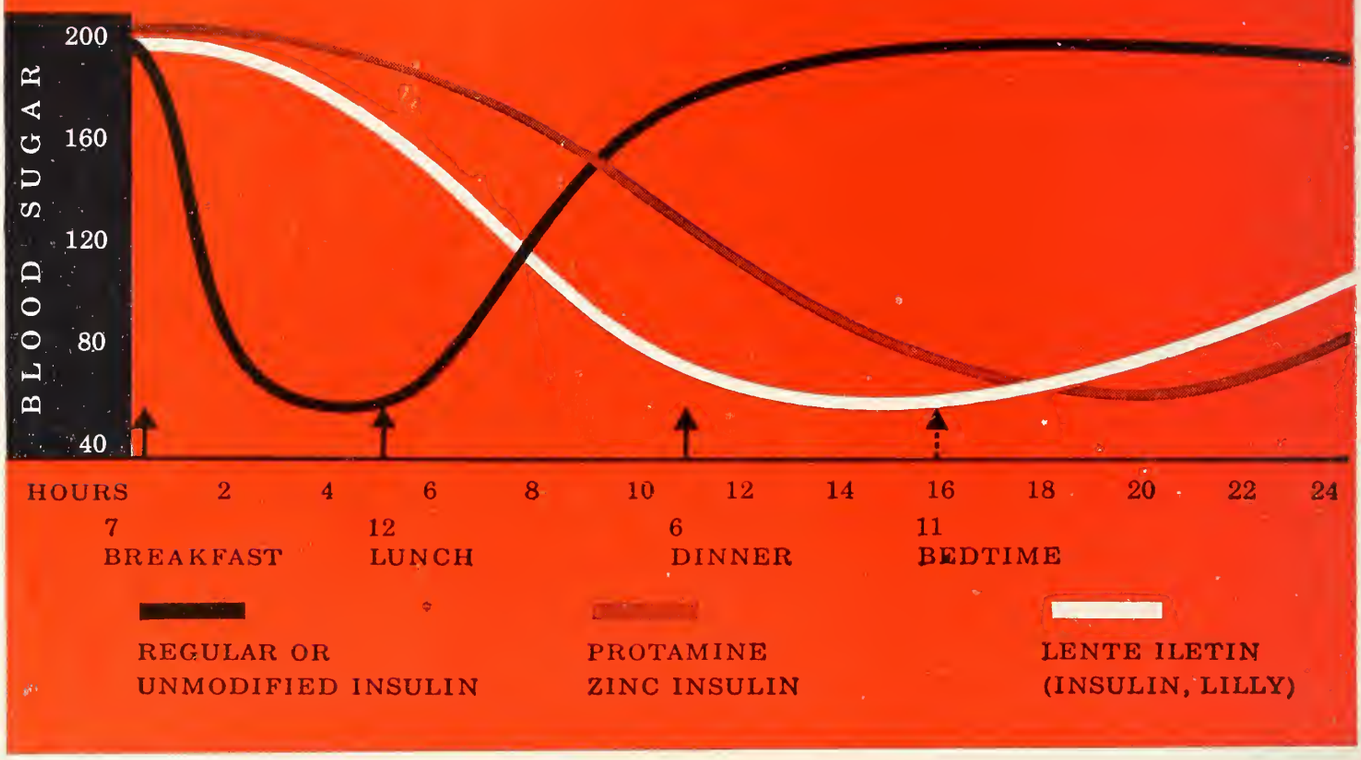
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Scrutiny of Progress Against Cancer

By Frederick A. Coller, M.D.,
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MANY DISEASES have been abolished by methods developed by science but cancer remains a major menace against the health of our people. As a relic of the past there still lingers in the minds of some physicians and of many people the thought that cancer is always hopeless and that treatment is always futile. This is a defeatist attitude that is far from the truth. The development of our knowledge of this disease and of methods for its treatment has in recent years been phenomenal and allows one to become an optimist in looking toward the future. A brief review of our present knowledge of the problem may well aid our progress in time to come. The education of the public in the character and behavior of cancer and especially in its early manifestations has been highly important. The recognition of precancerous lesions and the early diagnosis of cancer is of the utmost importance since prevention is easy and treatment of localized lesions is highly satisfactory. Let us review our efforts to effect early diagnosis.

Early Detection

Lay Education.—Certain principles of the education of lay people for the detection of cancer or for the warning symptoms of cancer have long been picturesquely applied by the American Cancer Society, the Michigan State Medical Society and others. It is heartening to have a patient report to one's office having just found a lump in a breast, or a mole only now detected as enlarging, or some rectal bleeding noted but yesterday. These are frequently the outcome of educational efforts on the part of these societies.

It is occasionally found that a patient suffers from cancerophobia, to which our educational and detection efforts may have contributed. One factor which may help in putting cancer in its more proper perspective for patients is the inclusion of cancer information in high school education, as urged by J. R. Hubbell and E. Margaret Siebert in our Journal of the Michigan State Medical Society. At adolescence, before the so-called "cancer years," the symptoms suggesting that a patient should report for examination can be taught with less fear and more philosophy.

Physical Examination and Care.—The responsibility for early detection of cancer is falling more heavily on physicians because patients are reporting earlier. A disservice has been done to a patient who comes to his physician because of diarrhea and leaves the office with prescriptions for sulfaguanidine and paregoric without a searching hand laid on the abdomen and an educated finger placed through the anal canal. It will be remembered that nearly 50 per cent of neoplasms of the large bowel are palpable by rectal examination, and another 20 per cent of them are seen by sigmoidoscope. Barium enema would picture the rest of the large bowel for us. And how much more worthwhile to detect the cancer today than to find it three months hence, and rely on a more radical surgical procedure to try to make up for the delay.

Cancer Detection Centers.—Cancer detection centers exist in large numbers, all of them in the stage of evaluation. Their aims are clinical help

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for patients, attempting to detect cancers in early, usually asymptomatic stages, education of the public and physicians, and research. There were 265 such cancer detection centers in the United States in 1952, 129 of these clinics approved by the American Cancer Society.

Most of these clinics are supported by public or charitable funds, are open to anyone who applies for examination, and they do not provide treatment. Essentially all provide a thorough physical examination, including pelvic examination, hemoglobin and white count determinations, urinalysis, and chest x-ray; many examine feces for occult blood, do sigmoidoscopic examination, vaginal smears by Papanicolaou technique, and biopsies as indicated; a few do other special examinations. The Strang Center in New York studies the stomach by photofluorograph in all patients over forty-five. Gastric analysis is offered all patients at the Cancer Detection Center of the University of Minnesota with barium studies of stomach for all with hypochlorhydria (under 30 degrees), anemia, family history of gastric cancer, or epigastric symptoms. Barium enema was employed if there was occult blood or proctoscopic abnormality found.

The average cancer detection rate at all centers is eight cancers per 1,000 examinations, according to a study by the American Cancer Society. The rates of detection of tumors vary primarily if the clinics accept and statistically include symptomatic patients, or if the clinic is located in an area where the population has relatively little medical care as the Hot Springs National Park Center in Arkansas where twenty-one cancers per 1,000 examinees were found. In the latter center there were many who had sought no medical care previously for advanced symptoms.

The cost per case of cancer found has been variously estimated, from $914 in Hot Springs to several thousand dollars. The University of Minnesota group estimated the cost for each cancer detected was $3,400.

A significant contribution was pointed out by Hubbard and State: of the carcinomas detected 77 per cent were early, with no lymphatic metastases: 50 per cent of stomach cancers, 83 per cent of rectum and colon cancers, 50 per cent of breast cancers, 100 per cent of ovarian and cervical cancers.

So-called pre-cancerous lesions were detected in roughly 20 to 25 per cent of examinees. These lesions included nodular thyroids, cystic lesions of the breast, leukoplakia, polyps of the colon and rectum, various lesions of the cervix.

Hillsdale Plan.—The Hillsdale Plan for Cancer Detection was started in 1947-1948 with the aim of making each physician's office a cancer detection center. Publicity directed first at women over forty resulted in over 15 per cent of these women within the county reporting for examination in the first year. Advantages of this plan included the utilization of physicians in their own offices, during office hours, with maintenance of physician-patient relations, and excellent follow-up of pathological problems found. Particular attention was directed to examination of skin, breasts, cervix, rectum, prostate, and oral cavity. The incidence of cancers found was 4.58 per 100 individuals, or 2.24 per 100 examinations, a very worthwhile yield.

Cancer Tests.—There are very useful laboratory tests in relation to specific tumors, as acid phosphatase in patients with carcinoma originating in the prostate, occult blood in the feces, hematuria, Bence-Jones proteinuria, gastric analysis, 17-ketosteroid determination, radioactive iodine in relation to thyroid tumors. But as yet we have no screening test useful for application to the general population to separate cancer-bearing persons from those free of tumors.

Advances in Surgery

Radiation is of value in eradication of certain specific cancers, but surgical operations are still the principal means of cure of most malignant lesions. It must always be borne in mind that operations for cancer, like radiation, are destructive. The radiologist limits the extent of damage to the tolerance of the skin, erythopoietic and other normal tissues. The surgeon tries to remove tumors with as wide an area of surrounding, possibly infiltrated tissue and lymph-drainage area as he thinks is feasible without endangering life, health or function. Harvey Stone likened this to "burning down the barn to get rid of the rats." We can eradicate more tissue today, but the principle of radical extirpation of tissue is still destructive.

The newer, more extensive resections will probably be attended by a slight increase in long-term survivors, though this remains to be proven. The success of each radical procedure should be bal-

anced against any possible lesser morbidity and mortality of the more classical operations. In his article on hepatic resection for neoplasms Brunschwig mentions the short course of patients having metastases to the liver, and feels that this short course may be an indication for extensive partial hepatectomy. Having seen occasional patients live four or five years in comfort with known hepatic metastases, and knowing the difficulty of assaying even crudely the intra-hepatic extent of metastases, we doubt this heroic procedure will be commonly efficacious.

Cancer of the stomach is being attacked more vigorously, the spleen often being removed with the stomach, along with an increased amount of lymphnode-bearing tissue, and patients miss that tissue little or none. Total gastrectomy is championed by some for all gastric carcinomas in which there is a chance of cure, and there is a place for such an experimental trial. But the anastomosis of esophagus to small bowel is more precarious than gastric stump to jejunum, and patients are more frequently nutritional cripples after total gastrectomy. One great stumbling block to a so-called "good cancer operation" for stomach neoplasms is the short distance from tumor to celiac axis and its surrounding nodes. The operations designed to remove those nodes en bloc, including pancreatectomy, destroy so much tissue of nutritional importance that we are hard pressed to replace these hormones, enzymes and their adjuncts.

In patients with carcinoma of the pancreas subjected to radical pancreatico-duodenectomy Child found the reported operative mortality rate between 20 and 30 per cent for a collected series; reported postoperative survival times for those who survived the operation averaged nine months, and of 150 patients subjected to radical extirpation for pancreatic cancer only three lived for five years. This highlights the fact that for the rank and file we have no good surgical answer to carcinoma of the pancreas. It is unlikely that more radical excisions will increase the survivors. We are seriously in need of a better rat-trap rather than a larger fire in the barn.

Pancreatico-duodenectomy offers more hope to the patient with carcinoma of the ampulla of Vater because the strategic location of the tumor causes early symptoms.

Larger Resections.—Attention has rightly been directed toward the internal mammary chain of lymph nodes in carcinoma of the breast. The high incidence of positive mediastinal nodes, particularly with medial tumors of the breast, makes resection of these nodes a logical experimental advance; if one resects chest wall he must accept an increase in morbidity and perhaps mortality. The method used by the Copenhagen group wherein the internal mammary vessels and nodes are excised without excision of chest wall has very low attendant morbidity, and only time will yield information on its contribution to long term survival.

The ligation of inferior mesenteric vessels and resection of perhaps an added 2 inches of lymphactic chain in removal of the sigmoid colon or rectum for carcinoma might be expected to increase by a few per cent the number of five-year survivors. The adequacy of collateral circulation from the middle colic artery in supplying the terminal portion of the remaining sigmoid colon must be carefully assayed in each case.

An interesting and fruitful application of surgical principles is that of alteration of the physiology, particularly of the endocrines of the tumor-bearing patient. Ovariectomy has been performed for patients with advanced mammary cancer since Beatson introduced this in 1896, and palliation has been achieved in roughly 20 per cent. Huggins introduced the concept of reducing endogenous estrogens still further by adrenalectomy and oöphorectomy, and found that about 40 per cent of his breast carcinoma patients in whom operations and x-ray were not successful had hormone-dependent tumors and enjoyed regression but not cure of their lesions. The efforts of Perault and of Olivecrona and others in hypophysectomy for advanced carcinoma of the breast have yielded some help also. The now classical effects of orchiectomy on metastatic prostatic cancer are well known. Adrenalectomy for prostatic cancer has been nearly abandoned by its originator, Dr. Charles Huggins.

Radiation

External Radiation.—The application of multi-million volt x-ray beams, cobalt-60 sources, the betatron, and cesium have opened the field of radiocurability of tumors still further. The possibilities of treatment of many tumors are being restudied. The beams having high voltage gamma rays or their equivalent roentgen rays without low energy "contamination" do less dam-

age to the skin and more damage to deeper structures, allowing the usual patient to tolerate more radiation therapy. Since the advent of these higher energy beams the radiologist has had to consider skin damage at the port of exit of the beam, no longer just the port of entry; and the development of sarcomas from radiation injury must be considered more seriously. Del Regato aptly points out also that there are biological attributes of some tumors which limit the usefulness of radiation. The melanoblastoma is by nature of its cells resistant to radiotherapy, and in order to damage it slightly one closely approaches the tolerance of other tissues.

Radioactive Isotopes.—The advent of radioactive isotopes in quantity has increased the possibilities of treatment and detection of tumors. Radioactive iodine in relation to thyroid tumors is the outstanding example. Thyroid carcinoma metastases have been detected by tracer doses of I-131 followed by external monitoring. The amount of iodine taken up by such metastases varies greatly, and only about 15 per cent pick up enough to be considered significant in terms of treatment. Other thyroid metastases may take up enough I-131 to reveal their identity, but insufficient to lead to their destruction. Surgical removal of involved tissue remains by all odds the most important weapon in treating this form of cancer, and x-ray therapy is a significant adjunct.

Radioactive phosphorus has long been used by the hematologists in treatment of blood dyscrasias, principally polycythemia rubra vera. The beta ray of phosphorus is short but potent and has led to its trial in treating other diseases. The fact that phoshorus has a large intracellular distribution and is found in actively growing tissue led to its early trial in various tumors, but results have not been therapeutically very effective to date aside from hematologic disorders.

Brain Tumor Localization.—The localization of brain tumors by radioactive isotopes has reached the stage of proven value. The administration of radioactive iodine as sodium iodide, or as tagged diodo-fluoroscein, or tagged human serum albumen has been followed by concentration of the activity within brain tumors, and this can be detected externally by collimated scintillation counters. At the University Hospital those patients having brain tumors have their tumors detected and localized in 60 per cent of the cases by this means. Errors in localization, if there is uptake, are rare indeed. Occasionally a cystic tumor may take up less activity than surrounding tissues. There may be uptake in a tuberculoma. Almost no patients without brain tumors are misdiagnosed as having such lesions. The greatest group of missed tumors are midline ones. Overall accuracy of the method is about 87 per cent.

Brain tumors absorb phosphorus, and differential uptake of P-32 in them may be as high as 140 times greater than the background. Using a radiosensitive probe at operation, the neurosurgeon can localize the extent of most brain tumors with greater accuracy than ever before. The beta rays penetrate the tissue for only about 5 mm.

Other Current Uses of Radioisotopes.—Using the fact that certain heavy metals are bone-seeking, some radioactive isotopes of gallium have been tried to see whether significant amounts of radiation could be localized in tumors of bone including some metastatic ones. There has been some localization in tumors but not enough to be therapeutically significant.

Radioactive colloidal gold is in common use for patients with ascites from metastases to serous surfaces. This has given effective palliation in some cases for as long as two years.

Using human serum albumen tagged with radioactive iodine Stirrett et al have found evidence of hepatic metastases preoperatively with an accuracy up to 94 per cent.

Chemotherapy

The most dramatic example of the effect of hormones on cancer was the use of estrogens in prostatic carcinoma, introduced by Huggins in 1941. The use of estrogens and testosterone in carcinoma of the breast has given some patients relief of symptoms, regression of lesions, and extended life. Adrenal steroids have been found helpful in supportive therapy, and some have found there is a suppressive effect on malignant cells, e.g., acute leukemia.

In 1945 nitrogen mustard, the war gas, was found to have an effect on leukemias, lymphoblastomas, and Hodgkin's disease, and there has been extensive research on compounds related to nitrogen mustard attempting to find drugs which

are less toxic or more effective or effecting other malignant cells. Among the drugs so tested are triethylene melamine, which was found by Gellhorn and others to have a palliative effect in carcinoma of the lung, and triethylene phosphoramide which was thought by Farber to effect melanomas. These compounds are said to produce their effects by inhibition of desoxyribose nucleic acid formation.

After folic acid had been found to be an essential nutrient, analogues of folic acid were proven to have an inhibitory effect on certain neoplastic cells notably acute leukemias as reported by Farber in 1949. It is pertinent to liken the use of this analogue to the usefulness of sulfa drugs which compete with para amino benzoic acid and then block the further metabolic process in certain bacteria; or again it might be compared to the use of isoniazid so presently useful in the treatment of tuberculosis.

Another inroad into the understanding of characteristics of neoplastic cells is exemplified by Burchenal's use of 6-mercaptopurine, which blocks a metabolic pathway for certain cells, notably leukemias.

Although these substances are currently usable clinically, they are probably more important for the light they shed on cellular metabolism, and better drugs will almost surely be forthcoming.

It is unfortunate but understandable that the patients with cancer that receive the greatest attention and excite the greatest interest are those with lesions that cannot be cured. They are patients in whom cancer has advanced beyond the point of cure or in whom attempts at cure have failed. The cured patients are no problem since no one ever hears about them.

The patients with hopeless lesions are deserving of our most careful and sympathetic care. It is cruel and stupid to give any patient a calendar-timed hopeless prognosis. No physician has the ability to look into the future and say that death will take place at a definite time. Our science is not that accurate. We should not lose interest in a patient even though we know that we may lose the fight against disease. We must maintain a keen interest in the day-to-day symptoms, many of which we can assuage. Nothing we do short of a dramatic cure will be more important than to help a hopeless case to die in comfort because of the staunch interest and skill that we have demonstrated to the end. We look to the time when our knowledge will abolish all disease, but in the meantime we must do all we can to alleviate suffering and to comfort the sick even though we know the odds are against us.

In view of the present knowledge the future is filled with hope. Earlier diagnosis of cancer can be attained by careful examination of all the patients that come to us. Early diagnosis will allow present therapeutic measures to give a much higher cure rate. Advances in our knowledge due to modern research permit us to give an optimistic view for the immediate future. Industry, imagination and courage on our part will whip this scourge as we have abolished others equally dreadful in the immediate past.

TUBERCULOSIS IN MICHIGAN

Can empty tuberculosis beds be used? The state's central tuberculosis register shows 2,976 cases of active tuberculosis in homes—1,805 with advanced disease. Currently vacant beds are not even enough to hospitalize these advanced cases.

Michigan tuberculosis hospitals have a total of 5,564 beds for care of tuberculosis patients—all except 430 rated "acceptable." As of December 31, 1954, there were 4,331 patients in these hospitals, leaving 1,233 beds unoccupied.

Facts from the files of the Michigan Department of Health show that tuberculosis stubbornly resists control.

Each week, 100 new tuberculosis cases are reported in Michigan—an estimated 5,200 in 1954—most of them in advanced stages.

There were 7,647 known active cases of tuberculosis in Michigan as of December 31, 1954—4,671 in hospitals —2,976 at home.

Most tuberculosis hospital admissions arriving in advanced stages—one third of them readmissions, returning to repeat treatment.

41 per cent of tuberculosis hospital discharges were against medical advice—treatment not complete—majority with disease uncontrolled.

Less than one-fifth of Michigan's population screened through all known chest x-ray programs.—*Michigan Tuberculosis Association Report,* February, 1955.

Radioactive Phosphorus in the Localization of the Brain Tumors

By Richard C. Schneider, M.D., Henry Pantek, M.S.E. (EE), David G. Freeman, M.D., and Robert G. Farris, M.D.

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NOTHING can be more deleterious to the patient and more troublesome and embarrassing to the neurosurgeon than the inability to locate a brain tumor readily at the time of craniotomy. The aids of electroencephalography, radioactive iodine examination,[2] cerebral arteriography, and ventriculography may have been utilized, but these are only preoperative methods of localization. If the tumor lies in a subcortical site, the neurosurgeon must still rely upon aspiration biopsy with a hollow suction needle or upon gross palpation with an exploring needle to differentiate between normal brain and neoplastic tissue at the operating table. Aspiration biopsy is uncertain and time consuming. If palpation suggests the presence of a tumor, then cortical incision and exploration into the depths of the brain must be performed to confirm the presence of the neoplasm and permit its excision. Unfortunately, aspiration biopsy or the sense of palpation may present a false clue and no lesion may be found. During the past few years, the use of radioactive phosphorus has done much to abolish false localizations and lend a true sense of security to the neurosurgeon.

In this study, radioactive phosphorus (P^{32}) has been administered preoperatively in a series of fifty suspected intracranial neoplasm cases at University Hospital and the surface and subcortical regions of the brain checked with a Robinson-Selverstone probe to register the degree of radioactivity on a counting rate meter. Tumor tissue, in general, will have a proportionately greater uptake of the phosphorus than normal brain, and consequently will exhibit a greater count. The method is not original at this clinic but has proven itself to us to be so effective a tool that further dissemination of knowledge concerning it is deemed advisable.

Moore et al[9] first stained brain tumors with the dye, fluorescein, and upon examining the abnormal tissue under ultra-violet light, found that it emitted a fluorescence. Shortly thereafter, Moore,[10] Moore et al,[11,12] and Belcher[2] reported the use of fluorescein tagged with radioactive iodine, I^{131}, sodium diiodofluorescein in the preoperative localization of intracranial tumors. Selverstone et al,[14,15,16] Selverstone[17] and Sweet[19] injected radioactive phosphorus (P^{32}) intravenously, and after a given time checked the lesion for radioactivity at various depths and locations with a special Geiger-Muller counter in the form of a probe, known as the Robinson-Selverstone probe. They found that there was a significantaly higher uptake of radioactive phosphorus (P^{32}) in the neoplastic cerebral tissue than in the normal brain. Since that time other reports have been presented.[4,18]

Radioactive phosphorus (P^{32}) is a pure beta emitter with half life of slightly over 14 days and an emission penetration of approximately 7 mm. into cerebral tissue. The advantage of this substance is that it penetrates only relatively short distances, ionizes readily but not rapidly, can be stored for a few days prior to its use, requires no special preoperative preparation, and most important, is taken up in considerably larger quantities by neoplastic tissues than normal brain.

Method

In this study, approximately one milicurie of P^{32} (the range has varied at University Hospital between 125 μc and 1 mc) was injected intravenously sometime (two and one-half hours to twenty-four hours) prior to operation. In almost all instances, one or several localizing studies such as ventriculography, arteriography, and electroencephalography have also been performed preoperatively.

In the operating room, the usual inhalation anesthetics were used, supplemented by pentothal or seconal intravenously for gentle induction. The routine osteoplastic craniotomy with incision of the dura was usually performed (in a few instances only a burr hole was made), and the standard Robinson-Selverstone probe (Fig. 1) was inserted into the cerebrum at one or more selected areas. Counts were then registered on the scale of the counting rate meter and the variation in the number of audible clicks gave the surgeon an

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A part of this work was carried out through the generosity of the Aaron Mendelson Research Fund.

idea of his proximity to the lesion. Readings were first taken on the normal brain and then as the probe was inserted readings were taken centimeter by centimeter into the subcortical areas to the tumor. Where the tumor lay under or in the optic chiasm or some other structure which could not be pierced with a probe for fear of causing irreparable damage, readings were taken on adjacent normal cortex and then on the surface of the tumor.

P^{32} Radiation Dosage.—In administering the radioactive isotope the health aspects of radiation exposure were also considered. Patient and personnel dosages were estimated and measured. The amount of radiation per gram of tissue received by the patient can be estimatd by using the equation[8]

$$D_B = 88\ E_B T C$$

where

D_B = total dose in equivalent roentgens (e.r.)
E_B = average beta ray energy per disintegration. 1.69 mev for P^{32}.
T = half life in days. 14.3 days for P^{32}
C = concentration of isotope in microcuries (μc) per gram of tissue.

The estimate of the total dose is made under the assumption that the isotope uniformly distributes itself over the entire body and that none is eliminated. The average weight of the patient is taken as 70 kg. and dosc given is 1 millicure (mc = 1,000 μc). The total dose received then is

$$D_B = 88 \times 1.69 \times 14.3 \times \frac{1.000}{70,000} = 27.2 \text{ e.r.}$$

The permissible dose is taken as 0.3 r per week or 0.043 r pcr day. For an average life (average life = 1.443 x half life) of 21 days the radiation dose received per day from 1 mc. of P^{32} is approximately 1.3 e.r. Actually not even bone, where the P^{32} concentrates, attains this dose.[8] About half of this dose at most, is reccived by any type of tissue. Biological elimination further reduces it by approximately one half. Also most of the activity has decayed in twenty-one days. It must be remembered, too, that the 0.3 r per week permissible dose is a limit set for continuous exposure year in and year out.

Measurements were taken to determine the personnel exposure dosage when attending the patient. A maximum of 800 counts per minute (CPM) was registered on our counting rate meter when the patient was surveyed by dircct contact, over various parts of the body, with a mica window tube. Using the approximation



Fig. 1. Counting rate meter with attached cable, pre-amplifier, and Robinson-Selverstone probe. The tape measure shown is in inches.

20,000 CPM is equivalent to 5 milliroentgens per hour ($1 \text{ mr} = \frac{1}{1,000}$ r) thc exposure dose turns out to be about 10 mr per forty-eight-hour week. This is estimated on the basis that thc personnel is in direct contact continuously with the patient's body. This cxposure of course is well within the tolerance dose of 300 mr per week.

Sometimes the patient is given I^{131} for preoperative localization[7] and thcn later it becomes desirable to administcr P^{32} for the operative demarcation. This means two doses; 2 mc. of I^{131} and 1 mc. of P^{32}. In the exposure estimate the gamma radiation of the I^{131} is neglected, since it is presumed to have negligible effect.[5] The beta radiation is of low energy (0.6 mev), and the half life is eight days approximately. Using the above equation again, it is estimated that the patient receives 1 e.r. per day during the average life of the I^{131}. Here again the estimate is high and the same discussion applies to I^{131} as for P^{32}. It might be mentioned that the I^{131} concentrates in the thyroid and the P^{32} in bone. Hence thc dosage is pretty well distributed. Therefore, in view of our estimates and findings of others[20] it is felt the patient and personnel are not endangered from the health physics standpoint.

It has been the practice in this hospital to wait at least a week after I^{131} administration if possible, before giving radioactive phosphorus for

SUMMARY OF CASE DATA

Case	Initials	Age	Tumor Type	Location of Tumor	Dosage of P^{32}	Hours Uptake Interval	Normal Brain CPM*	Tumor CPM*	Uptake Ratio†
1	M.M.	28	Meningioma meningiotheliomatous	Rt. parietal	1 mc‡	4	380 (Surface)	4700 (2 cm)	12.3
2	B.T.	37	Meningioma fibroblastic	Lt. parietal	1 mc	10	90 (1.5 cm)	3100 (4 cm)	34.4
3	D.M.	35	Meningioma fibroblastic	Lt. sphenoid ridge	1 mc	5	75 (Surface)	1800 (4 cm)	24.0
4	W.F.	59	Meningioma psammomatous	Rt. fronto-parietal	1 mc	7½	400 (Surface)	5000 (1 cm)	12.5
5	M.B.	45	Meningioma fibroblastic	Lt. parietal parasagittal	1 mc	5	240 (Surface)	1050 (5 cm)	4.3
6	I.B.	45	Meningioma meningotheliomatous	Tuberculum sella	1 mc	14	110 (Surface frontal lobe)	960 (1 cm) in tumor	8.7
7	B.O.	51	Meningioma	Lt. sphenoid ridge	1 mc	6	160 (Surface)	2700 (2 cm)	16.8
8	H.V.	51	Mengioma mengiotheliomatous	Olfactory groove	1 mc	18 plus	250 (Surface)	2300 (2 cm)	9.2
9	Y.D.	48	Meningioma	Rt. frontal	1 mc	22	150 (Surface)	1600	10.6
10	G.B.	55	Acoustic neuroma	Rt. post. fossa	1 mc	4	480 (Surface cerebellum)	1020 (tumor)	2.1
11	E.F.	58	Acoustic neuroma	Rt. post. fossa	1 mc	3½	110 (Surface cerebellum)	1200 (2 cm)	10.9
12	E.F.	43	Acoustic neuroma	Lt. post. fossa	1 mc	13	110 (Surface)	1500	13.6
13	F.B.	41	Pituitary adenoma chromophobe	Sella	1 mc	17½	900 (Surface)	3000 (2 cm)	3.3
14	T.C.	30	Pituitary adenoma chromophobe	Sella	1 mc	17½	270 (Surface)	1500 (2 cm)	5.5
15	E.H.	48	Pituitary adenoma	Sella	1 mc	17	440 (Surface)	1110 (1 cm)	2.5
16	L.W.	36	Glioblastoma multiforme	Corpus callosum	1 mc	3	200 (Surface)	320	1.1
17	L.W.	21	Glioblastoma multiforme	Lt. temporal	1 mc	18½	240 (Surface)	1400 (4 cm)	5.8
18	V.H.	61	Glioblastoma multiforme	Rt. parietal	1 mc	5	400 (Surface)	2100 (c cm)	5.2
19	M.M.	48	Glioblastoma multiforme	Rt. parietal	1 mc	16½	100 (Surface)	1700 (4 cm)	17
20	J.K.	39	Glioblastoma multiforme	Lt. fronto-temporal	1 mc	4½	350 (Surface)	3800 (2 cm)	10.1
21	F.V.	62	Glioblastoma multiforme	Lt. temporal	1 mc	4	280 (Surface)	2300 (5 cm)	8.1
22	I.P.	44	Glioblastoma multiforme	Lt. frontal	1 mc	12	110 (Surface)	2400 (4 cm)	21.8
23	E.O.	52	Glioblastoma multiforme	Lt. parietal	1 mc	13½	120 (Surface)	1500 (1 cm)	12.5
24	L.J.	37	Glioblastoma multiforme	Lt. frontal	1 mc	12	250 (Surface)	2700 (2 cm)	10.4
25	C.W.	60	Glioblastoma multiforme	Corpus callosum	1.1 mc	7	170 (Lt. Surface Rt. Surface)	3500 (5 cm)	17.5
26	W.H.	56	Glioblastoma multiforme	Lt. temporal	800 γc§	21	130 (Surface)	900 (3 cm)	6.9
27	E.S.	46	Astrocytoma	Rt. fronto-temporal	400 γc	5	110 (3 cm)	250 (Surface)	2.3
28	F.C.	35	Astrocytoma	Lt. frontal	1 mc	10	140 (Surface)	900 (3 cm)	6.4
29	I.S.	25	Astrocytoma	Rt. frontal	1 mc	21½	90 (Surface)	300 (3 cm)	3.3
30	D.W.	34	Astrocytoma	Lt. temporal	1 mc	12½	100 (Surface)	1000 (4 cm)	16
31	O.T.	41	Oligodendroglioma	Rt. fronto-parietal	500 γc	24	190 (Surface)	1050 (tumor edge)	5.5
32	W.H.	55	Oligodendroglioma	Rt. parietal	1 mc	2½	90 (Surface)	250 (2 cm)	2.7
33	T.S.	11	Choroid plexus papilloma	Rt. thalamus	500 γc	6	370 (Surface)	1200 (2 cm)	3.2
34	D.J.	11	Spongioblastoma polare	Pons	1 mc	6	30 (Surface)	280 (2 cm, along pontine edge)	9.3
35	F.M.	67	Spongioblastoma polare	Rt. frontal	1 mc	5	180 (Surface)	3400 (6 cm)	18.8
36	N.G.	6	Spongioblastoma polare	3rd. Ventricle	1 mc	2½	250	960	3.8
37	J.B.	13	Spongioblastoma polare	Optic chiasm	1 mc	21	170	750	4.4
38	K.C.	16	Ependymoma	Rt. parietal	500 γc	12	150 (Surface)	1440 (3 cm)	9.5
39	K.P.	2½	Ependymoma	Lt. fronto-parietal	1 mc	12	340 (Surface)	3700 (4 cm)	10.1
40	S.P.	34	Ependymoma	4th Ventricle	1 mc	2½	250	1000	4.
41	J.F.	12	Neuroblastoma	Lt. parietal	1 mc	5	100	2500	25.0
42	E.M.	51	Neuroblastoma	Lt. parietal	1 mc	5	150	3500 (6 cm)	23.3
43	J.S.	1½	Neuroblastoma	Rt. fronto-temporal	125 γc	4	350	1350	3.8
44	V.R.	62	Metastic medullary carcinoma	Temporal	1 mc	5½	100 (Surface)	6000 (4 cm)	60
45	I.B.	62	Metastic adenocarcinoma	Rt. parietal	1 mc	4	160 (Surface)	1700 (edge)	10.5
46	D.R.	51	Metastic bronchogenic neoplasm	Rt. parietal	1 mc	90	80 (Surface)	420 (3 cm)	5.2
47	J.L.	16	Craniopharyngioma	Beneath optic chiasm	1 cm	6	600 (Surface brain)	690 (Surface chiasm)	1.1
48	H.B.	45	Cerebral abscess	Lt. parietal occipital	1 mc	6½	100 (2 cm)	1800 (3 cm)	18
49	C.L.	61	Cerebral thrombosis	Lt. parietal temporal	1 mc	10	60 (Surface)	80 (depths)	1.2
50	C.C.	32	No tumor	3rd. Ventricle	750 γc	14	300 (Surface)	1400 (Foramen Munro)	4.6

*Counts per minute.

†$\frac{\text{Tumor CPM}}{\text{Normal Brain CPM}}$ = Uptake Ratio

‡mc = millicurie (1 millicurie = $\frac{1}{1000}$ curie)

§γc = microcurie (1 microcurie = $\frac{1}{1000}$ mc)

operative tumor demarcation. In that time the radiation is reduced to half its original value. This reduces the total dosage per day. Whenever possible the patient is exposed to as little radiation as is practicable under the circumstances.

Analysis of Data

The case data have been summarized in the accompanying table.

The data compiled were examined for (1) tumor type versus uptake ratio, (2) uptake ratio

versus hours uptake, (3) tumor count, and age for a particular tumor type, and (4) location of probe site and count.

1. *Tumor Type versus Uptake Ratio.*—Since twenty-two types of lesions were studied in our fifty cases it is difficult to arrive at any definite conclusions. It is suspected that there isn't a precise relationship between tumor type and uptake ratio. A probability relation might be established if a very large number of cases were studied. With the data at hand, it can be said that meningiomas and glioblastomas have in general a high uptake ratio and high tumor site count. This is in agreement with the findings of Ashkenazy, Davis and Martin,[1] and of Kahn et al.[7] Neuroblastomas and ependymomas seem to fall in this category also. It is interesting to note that the astrocytomas and pituitary chromophobe adenomas have a low ratio but a high tumor count. Since the ratio is obtained by dividing the tumor count by the normal brain count, one is compelled to wonder why the normal brain count in cases of this sort is so high.

To illustrate the difficulty encountered in this study, take for example the two acoustic neuroma cases (Cases 10 and 11). The patients are approximately the same age, the hours uptake nearly the same, the tumors located in the same area, and yet the ratios differ by a factor of five. The difference is in the normal brain counts. It appears that the difference in normal count is not due to the location of the site. The beta radiation is absorbed by about 7 mm. of tissue therefore the nearness or remoteness of the tumor would not contribute appreciably to the normal count. The normal count is taken a considerable distance away from the tumor site and on the surface of the brain. These tumors were located in the posterior fossa, a good distance away. The instrumentation of the counting and geometry of the probe largely contributed to this discrepancy.

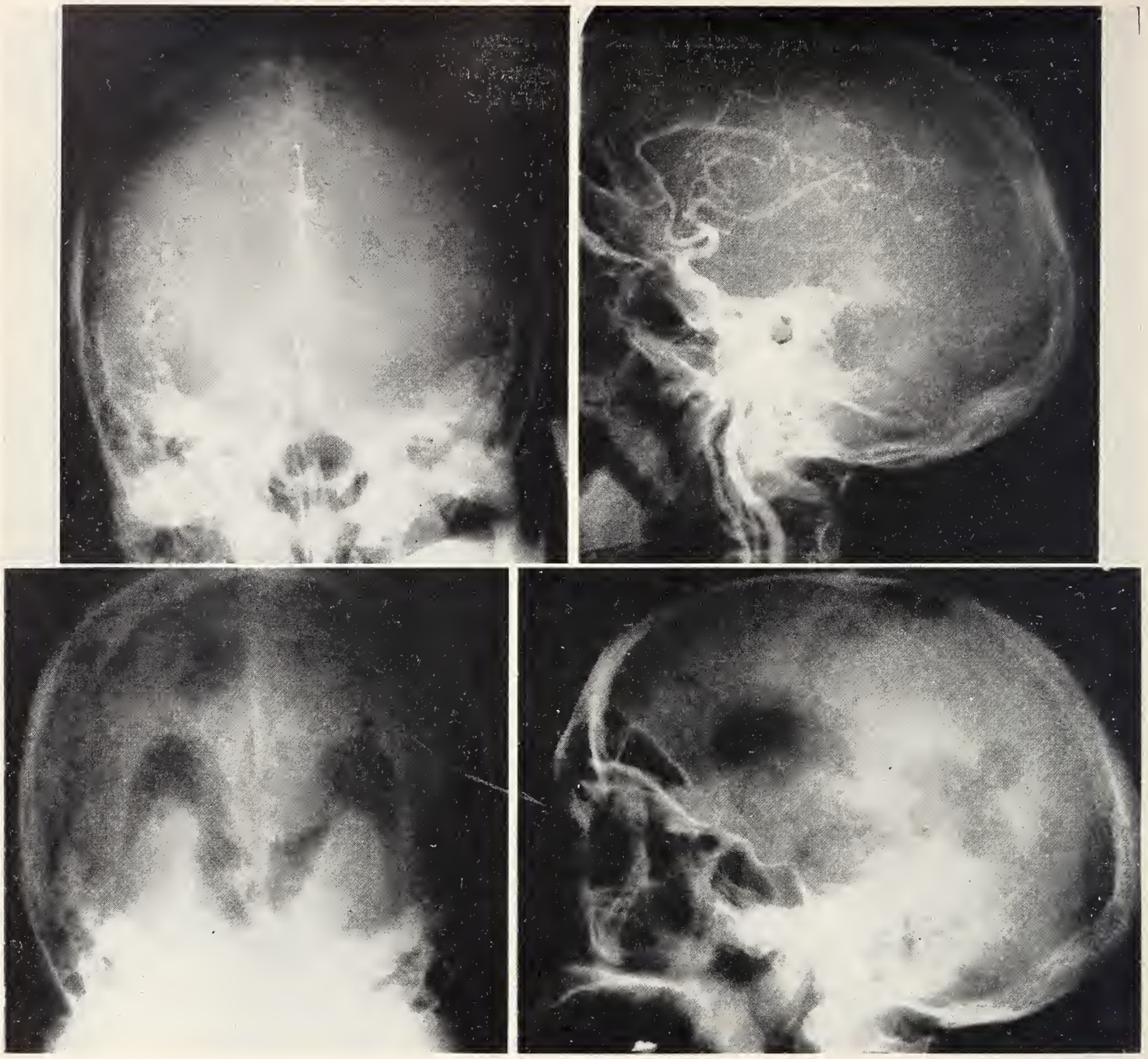
The counting rate meter used (a decimal scaler is not practical in this application) in these localizations has a minimum statistical error of 2 per cent. To get an accurate reading it is necessary to wait as long as two minutes. About twenty-five readings are taken during an operation. It would take fifty minutes for twenty-five readings and another twenty-five minutes for locations of sites and miscellaneous preparations. An hour and a quarter is a long time for mapping. The counting time was reduced to 10 seconds for reading. The 2 per cent accuracy, therefore, was not attained, because not enough time was allowed for the build-up of counts for averaging by the instrument. Our experience shows that about 25 per cent error in readings can be expected.

The geometry[7] of the probe with respect to normal brain site can vary the readings up to 50 per cent. This results in a total error of 75 per cent. Going back to our example, the acoustic neuromas, the normal brain count is 480 and the tumor count is 1020 in the one case (Case 10). In the other case (Case 11), the normal brain count is 110 and the tumor count is 1200. Simple arithmetic shows that for the two normal count readings to agree, it is necessary to increase the lower reading (Case 11), 110 counts, by 63 per cent and reduce the higher reading (Case 10), 480 counts, by 63 per cent. An error of 63 per cent could do this. This is within the error of 75 per cent which we anticipate. Since the discrepancy is in the normal brain count readings, the geometry in these readings seems to be very important. The response of the probe to a radiation source follows closely the cosine law. When the cylindrical axis of the probe is parallel to the radiation rays, the count is nearly zero. The count is maximum when the axis is at right angles to the rays. The geometry of the probe with respect to the radiation is unimportant when the probe is completely surrounded by tumor mass. Then only the meter reading error can be responsible for any discrepancy in the tumor count.

2. *Uptake Ratio versus Hours Uptake.*—In the glioblastoma cases there is no apparent advantage in waiting longer than four hours to take readings. The astrocytomas, however, seem to give a higher tumor count when the intervals are longer than four hours. In general it can be said that higher uptake ratios occur more consistently for uptake intervals of five hours or more.

3. *Tumor Count and Age.*—No consistent relationship could be found between tumor count and age of patient. It appears that in most cases for the same tumor type, location, and number of hours uptake interval, the older patient has the higher count.

4. *Location of Probe Site and Count.*—The diffuse and space occupying lesions so change the anatomy that it is very difficult to attempt to corre-



Figs. 2, 3, 4 and 5.—*Case 25.*

Fig. 2. Posterior-anterior left internal carotid arteriogram showing normal position of vessels.

Fig. 3. Lateral left internal carotid arteriogram demonstrating *minimal* depression of calloso-marginal branch of anterior cerebral artery.

Fig. 4. Posterior-anterior ventriculographic view showing corpus callosum tumor spreading the lateral ventricles.

Fig. 5. Lateral ventriculographic view exhibiting impingement of corpus callosum tumor on middle third of lateral ventricles.

late the count to the anatomical site. In analyzing these data, the errors in normal count geometry and in instrumentation make it difficult to make any but the most gross comparisons. However, for merely locating the lesion, the instrumentation is adequate.

Case Examples

The diagnosis of brain tumor was confirmed in forty-six of the fifty patients with suspected intracranial lesions using radioactive phosphorus, P^{32}. The other four cases are summarized briefly here. In *Case 47* a craniopharyngioma had so ironed out and displaced a prefixed optic chiasm upward that the Robinson-Selverstone probe could not be inserted next to the chiasm to reach the inaccessible tumor. There was no significant uptake from the chiasmal surface sufficient to diagnose the presence of the underlying lesion. The conclusion was correctly drawn that the tumor was not a primary one of the optic chiasm or nerves. In *Case 49,* there was no significant uptake ratio, and

the diagnosis was again correct for the patient was found to have a cerebral thrombosis. In *Case 48*, there was a marked uptake ratio, and an intracranial lesion was found, but it was discovered to be a cerebral abscess rather than a neoplasm. In *Case 50,* this case exhibited the only false positive or significant uptake ratio without a definite neoplasm (or abscess) being demonstrated. The false uptake was believed due to the proximity of the probe to the choroid plexus.

The vast majority of the fifty patients had a good surgical recovery, but this is not the main topic of this paper. The cases which will be discussed in detail are a group of patients with intracranial lesions not all of whom did well. But in a study of this type, much information is to be gained by a correlation of the clinical studies with the autopsy findings. Both successful and unsuccessful surgical cases are presented to show the more interesting facets of the use of radioactive phosphorus P^{32}.

Case 25.—C.W., a sixty-year-old right-handed die setter, was well until May 1, 1953. He developed mental changes and had marked rage states during which he beat his wife, knocked dishes from the table and became extremely difficult to handle. He had progressive weakness in his right leg, then in his right arm, and gradually developed a partial expressive aphasia. On admission to University Hospital on June 13, 1953, his vital signs were all within normal limits. The pupils were equal with no evidence of papilledema. There was some paresis of upward gaze, a right central facial palsy, paresis of the right arm, and marked extensor rigidity of both legs. Cortical extinction was noted on the right side of the body. All deep reflexes were hyperactive and there were bilateral extensor plantar reflexes.

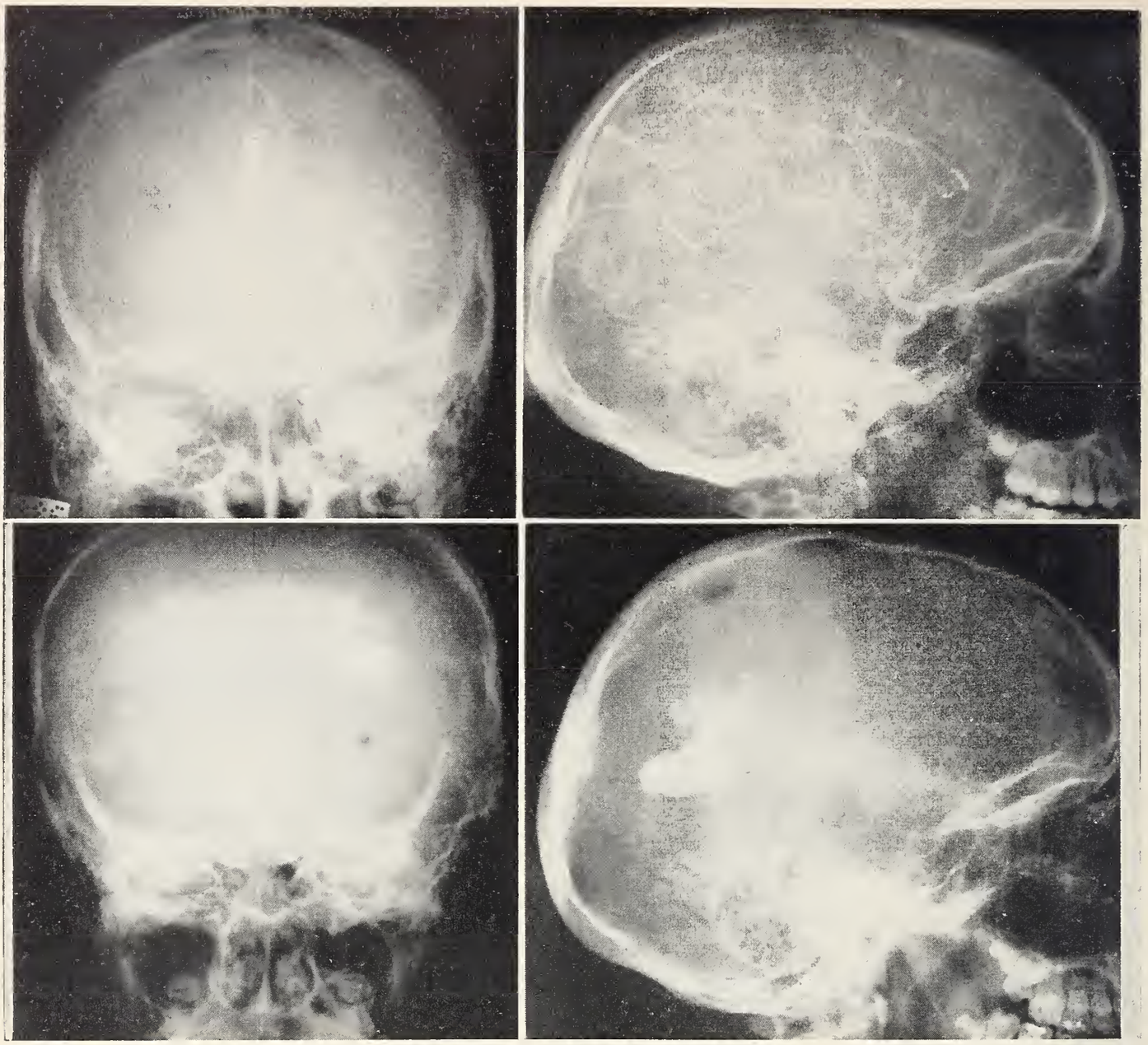
Skull roentgenograms were normal. A left internal carotid arteriogram (Figs. 2, 3) showed no definite lesion. Ventriculogram suggested a tumor of the corpus callosum (Figs. 4, 5). Radioactive phosphorus, 1.6 millicuries, was given intravenously at 8:30 a.m., on June 16, 1953. A transparietal osteoplastic craniotomy was performed with the flap based on the left temporal muscle. On opening the dura and inserting the Robinson-Selverstone probe at 2:15 p.m., the greatest count was noted at 5-centimeter depth to the right of the falx behind the interaural plane. At 4-centimeter depth a soft friable glioblastoma multiforme was encountered and a 3 cm x 3 cm x 7 cm internal decompression was made. Postoperatively the patient developed hyperthermia, decerebrate rigidity and expired on June 17, 1953. At postmortem examination an extensive corpus callosum tumor was found (Fig. 6).

Comment.—This patient exhibited a right-sided hemiplegia which might have led to rather extensive exploration of the left or dominant hemisphere, with the possibility of severe neurological sequelae if the patient had survived. The ventriculogram suggested, and the use of the P^{32} radioactive phosphorus with the Robinson-Selverstone probe demonstrated, that there was marked tumor infiltration on the ipsilateral side with the hemiplegia. Adequate internal decompression could be performed on a nondominant hemisphere with the hope of avoiding more extensive neurological disability. Unfortunately, in this case, the extent of the tumor was such that it mattered little from which hemisphere the tumor was removed.



Fig. 6. *Case 25.*—Postmortem specimen demonstrating bilateral hemispheric involvement by a corpus callosum tumor. Probe tract and site of operative biopsy visualized on the right side.

Case 41.—J.F., a twelve-year-old girl, was admitted to University Hospital on February 8, 1954, with a history of convulsive seizures of two years' duration. These had been treated only by chiropractic manipulations until one month prior to hospitalization. Convulsions occurred at the rate of two or three a day. They were preceded by a moan. The child fell to the floor, urinated, vomited and had violent generalized twitchings. The seizures were followed by a markedly somnolent state. The only positive neurological findings were two diopters of papilledema bilaterally, a right central facial weakness and a questionable weakness of the right upper extremity. Skull and chest roentgenograms were normal. An electroencephalogram indicated the presence of a left temporoparietal lesion. A left internal carotid arteriogram was read as normal (Figs. 7, 8). One millicurie of radioactive phosphorus P^{32} was given six hours preoperatively. A burr hole was made in the left posterior parietal area over the site suggested by the electroencephalogram. The Robinson-Selverstone probe was inserted to a depth of two centimeters where the counting rate increased to twenty fold over the count found at the surface of the brain. Upon re-



Figs. 7, 8, 9 and 10. *Case 41.*

Figs. 7 and 8. Posterior-anterior and left lateral carotid arteriograms which were originally read as normal.
Figs. 9 and 10. Posterior-anterior and left lateral views of skull after instillation of thorotrast into cyst of tumor in parieto-occipital region.

moval of the probe, there was a gush of old dark cystic fluid. A needle was re-inserted, part of the fluid removed and a few cubic centimeters of thorotrast were injected. Roentgenograms demonstrated a large, ragged cystic cavity (Figs. 9, 10). A left parieto-occipital craniotomy was performed with subtotal removal of a massive astrocytoma. X-ray therapy was administered postoperatively, and the patient was finally discharged from the hospital with only a right homonymous hemianopsia.

Comment.—This case demonstrated nicely how the probe may be inserted through a burr hole locating a tumor without additional diagnostic studies. It also illustrates how misleading it may be to exclude an intracranial lesion on the basis of one study, for in this case a left internal carotid arteriogram was reported to be within normal limits

Case 9.—Y.D., a forty-eight-year-old right-handed housewife, was admitted to University Hospital on February 22, 1954, complaining of severe frontal headaches of seven months' duration. These were often of a throbbing character and were accompanied by nausea and vomiting. At the peak of the headache there was weakness in the right foot. With the exception of bilateral low grade papilledema, the remainder of the neurological examination was normal. The chest and skull roentgenograms were normal. An electroencephalo-





Figs. 11 and 12. *Case 9.*

Fig. 11. Posterior-anterior view of right carotid arteriogram demonstrating displacement of right anterior cerebral artery across the midline in the frontoparietal area.

Fig. 12. Lateral view of right carotid arteriogram demonstrating spread between the anterior cerebral and middle cerebral arteries suggesting right parietotemporal lesion.

gram suggested a space occupying lesion parasagitally near the right prefrontal area. Bilateral internal carotid arteriograms indicated an avascular right frontal lesion (Figs. 11, 12). At the time of right frontal osteoplastic craniotomy March 22, 1954, a large right frontal meningioma was totally removed. One millicurie of radioactive phosphorus P^{32} had been given twenty-two hours prior to the operation. At the operating table, there was a 10.6 fold differential between tumor and normal brain tissue. The tumor was found to infiltrate the bone flap, and it was difficult to tell grossly whether total removal of tumor had been accomplished. By scanning the bone flap with the Robinson-Selverstone probe, it was possible to identify the site where the tumor had invaded the bone and enable more accurate and complete excision. The patient was discharged with gradual subsidence of her papilledema, and no other neurological findings.

Comment.—The probe definitely aided in more complete removal of the tumor, and did away with the necessity of discarding the entire bone flap.

Case 34.—D.J., an eleven-year-old right-handed boy was first admitted to University Hospital on October 26, 1954, with a five weeks' history of bifrontal headaches, diplopia and vomiting. These symptoms had been preceded by a small furuncle in the left nostril, with considerable swelling of the nose. There was papilledema in the left eye, a left fifth, seventh and eighth cranial nerve involvement, ataxia on left finger to nose testing a positive Romberg with falling to the left side, symmetrical hypoactive reflexes, an equivocal right extensor plantar reflex sign, and marked instability in

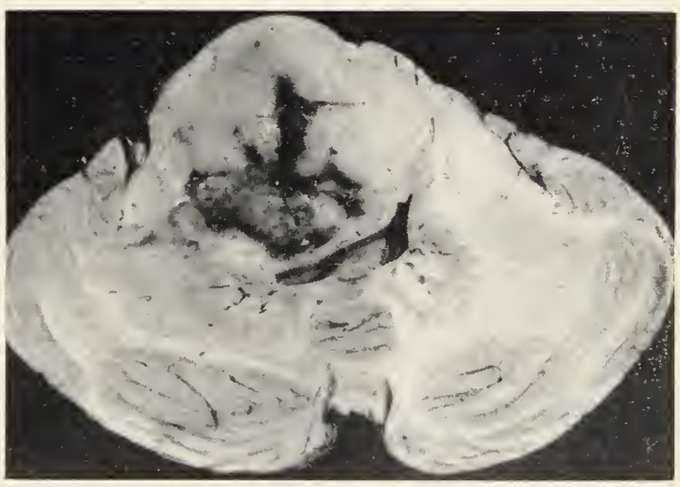
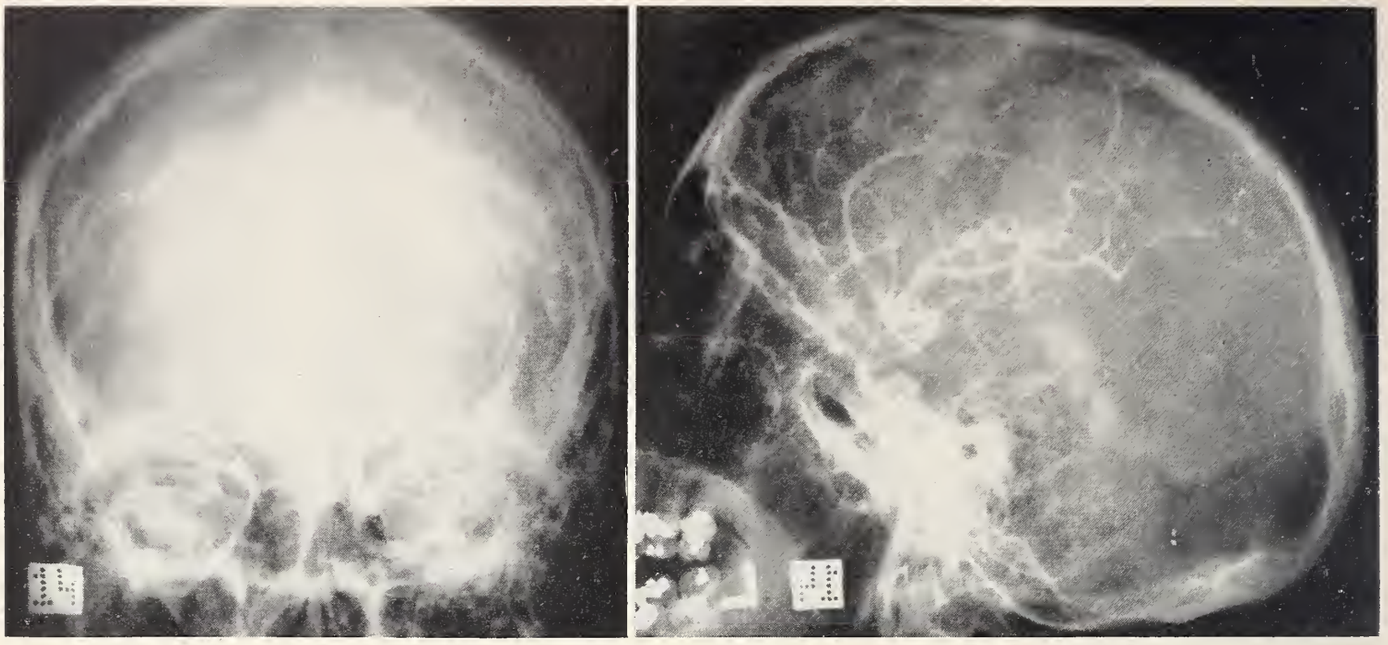


Fig. 13. *Case 34.*—Postmortem specimen demonstrating massive hemorrhagic infiltrative lesion of the pons. It should be emphasized that the Robinson-Selverstone probe was not inserted in this region but merely placed alongside of the pons.

gait. Skull roentgenograms showed a clouding of the left maxillary sinus. An electroencephalogram suggested a posterior fossa lesion. The parents were advised that the patient probably had a pontine tumor, but that an infectious process could not be excluded. There was no response to massive doses of antibiotics, and the patient was discharged from the hospital for a time to be followed neurologically as an out-patient. However, he became progressively worse and was hospitalized again on December 30, 1953. After thorough discussion and in spite of a hopeless prognosis, the parents wished to have exploration performed. Ventriculograms revealed a posterior displacement of the fourth ventricle and the aqueduct of Sylvius. One half a millicurie of



Figs. 14 and 15. *Case 50.*

Fig. 14. Posterior-anterior view of left internal carotid arteriogram which was read as normal.

Fig. 15. The lateral view suggested upward displacement of the middle cerebral artery with the possibility of a temporal lesion but this is not borne out by the posterior-anterior view.

radioactive phosphorus P^{32} was given preoperatively at 7:30 a.m. on December 31, 1953. A suboccipital craniotomy was performed at 3:00 p.m. The Robinson-Selverstone probe was inserted on the surface of the cerebellum and then along the grayish red mass on the left side of the medulla. There was a six-fold greater uptake in the paramedullary material than on the medullary surface and in the normal cerebellum. Any excision of such a medullary lesion or even biopsy, is dangerous so merely the counts were recorded. The patient succumbed on January 2, 1954. Postmortem examination disclosed an extensive astrocytoma, Grade 2, of the brain stem (Fig. 13).

Comment.—This case has shown that it may be possible by Robinson-Selverstone probe to differentiate tumor on the surface of a vital portion of the brain where biopsy may be absolutely contraindicated.

Case 50.—C.C., a thirty-two-year-old, right-handed woman, was admitted to the hospital on March 23, 1954, complaining of severe left frontal headache. Ten days prior to admission she had had a lumbar puncture elsewhere which exhibited a pressure of 350 mm. of water. At that time a left internal carotid arteriogram was found to be normal. Three days prior to hospitalization she suddenly had projectile vomiting and became unconscious for four or five hours and upon recovery had a transient right hemiparesis. Entrance examination disclosed the following positive neurological findings: some impairment of memory for recent events, bilateral papilledema, more prominent in the left eye, slight right central facial palsy, slight drift of the outstretched hands while the patient had her eyes closed, and a postive extensor plantar reflex on the right side.

Skull x-rays showed no shift of the minimally calcified pineal gland. Visual fields were normal. Bilateral internal carotid arteriograms were normal (Figs. 14, 15). The patient was given one millicurie of radioactive phosphous (P^{32}) 14 hours preoperatively. During bilateral ventriculography the ventricular cerebrospinal fluid was found to be under increased pressure and the ventricles markedly and symmetrically dilated (Fig. 16). A dilated third ventricle could be seen which filled well on a brow-up, (Fig. 18) but not so well on a brow-down film (Fig. 17). There was no evidence of filling of the fourth ventricle or aqueduct.

A right frontotemporal craniotomy was performed on March 24, 1954. The dilated right lateral ventricle was entered through a right frontal cortical incision on a plane anterior to the coronal suture. The right foramen of Munro could be visualized and a yellow cystic "apple jelly" appearing nodule lay medial to it with the choroid plexus lateral to it. Upon checking the normal cortex with the Robinson-Selverstone probe, the count was found to be 300 counts per minute compared to a count of 1,400 counts per minute when the probe was placed upon the mass in the ventricle. The differential ratio of 4.6 in the abnormal tissue suggested the presence of tumor. Upon attempting to cauterize the base of this tissue so it could be removed, there was a snapping sound and the lesion disappeared up the suction tip. Further investigation through the large hole in the septum pellucidum revealed a normal appearing left lateral ventricle. No further attempt at biopsy was made for fear of causing irreparable damage to the floor of the lateral or third ventricles. The wound was closed with the feeling that there was an inoper-







Fig. 16. Both lateral ventricles and the third are visualized.

Fig. 17. Brow-down film showing some air in third ventricle but none in the aqueduct or fourth ventricle suggesting possible obstructive lesion in posterior third ventricle.

Fig. 18. Brow-up film showing the left foramen of Munro and the anterior portion of the third ventricle.

Figs. 16 to 18. *Case 50.*—Ventriculograms exhibiting generalized dilitation of the ventricular system.

able neoplasm. The patient succumbed at 9:00 a.m. on March 26, 1954.

Postmortem examination revealed a large midbrain which was markedly edematous with the opening of the aqueduct scarcely visible. Microscopic examination of the sections of the brain showed a very marked edema and congestion. The tegmentum displayed edema and a "spongy" state. The aqueduct showed abundant debris in its lumen. The ependyma of this formation was swollen, and there was evidence of gliosis of the subspendymal plate. No tumor could be identified. A bilateral tentorial and foramen magnum pressure cone was found.

Comment.—This is an extremely unfortunate case. It is the only one in the series where a false positive uptake of radioactive phosphorus was found without biopsy or postmortem evidence of a neoplastic lesion. At the time of this operation approximately thirty-four patients with intracranial neoplasms had been operated upon and the Robinson-Selverstone probe used. In all of these patients tumor had been found where there was a definite increased differential in the counting rate over tumor compared to the normal brain. The 4.6 differential ratio in this case suggested adequate evidence of tumor and gave the surgeon the false sense of security in the diagnosis of inoperable tumor because the depth of the lesion precluded more complete biopsy. The reason for the error is not apparent. Perhaps the lesion which was coagulated and disappeared up the suction tip was

a colloid cyst which had been obstructing the third ventricle. Perhaps the elevated count was due to proximity to the choroid plexus where the uptake of radioactive phosphorus P^{32} might be greater. Perhaps the dilatation of the ventricular system was due to a partial aqueductal stenosis, but this should not form a basis for an increased uptake in radioactive phosphorus. In retrospect, a Torkildsen procedure with a catheter run from the lateral ventricle into the subarachnoid space at the basilar cistern might have saved this patient's life.

Further study is planned to determine differential ratio of uptake of phosphorus P^{32} in the choroid plexus compared to the normal brain.

Summary

Radioactive phosphorus P^{32} was injected intravenously at a given interval preoperatively in fifty patients with suspected intracranial neoplasms. By exploring the brain with a Robinson-Selverstone (Geiger counter) probe, the diagnosis of intracranial neoplasm was correctly made in forty-six cases. In two other cases, there was insufficient evidence of an increased phosphorus (P^{32}) uptake ratio; in one instance the tumor was inaccessible to probing and in the other patient a cerebral thrombosis was demonstrated. There was one instance in which a cerebral abscess was found instead of an intracranial neoplasm. The one remaining case presented the only false positive uptake ratio suggesting the presence of a tumor and none was found. It was believed that the probe had touched the choroid plexus resulting in an abnormal uptake ratio.

The calculation of radiation dosage has been discussed, and the data of the series of cases analyzed and commented upon.

Five cases were presented in detail to demonstrate the advantages and shortcomings of the procedure.

In conclusion, a new and effective weapon has been placed in the surgical armamentarium of the neurosurgeon, which when properly employed is an invaluable adjunct in gaining additional information on the location, extension and completeness of excision of intracranial tumors.

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Hodgkin's Disease

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I SELECTED Hodgkin's disease for presentation at this meeting for several reasons:

1. The attitude of the profession relative to this disease is, as a rule, one of utter discouragement and hopelessness, similar to that when faced by leukemia, lymphosarcoma or generalized cancer.

2. In most instances, this attitude is fully justified. However, there are not infrequently exceptions of a relatively benign course, and, what is even more important, the course of at least some of these exceptional cases seems to be determined by therapy undertaken early in the disease.

3. Early diagnosis of Hodgkin's disease is as important as in cancer and any improvement in this respect is entirely in the hands of the medical profession.

4. Further progress in the knowledge of the natural history of Hodgkin's disease depends largely on the interest and cooperation of the practicing physician.

Comparison of our present-day knowledge of Hodgkin's disease with what was known about it twenty-five years ago suggests that though basic information remains about the same, the results of therapy relative to prolongation of useful and enjoyable life are noticeably better. This has been brought about by at least four factors: partly by new therapeutic agents, partly by improved methodology and enhanced safety in the application of roentgen rays, partly by the recognition that Hodgkin's disease is frequently or always of unicentric origin, and last but not least, by better appreciation of the still vague but gradually emerging host factor.

It is entirely outside of my sphere of competence as a pathologist to speak about therapy of Hodgkin's disease, but I hope to justify my presence here by discussing some of the other problems involved in this condition in which the pathologist plays an important part. I have reference to the fact that of the three basic problems in Hodgkin's disease—diagnosis, therapy and the final outcome—the pathologist has a significant contribution to make to the first and last.

The diagnosis of Hodgkin's disease is largely the domain of the pathologist. The clinical diagnosis is a presumption requiring confirmation. Rational therapy of Hodgkin's disease without pathologic diagnosis is not and cannot be carried out. At the end, no matter how successful the treatment, it is the pathologist's obligation and opportunity to explain what has happened and why.

Hodgkin's disease is a condition teeming with many questions still to be answered by the investigator. One of them is the peculiar role of the host reaction which seems to hold the answer to the unexplained differences in the reactions of seemingly identical conditions of different patients to the same therapeutic intervention. It may well be that a study of the host will help to understand many of the baffling mysteries of this disease.

What is Hodgkin's disease?

It is a disease of lymphatic tissue, wherever it is found, mainly in the lymph nodes, spleen and in many other regions of the body. Lymphatic tissues consist of two main elements: lymphocytes and reticulum cells. Reticulum cells form a framework, in the meshes of which the lymphocytes are resting. Hodgkin's is a disease of reticulum cells. Lymphocytes are only secondarily involved.

The name, Hodgkin's disease, is most appropriate because it is noncommital.

Clinical Picture

The clinical manifestations include, in approximate order of frequency: enlargement of lymph nodes (in 80 per cent of the cases), weight loss, anorexia, weakness and fever. Other symptoms depend on local involvement and on individual host reactions. Variability of signs and symptoms, spontaneous remissions and exacerbations are a part of the picture.

Several varieties of pyrexia have been described. The so-called Pel-Ebstein form is characterized by prolonged periods of sustained high fever associated with sweats and alternating with intervals of normal or subnormal temperatures. Bouts of fever have been correlated with involvement of deep lymph nodes. It is of interest that effective radiation and other therapy is usually

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followed by prompt decrease of fever, gain of weight, and relief of pruritus. No anatomic correlation has been found for the itching.

Hodgkin's disease can be classified variously, depending on the approach.

I. Three stages are recognized in the natural history of the disease:

1. A prodromal stage, or period of latency. Slightly enlarged superficial or deep lymph nodes may be present. Pruritus may be the only complaint.

2. Period of progression and of specific involvement. Enlarged lymph nodes in various regions, most regularly in the neck. According to some, mediastinal lymph nodes are involved even earlier. Frequently splenomegaly. The clinical manifestations are an expression of host resistance.

3. Stage generalization (Hodgkin's toxemia). Fever, night sweats, anemia. This is the period of decline and cachexia. The picture is one of host decline.

Naturally, there are great variations in the clinical course, possibly determined by the vague but none-the-less extremely important fact of host resistance.

II. The chronologic classification recognizes four varieties:

1. Acute disease: lasts from weeks to a few months. The course is highly septic, with general involvement, often high eosinophilia, and tendency to massive necrosis.

2. Subacute disease: lasts from a few months to two years.

3. The chronic: the usual form extends from two years to six years.

4. In the protracted form, the patients survive for more than six years.

III. Another classification is based on anatomic distribution and on the degree of generalization:

1. Mediastinal.
2. Abdominal (mainly involvement of retroperitoneal lymph nodes, spleen and liver. Often so-called Pel-Ebstein syndrome).
3. Splenomegalic (rare as pure form).
4. Osteoperiostic.
5. Gastrointestinal.
6. Cutaneous.

Gross Pathology

First involvement most frequently is in the neck, as a rule on one side. Lymph nodes are more often involved on the same side in two regions (e.g., cervical and axillary) than on both sides in one region (e.g., cervical on both sides.)

The spread and progression occur by successive exacerbations and remissions. Eventually there is spread to deeper nodes, viscera and bones. The frequency of involvement of lymph nodes decreases in the following order: cervical, axillary, mediastinal, retroperitoneal, inguinal and epitrochlear. Some believe that deep lymph nodes are the first ones involved, in groups or chains of from three to five. The consistency varies with size. Usually the larger are harder. They are freely moveable and discrete or matted together.

On section the normal architecture is absent. It is semitranslucent gray with opaque yellow-gray streaks and light yellow dots of necrosis. In nodes recently involved the sectioned surface is bulging; in older nodes there is retraction due to firm fibrous tissue.

The spleen is involved frequently, in 50 to 75 per cent of advanced cases. The liver is affected less frequently but again in proportion to the duration. The spleen may be primarily involved. The same applies to the liver, though much more rarely. Involvement of the gastrointestinal tract may be a part of the general disease or primary in the stomach, ileum or duodenum. Involvement of any organ or tissue of the body is possible. Confinement of the disease to the abdominal cavity is not infrequent. Intrathoracic involvement is common, particularly of the mediastinal lymph nodes. Massive involvement of mediastinal nodes is more frequent in early life. The lungs are affected in about one-third of the cases.

Bones are a late manifestation of chronic disease. Lesions have been found mainly in the vertebrae, skull, thorax and pelvis.

Involvement of bone marrow may be revealed by a puncture. The central nervous system lesions are rare and as a rule secondary to bone involvement. Pruritus is common, but demonstrable true Hodkin's disease of the skin is rare. Immunity of subcutaneous tissues and mucous membranes to the disease has been claimed.

Is there a primary site in the natural history of Hodgkin's disease? This is a natural question in view of the fact that lymphoid tissue is spread all over the body. The prevalent opinion is that

superficially located lymphoid tissue is the primary site rather than the deep, although the opposite is maintained by recognized authorities on the subject. Primary sites in isolated cases have been definitely established in spleen, liver, stomach, duodenum, ileum, lungs, thymus, bone, breast, marrow and skin.

Laboratory Findings

The blood shows progressive anemia in late stages, first normochromic and normocytic, later hypochromic and microcytic. Eventually refractory anemia may develop. An improvement in red blood picture following treatment is a good prognostic sign.

Leukocytosis with lymphopenia is frequently seen in progressive disease. The latter may reach extreme degrees. Occasionally leukopenia is present. It does not constitute a contraindication to radiation therapy and it may improve following radiation. A rise in the number of lymphocytes is also a good prognostic development.

Eosinophilia is present in from 15 to 20 per cent of cases. Its significance is not known. Monocytes are frequently increased and high numbers are favorable prognostically. Platelets may be normal, increased (especially early) or decreased. In the latter case they suggest damaged marrow.

Marrow findings are not diagnostic, except for the extremely rare finding of Sternberg-Reed cells.

Urinary findings depend on extrinsic or intrinsic involvement of the kidneys by the disease. Nocturia is common even in the young, especially during exacerbations.

Basal metabolic rate is elevated in generalized but not in localized disease. Following successful radiation therapy the rate returns to normal levels. Tuberculin tests are characteristically negative in patients with Hodgkin's disease, occasionally even in the presence of demonstrable tuberculous lesions.

Histopathology

The target tissue in Hodgkin's disease is the reticulum, the multipotential matrix of various mesodermal structures found all over the body but concentrated in large amounts especially in the lymphoid tissue. The reticulum is a syncytium, which means that it consists of a common protoplasmic mass with nuclei in it but without distinct cytoplasmic borders.

The earliest detectable change in Hodgkin's is proliferation of reticulum cells, with enlargement and swelling of the nuclei and a tendency towards separation of the cell from the syncytium. The characteristic landmarks of the lymph node section become blurred and eventually obliterated by the overgrowth of the reticulum cells with large blown up vesicular nuclei and distinct nucleoli. There is increased mitotic activity. Mononuclear, multinucleated and polymorphonuclear giant cells appear.

The characteristic Sternberg-Reed (S-R) giant cell is a multinucleated cell with two or more nuclei, but rarely with the large number seen in other types of giant cells. The nuclei may be polymorphous, lobated. The chromatin is abundant with areas of condensation, especially adjacent to the nuclear membrane. The nucleoli are sharply outlined, round or oval and metachromatic. They frequently stain red in the H-E sections. As a rule, there is only one nucleolus in each nucleus or nuclear segment. A pale area is frequently noticed around each nucleus. It is not sharply outlined but passes gradually into the surrounding granular cytoplasm of the rest of the cell. Unicellular S-R cells with the described nuclear characteristics are also seen. In some cells there is a symmetrical arangement of the nuclei, producing a so-called mirror image appearance. Giant cells with many peripherally located nuclei occur but are rare and not diagnostic.

A detailed description of the S-R cell is important because it is specific and essential for the diagnosis of Hodgkin's disease. The changes due to proliferation of the reticulum including giant cell formation are seen early in the disease. Plasma cells, eosinophilic and neutrophilic leukocytes, are also present in varying proportions and during different stages of the disease. Lymphocytes may be numerous early, but seem to be displaced by the proliferating reticulum cells. Reticulum fibers appear early and become progressively numerous in the natural course of the disease. Eventually fibrosis of varying intensity is present with decrease in cellular elements.

In the fully established lesion there is a polymorphous picture of all the varieties of cells listed in varying proportions. For reasons yet unknown, some of the cells may be predominate and other are few or absent. The same holds for the fibrosis. Furthermore, the findings may vary considerably in different lymph nodes of the same person simultaneously or at different times.

Focal necrosis is common and usually of the coagulation type. Ischemia due to vascular changes is the probable cause; the capsule is frequently invaded.

The connective tissue is thought to arise from reticulin fibers produced by reticulum cells and/or to be produced by fibroblasts, products of differentiation of reticulum cells.

The eosinophils are, as a rule, absent in the capsule, connective tissue, and germinal centers, as long as these are preserved. They are thought by some to come from the blood in response to the action of a chemostatic agent, but according to others they are produced locally by differentiation from reticulum cells. In support of the latter conception are mononuclear eosinophilic cells, and the fact that they are rarely seen within blood vessels. Charcot-Leyden crystals and Russell bodies may be present.

The described histologic characteristics of the fully developed lesion are the same regardless of the organ. Certain deviations have been described in the case of the skin, but the exact interpretation of the differences is still lacking.

In the course of time, various classifications based on histologic findings have been proposed.

Bersack's classification published in 1943 is based on a study of 225 cases of the disease. He recognizes three stages:

1. Paragranuloma: (1) Enlarged lymph nodes by prevalence of reticulum cells or frequent mitoses, or both: (a) typical, (b) atypical.

2. Hodgkin's lymphoma, with destruction of lymph node architecture, slight tendency to pleomorphism, with or without Sternberg-Reed cells, with lymphocytes present in normal or excessive numbers.

3. Hodgkin's granuloma, encountered in majority of cases, with typical pleomorphism, Sternberg-Reed cells and moderate fibrosis.

This description did not become as widely accepted as Jackson and Parker's, first published in 1937 and in greater detail in 1944. They recognized three main phases of the disease:

1. Paragranuloma: (1) Enlarged lymph nodes few and mainly in the neck, rubbery, not attached to surrounding tissues, less than 3 cm. in diameter, capsule intact, no necrosis, involvement of internal organs rare. (2) Histologic changes: architecture may be partly preserved. (3) Sternberg-Reed cells present, but showing no mitoses. (4) The predominant cell is the adult lymphocyte. (5) Plasma cells and eosinophils may be present.

This is essentially a disease of lymph node. It is the least malignant form.

2. Granuloma: (1) Lymph node involvement in isolated groups, but may be extensive. Retroperitoneal or para-aortic nodes recognized as the primary site in most cases, even though nodes of neck may be more impressive. (2) Gross findings: consistency hard, sectioned surface gray with focal necrosis and complete loss of normal landmarks. (3) Histologic appearance: obliteration of normal architecture, cellular pleomorphism with varying prominence of typical Sternberg-Reed cells, some of them with necrotic and degenerative changes, frequent mitoses, lymphocytes, plasma cells, neutrophilic and eosinophilic granulocytes represented in varying proportions. Increase in reticulum fibers, progressive fibrosis, and necrosis. Fatty changes in vacuolated reticulum cells and in giant cells of foreign body type.

Granuloma may involve any organ except the central nervous system and is frequently widespread.

3. Hodgkin's sarcoma: (1) Usual origin retroperitoneal with extension to abdominal organs. Tendency to massive necrosis. (2) Sternberg-Reed cells and other atypical giant cells much larger than normal lymphocytes (about three times). (3) Lymphocytes and reticulum cells present, but plasma cells and eosinophils rare.

This behaves like a true tumor, is invasive, and may involve also the central nervous system.

Transitional forms of the three types occur.

Objections to this and other classifications have been raised on the ground that lymph nodes with changes in all stages may be present in one and the same person at one time.

Incidence

How frequent is Hodgkin's disease?

The figures for the United States vary from 0.5 to 2.5 per 100,000 living persons.

The higher figures are probably more correct, because it was shown that the morbidity and mortality statistics vary depending on the reporting ability of different states. Data compiled from autopsy statistics are probably more reliable. They range from 0.16 per cent to 0.33 per cent of au-

topsies in this country and abroad compiled from a total of over 90,000 autopsies.

Claims that the incidence of the disease has increased recently have not been confirmed. Its world wide distribution has been established. It is rare during puberty, most frequent in males between 45 to 49, in females between 25 to 29. Cases have been observed in the newborn, showing that it may be congenital. The disease was also reported in the ninth and tenth decades. Differences in the age distribution are claimed to be determined by the number of population in the particular age groups. The higher incidence in males seems definitely established, the proportion in adults is 2:1 and in children 4:1. The preponderance in males holds for all lymphomas (leukemia and lymphosarcoma).

Diagnosis

Early diagnosis means early biopsy, because biopsy is the only means of a correct diagnosis of Hodgkin's. Everything else is an approximation.

Following is a list of diagnosis established by biopsy in cases in which a clinical pre-biopsy diagnosis of Hodgkin's disease was made; metastases from a carcinoma of bronchus, pancreas, prostate, stomach (in a thirty-year-old woman), testicle, thyroid, melanoma, neuroblastoma, to quote but a few examples.

The preceding statement does not imply that a biopsy will always reveal the correct diagnosis. The problem of the early diagnosis of Hodgkin's is complicated by the fact that in one lymph node there may be early histopathologic changes which are not specific, whereas another lymph node may present specific and diagnostic changes.

There are cases on record of patients who consulted a physician with an enlarged lymph node and who were told to leave it alone, only to be found later, after varying intervals, to have Hodgkin's disease. For that reason, it is wise to consider any enlarged lymph node lasting over three weeks as requiring thorough investigation. In some areas, for example in the upper cervical region, careful examination of the drainage territory may reveal the presence of a primary infectious focus. Blood examination, x-ray study of the chest, et cetera, may throw additional light on the nature of the lymph node enlargement. However, biopsy should not be delayed whenever complete clarification of the condition did not come from the preliminary studies.

When lymph nodes are present in several regions, it is well to keep in mind that, as a rule, lower cervical and axillary are more satisfactory for study than upper cervical and inguinal, because less likely to show complicating inflammatory changes. Cosmetic considerations, important as they are, should not be deciding. It is better to remove the lymph node with some of the adjacent fat tissue than to dissect it absolutely free of it. Less trauma to the specimen will render it more satisfactory for a diagnostic study. A few lymph nodes are always preferable to a single one. The histopathologic diagnosis of lymph node lesions is difficult, and it is not made easier if the surgeon cuts the specimens. Vary rarely will he depend on his own diagnosis made with the naked eye on a dissected specimen, and not infrequently will the surgeon's curiosity damage the specimen sufficiently to make the pathologist's difficult task so much harder.

It may happen that an unequivocal diagnosis cannot be made by the pathologist by examining one lymph node, but that another lymph node removed from the same or from another area will be diagnostic. Removal of a lymph node is now a simple and safe procedure. I have seen months wasted because the recommendation for another biopsy was not heeded.

Prognosis

The treatment of Hodgkin's disease should be approached at present with greater confidence and hope for amelioration of symptoms and prolongation of life than many physicians seem to have. Even in the presence of generalized disease, spectacular improvement is possible. Ten-year and longer survivals have been reported in cases diagnosed originally as Hodgkin's sarcoma. Just as the diagnosis of paragranuloma does not necessarily mean assurance of a better prognosis, so does the finding of what seems to be a particularly malignant variant indicate an absolutely bad prognosis.

The fundamental premise is that Hodgkin's disease is unicentric in origin, that it begins in one area, one lymph node or in one group of lymph nodes, and that it spreads to other regions after varying time intervals and in response to various influences and circumstances. This premise is the basis for the conception of radical early therapy, be it surgical, roentgen ray or preferably a combination of both.

Prognosis in the individual case is extremely hazardous. Patients with disseminated lesions may respond to therapy and remain well for years or decades. On the other hand, patients with local lesions may die in a matter of weeks.

*Prognostically Favorable Factors**

1. Localization in one area.
2. Marked enlargement of external nodes before treatment.
3. Normal WBC.
4. Lymphocytosis in the blood and in the lymph nodes.
5. Monocytosis in the blood.
6. Normal RBC and Hb.
7. Females with Hodgkin's disease have a better prognosis than males.
8. Weight gain after x-ray.
9. "Patient showing osteoblastic metastases are in better condition and live longer" (Jenkinson, 1932).
10. Rural rather than urban environments are conducive to a good prognosis.
11. Normal or nearly normal sedimentation rate.

*Prognostically Unfavorable Factors**

1. Septic and Pel-Ebstein fever.
2. Initial temperature elevation due to the disease.
3. Marked pruritus.
4. Splenomegaly.
5. The presenting symptom other than adenopathy.
6. Cases in which symptoms of an acute infection immediately precede the onset of the disease are often rapidly fatal.
7. Parenchymal pulmonary involvement.
8. Patients with predominant localization in the abdominal cavity.
9. The development of gastro-intestinal symptoms.
10. Progressive anemia.
11. Both extremes of age.
12. A rapid sedimentation rate early in the disease.
13. Pronounced weight loss.
14. Marked lymphopenia.

According to Wallhauser's analysis of a large material prior to 1932, the average duration of life following the onset of the disease is slightly more than twenty-four months.

What Is Hodgkin's Disease?

*Nature and Etiology***

1. Hodgkin's disease is a neoplasm
   (a) Of myeloid origin
      i. Reticulum cell
      ii. Megakaryocyte
   (b) Of lymphoid origin
      i. Reticulum cell
      ii. Lymphocyte
   (c) The unitarian hypothesis of lymphomas (Custer)
2. Hodgkin's disease is an inflammation
   (a) Of infectious origin
   (b) Of "toxic" origin
   (c) Of allergic origin
3. Hodgkin's disease is a metabolic abnormality
   (a) Due to hormonal imbalance
   (b) Due to other metabolic imbalance
   (c) Due to autonomic nervous system imbalance
   (d) Due to allergy

Therapy—General

As stated at the onset, I am not competent to discuss therapy except as I have had an opportunity to see its effects and to follow the currents in the literature during the last thirty years.

If this is sufficient justification, my opinion at the present time is that courageous and intensive therapy as soon as diagnosis is made and constant and untiring lookout with roentgen-rays for new lesions and their treatment offer the best possible promise of prolongation of useful and enjoyable life.

There are those who advise treating Hodgkin's disease symptomatically; they recommend withholding treatment until clinical findings make it necessary, and then to give only as little treatment as is needed to produce palliation. This approach abandons whatever chance the patient might have for a cure, assuming that a cure is possible.

The opposite point of view is taken by those advocating radical surgical and/or radiotherapeutic attack as soon as the diagnosis was made. This point of view is predicated on the conviction that Hodgkin's disease is curable, or at least that such approach may be followed by results less likely to occur if a more conservative attitude is followed.

How do these diametrically different points of view stand up in the light of available data?

SURVIVAL AFTER COMBINED EARLY SURGICAL AND RADIATION THERAPY

	Total Surviving No.	No.	Survival Years
Jackson & Parker	5	2	25,* 35**
Hellwig	30	24	5 to 20
Slaughter & Craver	5	5	5 to 11
Baker & Mann	2	2	Cure
Craver	250	22	10 to 17.7
		6†	more than 15

*Modified from Hoster, H. A.; Dratman, M. B.; Craver, L. F., and Rolnick, H. A.: Hodgkin's Disease, 1832-1947. P. 17, 1948.

**Ibid. P. 38, 1948.

Prepared from data in Craver, Lloyd F.: Value of early diagnosis, 1952.

*Died three years later of a recurrence.

**Well at time of report.

†Five of them without treatment for from 4.8 to 14.4 years.

(Continued on Page 451)

Carcinoma of the Ovary

Diagnosis and Treatment

By Frederick H. Falls, M.D.
Oak Park, Illinois

THE diagnosis and management of ovarian malignant tumors is difficult primarily because of the insidiousness of their development and the prompt application of radical measures for their eradication before the tumor cells have had an opportunity to metastasize.

An important factor in delaying the recognition of these tumors is lack of discomfort and pain on the one hand and evidence of change in the physiological function of the ovary on the other.

To detect their presence, therefore, at an early stage in their development, routine pelvic examinations must be made at regular intervals, preferably every six months, with the express purpose of detecting a change in size of one or both ovaries. When such alteration is found, the patient must be kept under continuous observation with monthly examinations to determine the clinical behavior of such enlargements and, if progressive, immediate investigation by various diagnostic procedures such as culdoscopy, aspiration of cul-de-sac and Papanicolaou smears from the centrifuged fluid made. Exploratory laparotomy with frozen section biopsy may be advisable.

As soon as the diagnosis is made, radical removal of the involved ovary, the uterus and the opposite ovary is indicated because of the possibility of early metastasis to these organs. By the same token careful exploration of the regional lymphatics is in order to aid in the prognosis and in directing the measures best adapted to postoperative treatment.

When an ovarian malignancy has advanced beyond the early stages of its growth, pressure symptoms are usually complained of. This may be a dull pain on the involved side or dysfunction of the bowel or bladder due to compression. Occasionally a twist of the pedicle of such a tumor may occur, giving rise to acute symptoms requiring emergency surgery, at which time the malignant nature of the ovarian pathology is detected and panhysterectomy performed.

The most commonly encountered malignant ovarian tumor is the papillary proliferating cystadenoma. This is often not suspected until it has enlarged sufficiently to produce abdominal distention and may be easily felt on palpating the lower abdomen. The presence of free fluid in the peritoneal cavity in association with these tumors is ominous, especially if bloody.

Following removal of these tumors, x-ray treatments and, in some cases with rapidly recurrent ascites, colloidal gold have been valuable.

HODGKIN'S DISEASE

(Continued from Page 450)

Therapy—Surgical

Surgical removal of lymph nodes, the site of localized Hodgkin's disease, followed by roentgen radiation, has been tried by many with generally encouraging results. Survivals of from seven to thirty-four years following such treatment have been reported. The same applies to localization of the disease in various portions of the gastrointestinal tract. There are those who have expressed differing opinions, but on the whole the recorded observations and the relative innocuousness of surgical removal favor this approach. Much can be gained and little lost.

Therapy—Roentgen Radiation

The prevalent opinion has probably been expressed best by Hoster: "In our present state of knowledge there seems to be little question that persistent, early, and thorough x-ray therapy is indicated when the diagnosis of Hodgkin's disease is made."

There are a few contraindications: (1) acute forms of Hodgkin's disease, (2) active tuberculosis in regions where roentgen therapy is to be applied, (3) renal insufficiency, (4) previous x-ray damage especially of skin, or (5) toxic depression of bone marrow function.

Presented at the annual session of the Michigan State Medical Society, Detroit, September 29 to October 1, 1954.

Statistical Study of Cases of Carcinoma of the Lung at Mount Carmel Mercy Hospital, Detroit, Michigan

Louis J. Garieny, M.D.
Detroit, Michigan

OUR ORIGINAL work was to formulate a statistical survey of pulmonary complications in the heavy smoking patient, following general anesthesia in major surgery. The question of smoking on the part of the surgical patient has always been of prime importance to the writer. The post-operative complications, which frequently develop in heavy smokers, are troublesome and distressing, and consist of an aggravating cough caused by the collection of mucus during sleep, and the inability of the patient to raise the phlegm, which is particularly viscid throughout the entire bronchial tree. Efforts to expectorate this phlegm result in severe pain, and rather than incur this discomfort, the patient refrains from coughing. This non-productive cough frequently causes severe complications which are distressing to the surgeon, as well as to the patient. L. H. Morris, writing in the *Modern Practice of Anesthesia,* brings out this point quite suitably in speaking of his own extensive surgical experience.

This statistical study of carcinoma of the lung involving cases at Mount Carmel Mercy Hospital from its beginning in 1939 until April 1, 1954, was a concomitant problem. The policy to have a roentgen film of the chest of every pre-operative patient has enabled us to detect malignancy of the lung in a number of cases.

Much has been written and said regarding the effects of nicotine upon the patient, and the relation of smoking to carcinoma of the lung. The Hammond and Horn studies on "The Relationship Between Human Smoking Habits and Death Rates" was a tremendous contribution to this subject. In his report, the Minister of Health in England was cognizant that cigarette smoking plays some part in the increasing number of malignant pulmonary new growths.

Our method of study included a complete review of the patients' charts, followed by mailing to each of the 287 patients (or the nearest relative) with proven carcinoma of the lung at Mount Carmel Mercy Hospital, a questionnaire, together with the following letter:

The Record Room of Mount Carmel Mercy Hospital is now making a survey on all cases of lung pathology which have been treated in this hospital since the year 1939.

We are confident that you would be anxious to help others in their recovery from a similar condition. However, in order to accomplish the best results in this survey, it is necessary that we obtain pertinent information regarding previous cases of this nature.

The above named patient was hospitalized in (year). We would greatly appreciate your assistance in filling out the enclosed questionnaire. Kindly answer the questions to the best of your ability, sign the same, and return it in the enclosed stamped, self-addressed envelope as soon as possible.

Thank you kindly for co-operating in this study.

Sincerely yours,
MOUNT CARMEL MERCY HOSPITAL,
Director of Medical Records

The data obtained from the returned questionnaires are presented in twenty concise, systematic charts without embellishment of speculation and interpretation. Only simple facts are incorporated in this survey in an effort to secure a significant scientific perspective on the smoking problem in relation to carcinoma of the lung.

CARCINOMA OF THE LUNG

MOUNT CARMEL MERCY HOSPITAL OF DETROIT HAS BEEN IN OPERATION SINCE 1939. DURING THE FIFTEEN YEARS FROM 1939 TO 1954, 287 CASES OF LUNG CANCER HAVE BEEN TREATED. QUESTIONNAIRES WERE SENT TO EACH OF THESE PATIENTS. THE FOLLOWING REPORT IS BASED ON THE REPLIES RECEIVED.

OF THESE 287 CASES:

212 WERE MALES — 73.9%

75 WERE FEMALES — 26.1%

• • •

CARCINOMA OF THE LUNG

PERCENTAGE OF REPLIES TO QUESTIONNAIRE:

MALE — 36.3%

FEMALE — 30.7%

Read at a meeting of the Staff of Mount Carmel Mercy Hospital, Wednesday, September 22, 1954.

CARCINOMA OF THE LUNG

SMOKERS

MALE 92.2%

FEMALE 17.4%

• • •

CARCINOMA OF THE LUNG

PRIMARY CANCER OF THE LUNG AMONG SMOKERS:

MALES 92.2%

FEMALES 50.0%

• • •

CARCINOMA OF THE LUNG

AVERAGE AGE AT DATE OF FIRST ADMISSION TO THE HOSPITAL.

MALES 58.5 YEARS

FEMALES 49.0 YEARS

KNOWN FAMILY HISTORY OF CANCER

MALES 6.5%

FEMALES 25.0%

• • •

CARCINOMA OF THE LUNG

TYPES OF SMOKING MALES

CIGARETTES 87.3%

CIGARS 7.1%

PIPE 5.6%

• • •

CARCINOMA OF THE LUNG

AVERAGE YEARS OF SMOKING:

MALES 36.4 YEARS

FEMALES 14.0 YEARS

• • •

CARCINOMA OF THE LUNG

CIGARETTES SMOKED PER DAY BY MALE SMOKERS:

OCCASIONALLY, NOT EVERY DAY 0

LESS THAN ½ PACK PER DAY 0

½ TO 1 PACK PER DAY 40.3%

AT LEAST 1, BUT LESS THAN 2 PACKS PER DAY 48.5%

2 OR MORE PACKS PER DAY 11.2%

CARCINOMA OF THE LUNG

AVERAGE YEARS OF CIGARETTE SMOKING:

MALE 35.3 YEARS

FEMALE 14.0 YEARS

• • •

CARCINOMA OF THE LUNG

"HAS THE PATIENT STOPPED SMOKING SINCE THE ONSET OF HIS ILLNESS?"

YES 27.3%

NO 72.7%

"IF THE PATIENT IS STILL SMOKING, WHAT TYPE IS USED?"

CIGARETTES 75.0%

CIGARS 12.5%

PIPE 12.5%

• • •

CARCINOMA OF THE LUNG

BRANDS OF CIGARETTES USED:

CIGARETTE NO. 1 37.1%

CIGARETTE NO. 2 17.7%

CIGARETTE NO. 3 14.5%

ALL OTHERS 30.7%

• • •

CARCINOMA OF THE LUNG

CIGARS SMOKED PER DAY BY MALE SMOKERS:

OCCASIONALLY, NOT EVERY DAY 46.1%

1 TO 2 CIGARS PER DAY 46.1%

2 TO 3 CIGARS PER DAY 0

3 TO 4 CIGARS PER DAY 7.8%

4 TO 5 CIGARS PER DAY 0

5 TO 6 CIGARS PER DAY 0

AVERAGE YEARS OF CIGAR SMOKING 20 YEARS

• • •

CARCINOMA OF THE LUNG

AMOUNT SMOKED PER DAY BY PIPE SMOKERS

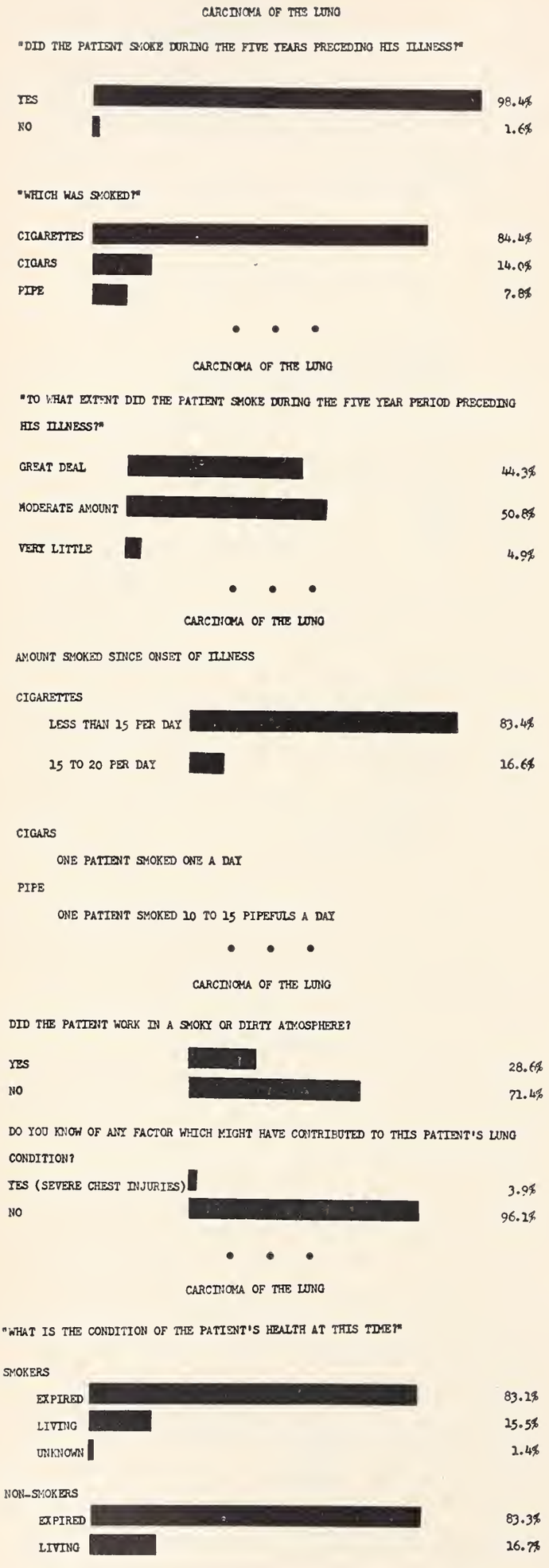
OCCASIONALLY, NOT EVERY DAY 0

LESS THAN 5 PIPEFULS PER DAY 57.2%

5 TO 10 PIPEFULS PER DAY 21.4%

10 TO 15 PIPEFULS PER DAY 21.4%

AVERAGE YEARS OF PIPE SMOKING 28 YEARS



The following is a summation of the 287 cases of lung cancer treated at Mount Carmel Mercy Hospital, Detroit, Michigan:

	Male	*Female*	*Total*	
Patients	212	75	287	
Family History of Cancer	12	4	16	(6%)
Primary Cancer of Lungs	195	34	229	(80%)
Primary Other than Lungs	17	41	58	(20%)
Average Age of Patients	58.5	55.7	57.8	
Average Age of Patients with Primary Cancer of the Lung	58.8	60.1	59.0	
Percentage, Male to Female, with Primary Cancer of the Lung	85%	15%		

Operative Procedures

	Male	*Female*	*Total*	
Bronchoscopy	114	19	133	(46%)
Biopsy	19	5	24	(8%)
Pneumonectomy	34	6	40	(11%)
Lobectomy	8	2	10	(3%)
Esophagoscopy	1	1	2	(.7%)
Laryngoscopy	1	0	1	(.3%)
Rib Resection	2	1	3	(1%)
Thoracotomy	27	6	33	(11%)

Summary

From a superficial survey of our statistical data, smoking may be a significant factor in the etiology of primary carcinoma of the lung. However, conclusive proof of this hypothesis has not been given.

This study has been presented with the sole idea that if *every major hospital in America* would review its records on cases of carcinoma of the lung, with the thought in mind as to whether or not smoking or any other factor might be suspected, *perhaps* the end result of this voluminous research, when considered in its entirety, would tend to steady the accusing finger when it points to cigarette smoking, or any other irritant, as a causative factor.

Innumerable substances have been discussed in the literature as possible carcinogenic agents. With the single exception of certain radioactive substances, this subject is most perplexing and controversial. Some authors believe cigarette smoking may be a significant factor, and at the present time, a tremendous intensive research program is planned to investigate the various components in inhaled smoke, such as nicotine, phenolic bodies, ammonia, pyridine bases, arsenic, certain hygroscopic agents, and so forth. Obviously, the American Cancer Society and the Tobacco Industry Research Committee are seriously interested in these investigations.

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Carcinoma of the Breast in Pregnancy and Lactation

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THE obstetrician must assume the responsibility of diagnosing malignant disease in association with pregnancy and see that adequate treatment is started at once. He has a long and intimate contact with the patient.

Carcinoma of the breast occurring in pregnancy has been considered to be such a disastrous disease that Haagensen and Stout[6] in 1943 stated that "cancer of the breast developing during pregnancy or lactation is so malignant that surgery cannot cure it often enough to justify this method of treatment." In 1951, however, they reversed their position and no longer considered the pregnancy itself in their criteria for operability.[5] The prognosis in malignancy still is dependent primarily upon early diagnosis and treatment. We propose to show by illustrative cases that, in spite of possible deleterious effects of pregnancy, much can be offered these patients, that cure is not impossible, and prolonged palliation can be afforded.

Case Reports

Case 1.—A thirty-five-year-old patient, who was a gravida IV, para III, first noticed a lump in her left breast two weeks prior to admission to Woman's Hospital in 1946. Clinically this was thought to be a fibroadenoma, but a breast biopsy and frozen section revealed a grade III medullary carcinoma. A radical mastectomy was performed and no axillary metastasis was found. The patient was four months pregnant at the time of operation. She made an uneventful postoperative recovery, carried her pregnancy to term, and delivered a normal living infant without difficulty. There has been no evidence of recurrence of the carcinoma to the present (nine years).

Case 2.—The patient was a twenty-nine-year-old gravida II, para I, who was four and one-half months pregnant when she was admitted to the hospital because of malaise, weight loss and severe, constant back pain. X-rays of the spine showed numerous osteolytic changes. Further x-rays showed these osteolytic lesions to involve the pelvis, ribs, skull and humerus. After repeated careful examinations, a small tumor was found in the right breast which biopsy proved to be the primary carcinoma. On the day following the biopsy spontaneous abortion occurred. Because of the extent of the metastases, x-ray therapy was thought inadvisable, so testosterone propionate, 100 mg. every other day, was begun. There was slight symptomatic improvement, but the bone metastasis became more extensive. It was decided that further palliation was possible only by complete eradication of all sources of estrogen, namely, bilateral oöphorectomy and adrenalectomy. Adrenal cortical substitution therapy was instituted and because of the extreme debility of the patient these procedures were carried out in three stages, approximately three weeks apart. Nine days following the third operation the patient was able to sit up for the first time in over three monhs. She continued to improve and was discharged walking three weeks later. She remained ambulatory and comfortable for about two years following these procedures. At intervals she would stop taking cortisone and would require hospitalization to correct the adrenal cortical insufficiency. The eventual cause of death was pulmonary metastasis.

Case 3.—A thirty-four-year-old woman, who was a gravia III, para II, was four months pregnant when she was admitted to the hospital in September, 1949, with a history of a tumor of the left breast for one month. On examination a 7 cm. mass was palpable in the breast and, in addition, there was a hard 2 cm. mass in the left axilla. Frozen section diagnosis of the biopsy revealed a malignancy, and radical mastectomy was performed. Numerous axillary metastases were found. Three weeks later a subtotal hysterectomy and bilateral salpingo-oöphorectomy were done as a palliative procedure, This was carried out at the request of the patient and her husband with the understanding that it was only a palliative procedure. X-ray therapy was given and at the time of this writing, four and one-half years later, there is no evidence of recurrence.

Case 4.—A thirty-seven-year-old woman, gravida V, para III, was admitted to the hospital in 1933, when she was 39 weeks pregnant and in labor. On routine physical examination a hard, 4 cm. mass was palpable in one breast. The patient stated that she had first noticed the tumor one month previously. She was delivered by low forceps of a normal living infant. Immediately following delivery an excision biopsy of the breast tumor was performed and microscopic examination revealed carcinoma. On her fourth postpartum day a radical mastectomy was done, and several large axillary lymph nodes were found to contain carcinoma. She made an uneventful postoperative recovery and was given deep x-ray therapy to the left thorax, axilla, cervical, infra- and supraclavicular areas. The patient remained well and there is no evidence of recurrence to the present (twenty-two years).

Case 5.—A twenty-one-year-old woman, gravida I, para O, was admitted to the hospital via ambulance when she was four and one-half months pregnant. One month prior to admission she had noticed a diffuse, reddened, tender swelling of the left breast. She was treated before admission with external applications, sulfa and penicillin, without improvement. The right breast soon became in-

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involve ment and distant metastasis. X-ray therapy to weak, dyspneic and confined to bed. On admission to the hospital a diagnosis of bilateral inflammatory carcinoma was confirmed by biopsy. There was obvious lung involvement and distant metastasis. X-ray therapy to both breasts, a total dosage of 6,160 roentgens, and testosterone propionate, 100 mg. daily, were given. The breasts regressed in size and the patient symptomatically improved. She was discharged from the hospital after a month, active, comfortable and able to conduct her household duties. She continued to receive 100 mg. of testosterone twice weekly. When she was last admitted to the hospital, in her twenty-ninth week of gestation, she showed evidence of generalized metastasis. In addition, she had developed a blood dyscrasia and, in spite of daily blood transfusions, it was impossible to raise her hemoglobin above eight grams. At thirty-one weeks gestation, she was delivered by cesarian section of a normal living infant. Bilateral oöphorectomy was done at this time and the ovaries were found to contain metastases. In spite of the castration and continued testosterone therapy, she failed rapidly and expired on the fifth postoperative day.

Case 6.—A thirty-nine-year-old woman, gravida II, para I, was delivered in March, 1954. She had breast-fed her baby regularly. When she was three weeks postpartum she noted a small mass in her left breast. The following day, frozen section of the excised 2 cm. mass revealed a grade III, medullary carcinoma, and radical mastectomy was performed. No axillary metastasis was found. The postoperative course was uneventful and no further therapy, i.e., x-ray or castration, was given. There is no evidence of recurrence to the present (eleven months later).

Comments

The common conditions of the breast requiring surgical intervention during pregnancy and lactation are, in order of frequency, acute mastitis, carcinoma, fibroadenoma, chronic infectious mastitis, tuberculosis and galactocele.[3]

Smith,[10] in a ten-year survey of malignancies occurring during pregnancy seen at Memorial Hospital in New York, found that about half of these were of the breast. The next most frequent site was the cervix. From Harrington's[8] survey of over 4,000 cases of carcinoma of the breast, ninety-two (2 per cent) occurred during pregnancy or lactation. Eighty-four per cent of those pregnant or lactating had axillary metastasis, compared with 63 per cent for the entire series. Eighty-one per cent were found to be grade three or four, indicating a higher degree of anaplasia at this time.

Geschickter[3] thought the deleterious effects of pregnancy to be due to the early age of the patient, the increased vascularity of the breast, and the intensity of endocrine influences resulting in an increased rate of growth and spread of the malignancy. Haagensen,[6] however, in reviewing 1,000 cases of carcinoma of the breast, found survival rates varied very little with the age of the patient. Another important factor thought to be responsible for the poorer prognosis is the difficulty in detection of a mass in the presence of the increased fullness and size of the breasts at this time.[1] Geschickter[3] found in most cases the duration of the cancer exceeded the duration of the pregnancy. The duration of symptoms averaged six months in the tumors observed in the first half of gestation and eight and one-half months in the second half. The size of the growth was between 4 and 6 cm. in diameter at the time of the first examination. It is clear, then, that thorough examination of the breasts as part of the prenatal care of every patient and prompt biopsy of every breast tumor found during pregnancy should be done.

The presence of axillary metastasis is the most important factor in determining prognosis. Harrington[8] found the five-year survival rate in those pregnant to be 61 per cent, in the absence of axillary metastasis. If axillary metastasis were present, the five-year survival rate fell to 5 per cent, compared to 72 per cent and 28 per cent, respectively, in those not pregnant. Geschickter[3] thinks that, if inflammatory carcinoma is excluded, the survival rates of breast malignancies occurring during pregnancy are comparable to those in the nonpregnant and nonlactating. Cases 1, 3, 4 and 6 bear out this impression.

The question of therapeutic abortion is invariably raised and, as yet, there is no unanimity of opinion. Geschickter[3] and Cheek[1] thought that abortion should be done, particularly if the patient is in the first half of pregnancy. White,[12] Harvey[9] and Hachman and Schreiber[7] thought that abortion is not indicated. Hachman and Schreiber[7] state that "whether aborted or delivered at term the evolution of the disease is not changed in early cases properly treated. No benefit is observed from therapeutic abortion. Stress, therefore, should be laid on the extension of the disease and prompt treatment, the indications being similar to those of noncomplicated cases." Smith[10] thought the prognosis was better in those not aborted. We think that if axillary metastasis has not occurred, nothing is to be gained by interruption of the pregnancy. In the presence of metastasis, abortion can only be considered as a palliative procedure in association with surgical castration.

Inflammatory carcinoma of the breast occurs most frequently during pregnancy and lactation. It is stated that 5 to 7 per cent of breast malignancies occurring at this time are of the inflammatory type. It is well to repeat Da Costa's[2] rule that in any case of supposed mastitis persisting for more than two weeks, biopsy is indicated to rule out inflammatory carcinoma. Since curative procedures are not yet available for this type of malignancy, palliation with testosterone and x-ray should be employed. This is well seen in Case 5, in which palliation with these two agents enabled the patient to carry her pregnancy to viability. It should be noted also that this therapy produced no deleterious effect on the offspring.

Definitive radical surgery, including thorough dissection of the axilla, should be undertaken as soon as possible if cure is to be anticipated. Simple mastectomy is indicated solely for palliation in the clinically inoperable and this therapy should be individualized. In general, the following methods are available: x-ray, androgens, castration, interruption of the pregnancy and, in selected cases, bilateral adrenalectomy. Triethylene melamine, a new chemotherapeutic agent, has been used with some success in palliative treatment. X-ray therapy should be used first. It has been shown that there is no detrimental effect to the fetus from this treatment. Androgen is indicated for relief of pain due to bone metastasis only after irradiation will no longer control it. As mentioned earlier, interruption of the pregnancy should be done only at the request of the patient and her husband, in an effort to prolong her life a few more months. Surgical castration soon after radical mastectomy will benefit one third of the patients who have evidence of metastasis.[11] Bilateral adrenalectomy is still considered to be an experimental procedure but in carefully selected cases has proved quite beneficial, as seen in Case 2.

In the absence of axillary metastasis, if the patient shows no evidence of recurrence of the malignancy in three to five years, there is no reason why another pregnancy should not be undertaken. Haagensen[4] thinks that as follow-up care improves, the incidence of bilateral breast carcinoma will reach 10 per cent. This does not imply that pregnancy has any influence on the development of breast carcinoma, but rather that an already existing malignancy will have an accelerated growth during pregnancy and lactation.

Summary

Six cases illustrating the common situations encountered in carcinoma of the breast occurring in pregnancy and lactation have been reviewed. We would emphasize the following points:

1. Pregnancy alone does not make the malignancy incurable. Excluding inflammatory carcinoma, survival rates are comparable to those in the nonpregnant and nonlactating.

2. Early detection and prompt treatment are paramount if cure is to be effected. Do not dismiss any breast swelling as inflammatory unless it responds to treatment quickly.

3. The young age of these patients and the degree of anaplasia are not deterring factors in prognosis, but the presence of axillary metastasis decreases the five-year survival rate from 61 to 65 per cent.

4. Because of the increased size and engorgement of the breast during pregnancy and lactation, palpation of early malignancies is more difficult. We would urge every physician practicing obstetrics to carry out frequent breast examinations and to instruct his patients in the importance and methods of self examination of the breasts.

5. Inflammatory carcinoma of the breast is incurable, but palliation can now keep these patients comfortable for a period of time. Since interruption of pregnancy does not alter the prognosis, every effort should be made to carry the patient along until the baby is viable.

6. Interruption of pregnancy is not indicated in the absence of axillary metastasis. In the presence of axillary metasis, interruption of the pregnancy can only be considered as a palliative procedure in association with castration.

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Cancer of the Breast in Kalamazoo

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THIS study was prompted by a personal inquisitiveness as to whether breast cancer treatment in a small city, 100 miles from the nearest teaching center, compared at all favorably with the results from the medical centers. The author on several occasions had been involved in discussions as to whether the average general practitioner doing the average simple mastectomy and following this with postoperative irradiation was performing work that compared favorably with that done by surgeons who did a radical mastectomy and followed this with a course of irradiation. The radiologist not infrequently had been looked upon as the one who caused the swollen arm and the one who occasionally produced significant damage to the underlying lung. Therefore, this study was done locally to check our own cases and also to attempt to answer some of the above questions.

This survey extends from 1937 to 1952 and is limited to proven cases of breast cancer given a "significant" amount of irradiation at our office*; 417 cases were eligible.

Six of this group were men, five having been seen within the past five years. Four had positive nodes in the axilla at the time of surgery. One was negative and there were no nodes in the specimen in the last case. Three are dead with an average survival of one and one-half years; two others are well at two and one-half and three years. The sixth case developed osteoblastic metastases at the four-year mark. One of these patients was "inoperable"; however, he was operated upon with an associated orchiectomy and this patient survived one year following the irradiation (carcinoma en cuirasse).

The median age of the 411 women was fifty-four years. (See tabulation.)

Radiation Technique

There was a slight variation in our factors over this period, but in general we delivered 1,800 to 2,000 r in air to each of four fields. The anterior thorax field averaged 11 by 19 cm. with the central ray directed toward the axilla with the mesial edge beyond the midline to the contralateral hemithorax. The anterior and posterior axillary and the supraclavicular fields were 10 by 15 cm. each. In earlier years the average patient received 130 KV and in later years 200 KV irradiation with a half value layer of 1.0 mm. copper. The only significant difference that one can gain from reviewing these cases is that with the higher voltage the incidence of radiation fibrosis was slightly higher but one could be more confident of a better tumor dose. If the patient had a simple or a modified radical mastectomy, our goal was 2,200 r per field, but if a radical mastectomy had been performed, the dose was about 1,800 r as measured in air. In this latter group with tight skin over the anterior thorax and axilla we have experienced definitely delayed healing of the irradiation reaction and, therefore, we have not irradiated as vigorously.

Type of Surgery

The cases were divided into three major classifications the first being that of a simple mastectomy. Mere excision of the local tumor was included with the simple mastectomies. The second group represents the modified radical mastectomy where the surgery was definitely more adequate and there had been some dissection of the axilla and partial excision of the pectoralis major or minor. The radical mastectomies were the group where the pectoralis major and minor had been resected and there had been, in the opinion of the radiologist and the pathologist, adequate dissection of the axilla. In order to establish survival figures, the author has limited the cases to those in which there is a known follow-up of at least five years or where there has been a death due to the known cancer of the breast and/or its complications. In all, 211 cases were eligible for analysis. The evaluation of the stage of the disease at the time of surgery would have been a valuable

Age	No. of Cases
20-30	2
31-40	37
41-50	101
51-60	117
61-70	97
71-80	48
81-90	6
Unknown	3

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fact in this analysis, but with the surgery having been done by ninety-nine doctors and with such a great variance in their training, the written preoperative description was in many cases too vague for critical classification.

There were sixty-one cases of simple mastectomy with an average age of 51.1 years. The median survival was 5.2 years. There were fifty-two cases with a modified radical mastectomy with an average age of 54.6 years. The median survival was 4.9 years. Ninety-eight patients had radical mastectomies with an average age of 50.0 years and had a median survival of 4.85 years.

There were thirty-seven cases who had negative axillary nodes microscopically at the time of surgery, and twenty-eight of this group have survived five years, making a 76 per cent five-year survival. One hundred and thirty-six cases had positive axillary nodes at the time of surgery, and fifty-four have survived five or more years with a percentage of 40.

Swollen Arm

One hundred and nine of the 417 cases (26 per cent of the patients) exhibited some degree of swollen arm. Ten of these (9 per cent) were definitely due to neoplasm. Forty-three showed only minimal arm swelling, forty-five showed moderately advanced arm swelling, and twenty-one were far advanced. Therefore, 16 per cent of all our patients had moderate or advanced arm swelling. The cases that are of clinical concern are those with moderate or advanced arm swelling. Eliminating the cases of swollen arm due to neoplasm and including only the patients who had either the radical or the modified radical procedure, swollen arm did not occur in the simple mastectomy group unless it was due to cancer. It means that 21 per cent had a clinically significant swollen arm. The average survival in this group was 4.3 years, and this is about one year less than in the simple mastectomy group.

An attempt was made to determine if this advanced or moderately advanced arm swelling could be attributed to certain surgical teams, and the figures revealed that thirty-one of the sixty-six clinically significant cases could be traced to four surgical groups. One surgical group had 55 per cent of its patients exhibiting moderate to advanced arm swelling. Next surgical team had 38 per cent, the other two showed 33 and 30 per cent respectively.

An additional complication to the usual discomfort on a chronic basis is the incidence of erysipelas. Five of the sixty-six had erysipelas, three of whom had a recurrence of the same at least once. Occasionally there was an associated cellulitis. This would tend to indicate that irradiation does not cause the swollen arm. Furthermore, our highest irradiation doses were in the simple mastectomy cases, and this is the class where "non-neoplastic" arm swelling is the rarest.

It was noted that fifteen patients died within six months of their surgery and irradiation. In retrospect one wonders if the life span had been reduced by violation of the well-established criteria of inoperability as set forth by Haagensen.[1] Briefly they are:

1. When the carcinoma is one which developed during pregnancy or lactation.
2. When extensive edema of the skin over the breast is present.
3. When satellite nodules are present in the skin over the breast.
4. When intercostal or parasternal tumor nodules are present.
5. When there is edema of the arm.
6. When proved supraclavicular metastases are present.
7. When carcinoma is of the inflammatory type.
8. When distant metastases are demonstrated.
9. When any two or more of the signs of locally advanced carcinoma are present: ulceration of the skin; edema of the skin of limited extent (less than ⅓ of breast skin); fixation of tumor to chest wall; axillary metastases more than 2.5 cm. in diameter (proved); fixation of axillary nodes to skin or deep structures.

Radiation Fibrosis

Forty-seven of the 417 cases exhibited some irradiation fibrosis: thirty-seven minimal, eight moderate, and two advanced. In our opinion only the moderate or the advanced fibrosis could be considered as of any clinical importance and they represented ten cases or 2 per cent of the total or 5 per cent of the 211 five-year survivals. Of these ten patients, seven had radical mastectomy, two had modified radical type of surgery, and one had a simple mastectomy. One might draw the conclusion that the incidence of post-irradiation fibrosis is greater in those having the more extensive surgery. Is this due to the de-

creased tisues of the chest wall and axilla? Also those with the extensive surgery received 10 to 20 per cent less irradiation as calculated in air. A complicating factor is the fact that eight of these ten patients had a pre-existing chronic cough or a pre-existing possible bronchiectasis.

Comment

In preparing this paper, perusal of the recent international literature on this subject and knowledge from our local inquiry caused the author to conclude the following: acceptable treatment for cancer of the breast is anything but standardized. One can quote prominent authors to substantiate almost any seemingly unorthodox method of treatment. In fact, Park and Lees (1951) contend that there is no proof that the five-year survival of breast cancer patients is affected by treatment at all. In general, the surgical masters advocate meticulous surgery à la Halsted with or without postoperative irradiation depending upon the individual case and the personal feelings of the surgeon. On the other hand, there is the McWhirter group advocating limited surgery such as a simple mastectomy followed by very adequate meticulous postoperative irradiation. The five-year survival figures are strictly comparable and the same can be said for the Kalamazoo figures.

REPRESENTATIVE FIVE-YEAR SURVIVALS

	Negative Axillary Nodes	Positive Axillary Nodes
Nohrman, 1949 Radiumhemmet Sweden	66%	41%
Haagensen, 1949 Presbyterian, N. Y.	77%	51%
McWhirter, 1950 Royal Infirmary Edinburgh, Scotland	89%	44%
Kalamazoo	76%	40%

Summary

1. In our study 411 of the 417 patients were women. Only three of the six men were alive at the end of the two years, indicating the increased gravity of the disease in the male.

2. The median age of the woman contracting breast cancer is fifty-four.

3. The radical mastectomy was the commonest surgical procedure in this series with an average survival of 4.85 years.

4. The simple mastectomy had the best survival rate, 5.2 years.

5. Sixty-six patients (14 per cent of the group) had a clinically significant swollen arm problem. Twenty-one per cent of patients with the modified or radical mastectomy had a swollen arm of clinical concern.

6. Four surgical teams had between 30 and 55 per cent of their patients develop clinically significant swollen arm problems.

7. Average survival of patients with the moderate or advanced swollen arm not due to neoplasm was 4.3 years. Five of these sixty-six patients had bouts of local erysipelas probably as a result of this swollen arm.

8. Seventy-six per cent of our patients with microscopically negative axillary nodes at the time of surgery survived at least five years.

9. Forty per cent of our patients with positive axillary nodes at the time of surgery lived five or more years.

10. Radiation fibrosis occurred in ten of the 417 patients, i.e., 2 per cent. Thirty-seven showed minimal roentgen evidence of fibrosis with scant clinical symptoms, and this virtually completely regressed. The fibrosis usually occurred four to six months following the irradiation and usually disappeared six months later.

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Cancer of the Cervix Recurring after Radiation Therapy

Surgical Treatment

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THE standard treatment for cancer of the cervix in the United States is the application of radium to the lesion and x-rays by means of pelvic portals. Details as to dosage vary with the individual carrying out of the treatment. It has been repeatedly demonstrated that patients can be cured by radiation therapy. The fact remains, however, that the majority of patients with cancer of the cervix are still dying of their disease. This implies that they did not respond to radiation therapy or that responding at first, the disease recurred and there was a fatal outcome.

The history of cancer of the cervix indicates that it is often of relatively slow growth and that it may extend locally and involve adjacent viscera before it produces metastases. It appears, therefore, that cancer of the cervix which is not controlled by radiation, or recurs in the pelvis, might prove amenable to surgical attack.

The thorough studies of Truelsen[2] on the fate of patients in whom the lesion is not controlled by radiation, and in those who present recurrences after apparent control of the lesion by radiation, shed light upon the unhappy outlook for these women. For example, in 390 patients who failed to show clinical healing of their cancerous cervices after radiation therapy, all died within twenty-four months. Of 704 patients who exhibited clinical healing of the lesion following radiation therapy and after a period of six months or more showed recurrences, about 95 per cent died during the twenty-four months following the detection of these recurrences. About 3 per cent were alive at the end of the third year. These represented fortuitous instances wherein recurrences were in the cervix, limited in size, and were treated by radiation or the recurrences destroyed by actual cauterization.

In general, reradiation is not considered effective in the control of recurrences of cancer of the cervix. There are exceptions to this, but they are so few that such secondary treatment should not be relied upon to control the recurrent disease. There are reports in the literature that purport to show the efficacy of reradiation. However, these reports are not well documented. In most instances the diagnosis of recurrence is based upon the clinical findings of indurations in the parametria that were not previously apparent, and the assumption made that recurrences were present. The patients were reradiated and their continued survival was thus interpreted as "cure" of the recurrences. Dr. Hans Kottmier, director of the Gynecologic Clinic of the Radiumhemmet in Stockholm, told me that some fifty patients who, following initial radiation, developed indurations in the pelvis and sometimes a swollen leg, and who clinically appeared as though they had recurrences, were followed without treatment and all survived five or more years.

If radiation is therefore ruled out as a repeat treatment for recurrent or uncontrolled cancer of the cervix, what else is there to recommend? The only other treatment is surgery. There are five operations which may be envisaged; the choice of any one of these depends upon the extent of the recurrent or uncontrolled disease and the patient's general condition. These may be described as follows (preliminary report previously published[1]):

1. Radical panhysterectomy and pelvic node excision (all pelvic nodes, fatty tissue and most of pelvic peritoneum; sciatic nerve routes are denuded). Indications: the recurrent disease is limited to cervix, and/or vaginal vault and bladder or rectum are not involved; parametria may be indurated; the patient must be a good operative risk.

2. Classical Wertheim. This includes removal of uterus, appendages, parametria, external iliac and obturator nodes. Indications: recurrent disease is limited to cervix and/or upper vagina. Parametria may feel indurated but rectum and/or bladder are not involved. The patient is a fair operative risk.

3. Radical vaginal hysterectomy (Schauta). The uterus and as much parametria as possible is removed by the vaginal route. Indications: recurrent disease is limited to cervix or uterus and upper vaginal vault. Parametria are not indurated.

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The patient is not a good risk for a radical abdominal operation.

4. Exenterations. Anterior: uterus, adnexae, pelvic nodes, bladder are resected en masse, for cancer that invades bladder, but rectum is free. Ureters are implanted into rectum.

5. Total exenteration. All pelvic viscera, with formation of wet colostomy, for cancer that invades bladder and rectum.

These are operations of desperation, attempted when cancer has still not apparently spread beyond the pelvis.

Naturally the results of any surgical procedure indicate its value. Operations for postradiation cancer of the cervix were first carried out essentially as palliative operations, but the passage of time has shown that they may afford five-year cures.

The results in a series of seventy-five patients operated upon between September, 1947 and July 1, 1950, i.e., about five or more years previously, are presented in Table I.

The over-all five-year salvage rate was 32 per cent, being 61 per cent for patients with recurrent or uncontrolled disease limited to the cervix, and decreasing to 20 per cent where bladder or rectum or both were involved. Even the latter figure is of significance in view of Truelsen's studies, mentioned above, where all patients not primarily responding to radiation were dead in twenty-four months and only 1.5 per cent were alive at the end of the third year following detection of their recurrences after a period of apparent healing of the lesion under radiation therapy.

A review of the type of operation performed in this series of seventy-five patients is summarized in Table II.

In radical cancer surgery there are inherent risks. The mortality in this series is summarized in Table III.

Surgical mortality is defined as death within 30 days.

For those who did not survive five years, the postoperative longevity is as shown in Table IV.

These data would indicate that if the patients who were not destined to survive following what was judged to be the appropriate operation, survived (excepting the surgical deaths) for an average of fourteen months following operation, and in view of Truelsen's results (mentioned above), it would appear that their lives were not necessarily appreciably shortened.

TABLE I.

	Total No.	Living 5 or more yr.	Dead	Per cent 5 yr. Cures
When recurrent carcinoma was confined to cervix	18	11	7	61%
When recurrent carcinoma spread to vaginal vault	9	3	6	30%
When recurrent carcinoma spread to parametria	7	2	5	30%
Recurrent carcinoma metastasized to pelvic nodes	1	0	1	—
Recurrent carcinoma invaded bladder and/or rectum	40	8	32	20%
Totals	75	24	51	32%

TABLE II

Operation	*No. Patients*	*5 yr. survivors*
Classical Wertheim	6	4 (66%)
Radical hysterectomy and pelvic nodes	23	12 (52%)
Anterior pelvic exenteration	11	3 (30%)
Total pelvic exenteration	35	4 (11%)
	75	23 (30%)

TABLE III

Operation	*No. Patients*	*Surg. Mortality*
Classical Wertheim	6	0 (%)
Radical hysterectomy and pelvic nodes	23	0 (%)
Anterior pelvic exenteration	11	3 (30%)
Total pelvic exenteration	35	6 (16%)
	75	8 (10%)

TABLE IV

Operation	*No. not Surviving 5 yr.*	*Av. Postop. Life*
Classical Wertheim	2	29 mo.
Radical hysterectomy and pelvic nodes	11	14 mo.
Anterior pelvic exenteration	6	4 mo.
Total pelvic exenteration	25	14 mo.
Totals	44	Gen. Av. 14 mo.

Discussion and Conclusion

If a patient is treated for cancer of the cervix by radiation, she should be carefully followed and examined at frequent intervals. If clinical evidence of recurrence is detected, biopsy evidence for this should be sought. If there is such evidence,

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Early Carcinoma of the Prostate

Diagnosis and Treatment

By Fletcher H. Colby, M.D.
Boston, Massachusetts

THREE things are important in regard to carcinoma of the prostate. It is surprisingly common. The diagnosis of early lesions is not easy. Cancer of the prostate can be cured.

Incidence

Figures from many sources indicate the frequency of prostatic cancer. Five of every 100 men over sixty, it is said, will eventually have this disease. According to public health and insurance company statistics, about 700,000 men each year in this country reach the age of sixty.[2] Each year, therefore, if these figures are correct, 35,000 men will develop cancer of the prostate.

Even more impressive is the incidence of prostatic cancer found at routine autopsy. Several different investigators have reported that there is histological evidence of this disease in from 14 to 50 per cent of men over fifty. These observations are based on the finding of small microscopic areas of cancer within the gland. Their clinical significance is not clear, for it is not known how many of these men would have developed clinically detectable cancer had they lived.

Next to cancer of the stomach, cancer of the prostate is the commonest malignant tumor as a cause of death in men over sixty. In the United States there are 11,000 deaths annually from this disease.[2] For years it has been true that about 20 per cent of obstructing prostates are malignant.

Such figures as these speak for the high incidence of prostatic cancer. There seems to be no real evidence that the incidence of this disease has increased alarmingly during the last twenty years.

In spite of the frequency of cancer of the prostate probably comparatively few cases are recognized early and many fewer are subjected to radical surgery. The reasons are clear. By itself, early cancer of the gland causes no symptoms. When obstructive symptoms occur, the lesion is either associated with benign hypertrophy or is so advanced that surgical care is impossible. About one half of our own total prostatectomies for early cancer had no urinary symptoms. Their lesions were detected by rectal palpation during a routine physical examination.

It is apparent that many clinics and many urologists fail to advise radical surgery for early prostatic cancer. Otherwise, more of these operations would be performed. This is because many are skeptical about this operation in spite of favorable reports of a very respectable five-year survival rate clinically free of disease. The fear of urinary incontinence, damage to the rectum and impotence are considerations. The first two are operative hazards. Impotence is inevitable. Castration and/or estrogen therapy are less hazardous and easier to recommend. Although castration and/or estrogen therapy may render this disease quiescent for several years, the only possibility of cure at present lies in radical surgery.

During the five-year period 1946 to 1950, two hundred and nineteen patients with cancer of the prostate were admitted to our urological ward service. Forty-one total prostatectomies for carcinoma were performed during these years. About 19 per cent of these patients, therefore, were considered suitable for this operation. This is a higher ratio than many clinics have reported, other figures varying from 5 to 20 per cent. Applying this to the yearly expected incidence of this disease there would be at the least 1,750 and at the most 7,000 total prostatectomies performed in this country. Obviously a very small number of men who have this disease receive what we believe is adequate treatment.

Diagnosis

Proper treatment is based on correct diagnosis. The diagnosis of early prostatic cancer is not easy. Rectal palpation, needle biopsy and perineal exposure with immediate frozen section are the methods we use. Other diagnostic methods have not been reliable enough for us to depend upon them as indications for radical surgery. Serum acid phosphatase determinations are of value only as a contraindication to radical surgery when they are elevated. More recent methods of estimating the serum acid phosphatase of prostatic origin based

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on the inhibiting action of L-tartrate on prostatic acid phosphatase may prove to be helpful in the detection of early lesions.[1] Cytological examination of expressed prostatic secretion has not been an aid in diagnosis in our experience.

How accurate have these three methods of making a diagnosis been?

Rectal Palpation.—In 193 cases of suspected prostatic disease examination by the rectum made the correct diagnosis in 68 per cent. It was incorrect in 32 per cent.

Needle Biopsy.—In 103 patients in whom bits of tissue were removed with the Silverman needle the correct diagnosis was made in 78 per cent. Needle biopsy was unsatisfactory or failed to make a correct diagnosis in 22 per cent.

Perineal Exposure and Frozen Section.—This was the most accurate diagnostic procedure. It was correct in 92 per cent of our cases and incorrect in 8 per cent. Errors were due chiefly to the removal of inadequate tissue and to the difficulties of the microscopic examination of tissue hurriedly fixed and stained.

Total prostatectomy was performed in forty-six of our cases without a histological diagnosis of cancer. Here the operator depended upon his preoperative impression from rectal examination and the consistency of the gland at the time of perineal exposure. He was correct 65 per cent of the time but wrong in over one-third of the cases and proceeded with an unnecessarily radical operation. Total prostatectomy should be performed only after a histological diagnosis of cancer has been established.

From 1933 to 1954 one hundred and seven total prostatectomies for suspected early cancer were performed on our ward service. Many were done by the resident staff. About an equal number of these operations done on the private services are not included in this report. Eighty-six of these 107 patients had cancer. Twenty-one had benign lesions suspected of being malignant. Most of the operations followed the perineal technique described by Dr. Hugh Young. A few patients who had very large glands had a combined abdominoperineal operation.

The mortality following this procedure has been low (about 5 per cent), complications were few, and the functional results have been reasonably good. Eighty-eight per cent of the patients eventually had good or fair urinary control and required no apparatus to keep them dry. About 74 per cent had perfect control. Twelve per cent were incontinent. Many of these, however, remained dry at night but when they were active some sort of apparatus was necessary.

Adequate operation means the removal of the entire prostate with its capsule, the prostatic urethra and part of the bladder neck, the seminal vesicles and intervening fascia. A study of these tissues removed at operation taught us certain interesting facts. Although clinically, malignant disease often seemed to be limited to one small area within the prostate, histological examination showed that frequently there were other unsuspected foci of cancer present. This was demonstrated by the examination of sections of the entire prostate. Neoplastic tissue often seemed to be multicentric in origin.

Tumor involvement of the capsule of the prostate and invasion of the perineural lymphatics have both been considered to be ominous features of this disease. Both were present in about 70 per cent of our cases but, as far as I could determine, their presence had no effect upon prognosis.

Invasion of the seminal vesicles, on the other hand, was a serious feature. Tumor extention along the sheaths of the vesicles is a favorite course for the spread of tumor cells. This had occurred in 38 per cent of our patients who were treated by total prostatectomy. The seriousness of this feature is evident from the fact that when the seminal vesicles were invaded, 25 per cent of the patients died of cancer within three years. When no such invasion was found, only 3 per cent died within three years. Invasion of the seminal vesicles then was an ominous sign and was regarded as an indication for castration and estrogen therapy. The seminal vesicles always should be completely removed.

Castration and/or estrogen therapy were used in addition to total prostatectomy in some of our patients who were operated upon before 1949, but these measures had no effect upon the five-year survival rate of patients reported clinically free of disease. Six of our fifty patients operated upon five or more years ago were castrated. Three patients died of cancer within about three years, one died of unknown causes, and one cannot be followed. The sixth patient, castrated at the time of total prostatectomy, is alive nine years later with questionable recurrent disease and is not regarded as a five-year cure.

End-results

Cancer of the prostate is a variable disease. Some afflicted individuals live for years apparently affected little if any by their neoplasm. Others succumb quickly. The histology of these tumors has not been very helpful in telling why this is so, except that the rapidly growing undifferentiated neoplasms usually respond poorly to any treatment. The average duration of life for patients with untreated cancer of the prostate is probably less than two years.

Seventy-one of our patients with prostatic cancer had total prostatectomies three or more years ago. About 62 per cent lived for three years apparently free of disease. Eleven per cent died of cancer. About 12 per cent died of other causes. About 4 per cent are alive with recurrent disease. Three years is too short a period to fairly evaluate this operation.

Fifty patients were operated upon five or more years ago. Fifty per cent lived for five or more years clinically well. Twenty per cent died of cancer and an equal number died from other causes. One patient who is alive nine years after total prostatectomy and castration may have recurrent cancer. If a patient survives for five years after this operation and has no evidence of recurrent disease, his chance of cure appears to be good since only 4 per cent of our patients developed recurrent cancer after the five-year period. However, survival for five years after radical surgery is no guarantee that this disease has been cured.

Conclusions

There is a reasonable chance that cancer of the prostate may be cured by total prostatectomy if the disease is detected early. Such cases usually are free of symptoms, the lesion being suspected at the time of routine rectal examination. The most accurate method of diagnosis is by perineal exposure and frozen sections of tissue removed from a suspected area.

The results of total prostatectomy for early prostatic cancer compare favorably with those for the surgery of cancer of other regions. Functional results after operation are reasonably good. The five-year survival rate clinically free of disease has been 50 per cent.

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CARCINOMA OF THE LUNG

(Continued from Page 454)

While these scientific studies are of paramount importance, statistical clinical reviews of cancer of the lung, such as this report from Mount Carmel Mercy Hospital, may be highly informative along many lines of thought and complementary to strict laboratory research.

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CARCINOMA OF THE BREAST IN PREGNANCY

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Roentgenological Studies of the Colon

Indications and Significance of Findings

By Walter A. Fansler, M.D.
Minneapolis, Minnesota

I WISH to express my appreciation for the honor of presenting the Annual Beaumont Oration before the General Assembly of the Eighty-seventh Meeting of the Michigan State Medical Society. Dr. Beaumont should be an inspiration to all of us, particularly to members of the Michigan State Medical Society, since it was here that so much of his work was done. With little scientific equipment and under most adverse conditions his observation proved certain physiological functions of the stomach which had previously been only a matter of conjecture. His work is a striking example of the truth that valuable medical contributions need not depend upon elaborate scientific equipment. It is the duty of each of us to try to make some contribution, no matter how small, to the common fund of medical knowledge. My discussion is to call attention to some of the most recent developments in the diagnosis and treatment of conditions of the colon which I believe are not, as yet, fully appreciated by many physicians.

Perhaps the most outstanding causes for the increased interest in colon studies are the present interest in the early diagnosis of cancerous or precancerous lesions and the fact that operations on the colon carry a much lower operative mortality than formerly. With operative risks varying from 10 to 40 per cent, operations upon the colon were more or less reserved for cancer, obstruction or other lethal conditions. Small tumors, ulcerative colitis, diverticulosis, diverticulitis and recurrent volvulus were regarded as conditions to be observed and treated medically except in case of extreme emergency. With present mortality rates reduced to a minimum, colon surgery is no longer regarded as a major hazard.

It is not my intention to dwell unduly upon the symptoms and diagnosis of lesions of the large bowel, in which indications for study are obvious and positive x-ray findings a foregone conclusion. Rather, I wish to discuss symptoms which are frequently overlooked or are more or less disregarded and to call attention to the fact that small lesions which were seldom revealed by older x-ray methods are presently being demonstrated almost routinely. The importance of the diagnosis of small polypoid lesions lies in the fact that 10 per cent of them are cancerous and the remainder are potentially malignant. We have almost reached the limit of radical operation for cancer of the colon and rectum, so little more can be expected in this direction insofar as increasing our percentage of cures for this disease. Our greatest chance for extension of cure lies in early diagnosis and elimination of the focus while the disease is still localized or is in the precancerous stage.

There are a number of symptoms which should alert the physician to the advisability of x-ray studies. Very early cancerous or precancerous lesions do not bleed. Their discovery can only be due to a fortuitous routine examination. In most instances the earliest clinical evidence of the disease is the passage of blood. Also, bleeding is the symptom, aside from pain, which most frequently brings the patient to the physician.

The amount and character of the blood passed has been considered significant as to the probable cause and site of bleeding. Time is spent discussing whether the blood is mixed with the stool, is on the surface of the stool, is light or dark, clotted, mixed with mucus or precedes or follows bowel movement. Such facts make an interesting academic discussion, but the crux of the situation is that the patient has passed blood and the passage of any kind or amount of blood is abnormal. A thorough examination is indicated in all instances. This means a careful proctoscopic and, in many cases, roentgenological examination. A physician is never justified in prescribing treatment for bleeding without one or both of these examinations. Proctoscopic examination may definitely reveal the source of bleeding. If such a source is revealed and the blood is limited to the bowel below the point of proctoscopic examination, x-ray studies may not be necessary. If, however, a cancerous or precancerous lesion is discovered, x-ray studies should be made since in approximately 3 per cent of cases another lesion or lesions will be present above the reach of the proctoscope.

The presence of gross amounts of blood is sel-

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dom overlooked so I wish to call attention particularly to the great significance of the presence of a few small pinpoint clots of dark blood or thread-like streaks scattered over normal bowel mucosa. It is this type of bleeding which the physician may disregard. A colonic lesion is present in the majority of these cases. In most instances the lesion will be a small polyp or early carcinoma, although occasionally a scirrhus napkin ring type of carcinoma may be encircling the entire bowel. In any event, the observation of this type of bleeding is extremely significant and careful x-ray studies are indicated in every case. If with this type of bleeding the x-ray study is negative, we believe it should be repeated immediately. If it is still negative and bleeding persists, the examination should be repeated at regular intervals. In our experience on several occasions later examinations have demonstrated a lesion. We believe this type of bleeding to be the one most significant slight symptom indicating the presence of a colonic lesion.

Common symptoms other than bleeding which are indications for x-ray studies of the colon are unexplained changes in bowel habit, alternate diarrhea and constipation, recurrent abdominal cramps of suspected colonic origin, tenderness along the colon or segments of the colon or tumefactions which may involve the bowel. These symptoms are frequently due to functional conditions, particularly in younger individuals, and more often than not are of medical rather than surgical significance. However, it has been our experience that most patients welcome the suggestion of x-ray examinations. The fear of cancer lurks in the minds of most of these patients and relief of this fear is well worth time and expense involved in x-ray studies.

If colon studies are decided upon, it is needless to say that the barium enema is the only safe and satisfactory method. Oral ingestion of barium will seldom reveal a small colonic lesion, and if a gross lesion with obstruction is present, future surgical intervention will be more difficult. To be of value, roentgenological studies must be well done. Inadequate examinations confuse rather than clarify the issue. Insofar as gross lesions are concerned, I am sure a good x-ray technician will do a very creditable procedure. However, the finer phases, and by this I mean the demonstration of lesions 0.5 cm. or less in diameter, require the services of a trained roentgenologist who is especially interested in this phase of study.

A bowel free of stool is the prime requisite of a satisfactory examination so the preliminary cleansing must be thorough. Adequate examination consists of fluoroscopic examination followed by films taken from different angles and with the patient in different positions, the use of special enema media and both routine and air contrast examinations. Films alone are often inadequate for diagnostic purposes. In films there are frequently overlapping segments of colon or regurgitation of the opaque media into the ileum which obscures a portion of the large bowel. Manipulation during fluoroscopic examination will straighten out these overlapping areas and allow adequate examination of all segments. Change of position of the patient will also permit better visualization of all portions of the colon and is an aid in differentiating between polyps and diverticula.

The most troublesome point of diagnosis is the differentiation between small polypoid lesions and retained particles of stool. In the case of a small sessile polyp, a definite diagnosis should not be made on the basis of one examination. If such a lesion is thought to be present as a result of the first study, the examination should always be repeated after a second thorough preparation. If the same defect is noted in the same location, it is then safe to conclude that an organic lesion is present and that the original shadow was not due to a particle of stool or other artefact. In some cases even a small polyp may have a definite pedicle, and if a pedicle can be definitely demonstrated on the first examination, a second examination is not necessary. It is only where a pedicle can be demonstrated that a positive diagnosis of a small lesion is possible from one examination. Repeated x-ray examinations are unpleasant but they are much less serious and less disconcerting than to open an abdomen and find no lesion present.

There is one complication which often renders the demonstration of small polypoid or invasive lesions difficult or even impossible. This is the presence of diverticula, diverticulitis or the residual changes due to this disease. In diverticular disease we consider the continued or intermittent presence of small amounts of blood as noted in the stool or seen on the bowel wall during proctoscopic examination of extreme significance. This type of bleeding seldom occurs from diverticula,

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Liposarcoma of the Foot

Case Report

By Sam Sugar, M.D., and
Bernard M. Murphy, M.D.

Jackson, Michigan

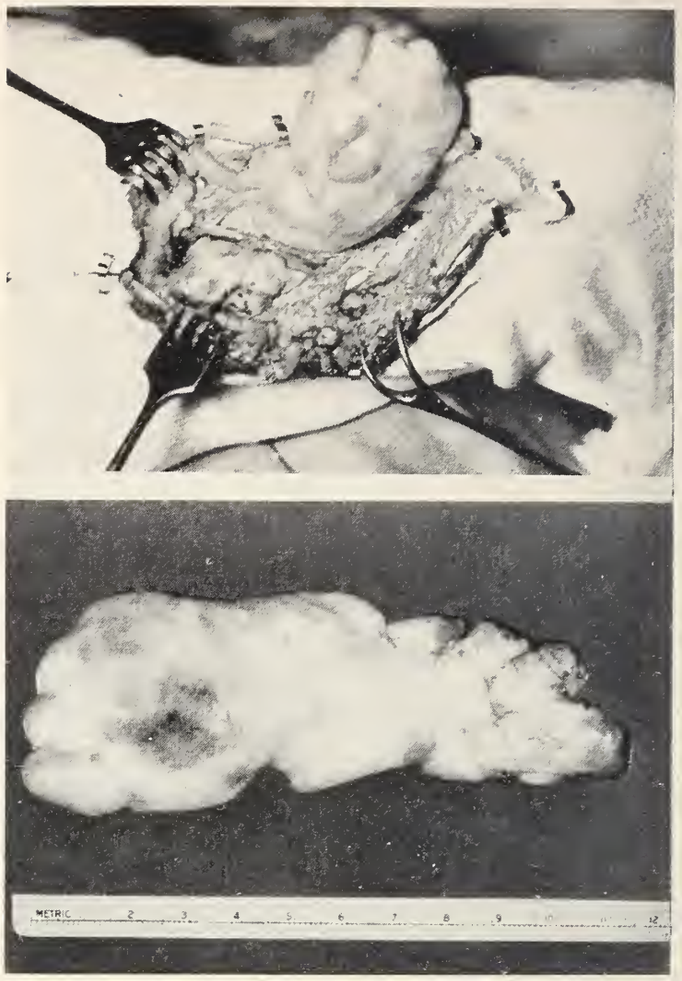
A SEARCH of the available literature indicates that liposarcomas are comparatively rare tumors. Stout[5] in his excellent discussion states that he only was able to find forty-one cases in the past thirty-seven years at Columbia University. Moreland and McNamara[3] found nine cases in a review of 16,000 of all types of tumors. Other authors have reported isolated cases in various locations of the body. No cases of such a tumor in the foot has been reported.

However, this case is being presented, not because of its rarity, but because of the course it followed. Whereas all reports have noted the serious potentialities of these tumors, yet the general feeling is that these tumors are not very malignant; local excision and radio therapy are usually sufficient, since metastases occur very late or not at all. Yet one must keep in mind that these tumors are not to be treated lightly, and unless early radical treatment is instituted, the prognosis may be hopeless. The following case brings this out quite forcibly.

Case Report

The patient was a white male physician, aged forty. In November, 1950, following a slight fall down some stairs, he noticed some pain and a mass in the plantar surface of the left heel. This persisted and in February, 1951, he was operated upon. X-rays at the time were negative for bone pathology. The patient was in good health otherwise, and physical examination was essentially normal except for the left foot. The past history was noncontributory. At operation a yellowish fatty tumor beneath the plantar fascia was found. It extended from the os calus to the metatarsal heads. It gave the gross appearance of a lipoma. It shelled out easily by finger dissection and appeared well encapsulated (Fig. 1). It measured 3½ inches in length and 2½ inches in width. There were a number of digitations at the distal end of the tumor, giving the appearance of small toes. In fact the tumor had somewhat the appearance of a miniature foot (Fig. 2).

The microscopic report was as follows: "Sections of the tumor mass reveal a very cellular growth in some areas which is well circumscribed but not encapsulated. Cells are without organized structure and within the loosely textured stroma there are numerous small blood vessels. Cells comprising the tumor vary greatly in size and shape. Some are adult type fat cells with large vacuoles representing cytoplasm, with compressed nuclei along their border. Still other cells have elongated to ovoid nuclei, with small vacuoles of fat in their cytoplasm, these most frequently being bipolar. Still other cells have large elongated nuclei, without fat being demonstrated within their cytoplasm. A few cells have scanty cytoplasm, and large nuclei which show some clumping of their chromatin, and in a few instances very prominent nucleoli, and an occasional nucleus having as many as three nucleoli. A few areas show recent hemorrhage." The microscopic diagnosis was liposarcoma.



Figs. 1 and 2.

According to the classification described by Stout,[5] the tumor could be placed in the poorly differentiated type. Nothing else was done besides the local excision. The patient got along well for one year. In February, 1952, due to some pain in the original site the patient was reoperated upon. A recurrence was found with signs of invasiveness. The left leg was amputated below the knee. The patient was fitted with a prosthesis and got along well for about eighteen months in apparent good health.

In July, 1953, he was suddenly seized with acute pains in the right lower chest radiating forward from back. Myelograms showed a block at levels of D-9

and D-10. A laminectomy was done and an extradural tumor mass was found. It was impossible to remove it all. Microscopic diagnosis confirmed that it was metastatic from original tumor. He was given a course of roentgen therapy. While he was receiving this, a mass was felt in the left thigh. This was excised and also found to be metastatic. This area also received radiation.

In October, 1953, he developed bilateral sciatic pain. Another laminectomy was done at level of L-4 and L-5. Further metastases were found. A palliative rhizotomy was done, and radiation to this part was given. About two weeks later the patient noticed two masses in the right thigh and also developed a droop of the right upper lid. He showed no other neurological signs.

It was decided to try a course of radioactive cobalt therapy. While he was receiving this, he developed complete paralysis of the right upper lid; also x-rays revealed pulmonary metastases. Following the cobalt treatment, he went down hill rapidly, and terminally developed abdominal metastases with intestinal obstruction, and metastases in the soft tissue of the right shoulder and chest. He died in February, 1954, about three years from the date of the orginal operation for local removal. No autopsy was obtained.

Summary

A case of liposarcoma of the foot is reported that progressed rapidly to a fatal outcome. Rapid and diffuse metastases occurred in spite of local excision, later amputation, and intensive radiotherapy.

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ROENTGENOLOGICAL STUDIES OF THE COLON

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and if present, it frequently indicates the existence of a polypoid or invasive lesion. If persistent bleeding is present in these cases, we believe surgical exploration to be indicated regardless of the inconclusiveness of roentgenological findings.

The development of the sulfonamides, antibotics, the use of transfusions and other intravenous medications and supplements have reduced the risk of operations upon the colon to a minimum. Except in the case of the extremely aged and persons with serious systemic changes, colotomy, the removal of segments of the colon or the entire colon involves little more risk than other less extensive abdominal procedures. It need no longer be reserved as a last resort for patients with obstructive or far advanced carcinomas or more or less hopeless conditions. Many patients who have in the past been treated medically for conditions which have caused more or less constant discomfort or semi-invalidism are being resorted to normal health and activity by safe surgical procedures.

In conclusion, I wish to stress the following points:

1. It is possible to reveal minute lesions of the colon by proper x-ray studies.

2. Unless the x-ray studies are well done, they are a handicap rather than a help, since a negative report based on an unsatisfactory examination may give both the patient and physician a sense of false security.

3. The presence of minute quantities of blood, particularly when observed on a normal bowel wall during proctoscopic examination, is most significant.

4. Where no source can be shown by the first examination, the study should be repeated.

5. The discovery and removal of small cancerous or precancerous lesions is essentially the only chance of appreciably increasing the rate of cure of colonic cancer.

6. Because of lessened operative mortality, many disabling conditions due to colonic conditions which have been treated palliatively can and should be relieved by surgical measures.

Calhoun County Medical Society Cancer Registry

By James W. Hubly, M.D.
Battle Creek, Michigan

THE Calhoun County Medical Society, believing that valuable information could be derived from a continuing system of cancer patient reporting and follow-up, in 1949, extended an invitation to the Calhoun County Unit of the Michigan Division of the American Cancer Society to assist in formulating such a program. Representatives of the Medical Society and its Cancer Committee, the County Health Department, the local hospitals, the Michigan State Board of Health, the Calhoun County Cancer Society, and other interested organizations met and formulated plans for the establishment and operation of the Calhoun County Medical Society Cancer Registry.

The registry is the property of the Calhoun County Medical Society and is housed, operated and financed by the Calhoun County Unit of the American Cancer Society.

During the first five years of its operation the registry has become the focal point of the county cancer control program. It is now functioning as the central registry for the several hospital cancer registries in the county. As a central registry, this facility provides for each of the co-operating hospitals a service which greatly simplifies the problems of conducting separate hospital cancer registries in conformity with the American College of Surgeons standards for approved hospital cancer programs.*

There are three primary specific purposes for the cancer registry:

1. To serve as the foundation for the cancer control program of the county.

2. To function as a central registry for the hospitals of the county, providing follow-up service and analysis of records on their patients.

3. To provide the necessary data for measuring the magnitude of the problem, for comparison with other communities, and for evaluating the effectiveness of control measures.

The physical organization of the central and satellite hospital registries is as follows:

The central cancer registry consists of three sets of files:

1. A name file: A card for each person ever entered in the registry, filed alphabetically and containing in addition to the person's name his registry case number and other pertinent identifying information.

2. A case file: A folder containing as complete, accurate, and up-to-date information as is available on every case of cancer in the county. This folder normally contains one or more physician's initial report forms, a hospital report form, a pathologist's report form, and periodic follow-up report forms. In addition, memoranda relative to special services needed by the patient and provided by the cancer society or other interested agencies are filed here. In the event of death, a copy of the death certificate and autopsy report, if available, complete the record. These records are filed by case number.

3. A follow-up file: A monthly rotating card file indicating the date on which the next follow-up on each case should be made.

The hospital registry consists of two sets of files:

1. A name file: A card for each person admitted to the hospital and discharged with a diagnosis of cancer. This card provides the central registry case number by which the case folder may be located in the hospital case file.

2. Hospital case file: A folder containing a copy of the central registry's hospital report and follow-up form.

The central registry has many sources of information. Physicians send in cards on all cases of cancer or suspected cancer under their care. Dentists, who are excellent sources of cancer case finding, particularly for cancer of the mouth, lip, and pharynx, do the same. The record librarians of the hospitals pull the records for all cancer patients, and volunteer personnel from the cancer registry abstract the cases onto the registry hospital forms. Copies of diagnostic x-ray mate-

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Read at the American College of Surgeons Clinic (Michigan Chapter) March 9, 1954, at Detroit, Michigan.

Dr. Hubly is a member of the Board of the Michigan Division of the American Cancer Society.

*The Calhoun County Medical Society and the Calhoun County unit of the American Cancer Society are particularly indebted to Dr. B. Aubrey Schneider and Dr. Daniel Horn of the statistical research section, medical and scientific department of the national office of the American Cancer Society, who drew up the original proposal on the basis of which the Registry was established, and who have maintained a continuing consultative and advisory relationship to the Registry.

rials are made available to the registry by the radiologists. The pathologists in the county submit to the registry a carbon copy of their reports on all tissue specimens and autopsies in which a diagnosis of malignancy is made.

The county health department submits to the registry monthly lists of all deaths occurring in the county during the month containing identifying information and the cause of death. In each case of death caused by cancer the county health department furnishes without cost a copy of the death certificate. Quarterly lists of Calhoun County resident cancer deaths are furnished by the vital statistics office of the Michigan State Board of Health. All death information thus obtained is checked against the registry files and death certificates are obtained from the county clerk's office on all cases dying of causes other than cancer. The follow-up on living cases is carried on by cancer registry personnel working through the physician in charge of each case.

For the purpose of obtaining as complete and accurate information as possible on each case of cancer, the following four forms are used: (1) physician's initial report form, (2) hospital record form, (3) pathologist's record form, and (4) follow-up report form.**

The responsibility for planning the statistical analysis of the data collected by the registry has been assumed by the statistical research section, medical and scientific department of the American Cancer Society in New York. The case records accumulated in the registry are coded by registry personnel, and the routine coding of new follow-up information is done as the reports are received. Periodic analyses and special studies are made at the request of the physicians and hospitals of the county.

With the records accumulated thus far, the central cancer registry has developed a workable file which aids in the administration of the cancer control program, the periodic evaluation of the cancer problem in the county, and also meets the needs of the physicians who are interested in the cancer problem.

The registry has been an effective agent for professional education in bringing the problems of cancer at a community level to the attention of the practicing physician. It has made the physician aware of the areas in which the diagnosis, treatment, and care of cancer can be improved. It has stimulated physician interest in cancer control. The pooling of records in the central cancer registry makes possible the impartial study of cancer as it exists and as it is being handled throughout the county.

One effect of the registry has been that of greatly improving the keeping of hospital records as they relate to cancer. This improvement has been brought about through greater interest among the attending physicians, residents, and interns. For example, records are now signed out with more attention paid to the specificity of primary site and extent of disease, and as to whether the treatment was definitive or palliative, and finally, with a statement as to whether the patient is free or not free of cancer when he leaves the hospital.

The central cancer registry has been of great help in establishing the hospital cancer registries in such a way as to meet the minimum standards for approval of a cancer program as required by the American College of Surgeons.

Although the volume of material thus far accumulated by the central cancer registry is not quantitatively spectacular, it is of such quality as to indicate the value and importance of concentrated and co-operative effort in dealing with the problem of cancer control.

**All of the above-mentioned forms are available for distribution at the Calhoun County Medical Society Cancer Registry, 27 West State Street, Battle Creek, Michigan.

The few cancers found among asymptomatic persons, as well as the high cost of each examination, precludes the large-scale financing of cancer detection centers by either governmental or voluntary agencies.

* * *

In Massachusetts, the delay between first cancer symptoms and the first consultation with a physician, and between the first consultation and the first visit to a clinic, have been reduced by one-half during the past twenty-six years.

The importance of evaluating a cancer control program cannot be overemphasized. Those portions of the program which do not achieve results commensurate with the time and money expended should be replaced by other types of endeavor. Methods for appraisal cannot be stereotyped and must be altered according to the type of program.

* * *

Next to curative therapy, there is no greater service that a physician can render to his cancer patient than to relieve him of pain.

Periodic Health Appraisal

Eyes

By Windsor S. Davies, M.D.
Detroit, Michigan

IT IS during the routine physical examination that unsuspected disease may be discovered. This is true of diseases of the eye as well as of other portions of the body. If an adequate ocular examination is not included in routine physical examinations, an important organ is neglected and the advantage gained by recognition of an unsuspected pathologic condition is lost. The discovery of such pathology must then depend upon those who do the physical examinations. A great step forward may be made in the prevention of blindness in this manner.

It is not the purpose of this paper to dwell upon the various diseases of the eye, their differential diagnosis and treatment. Instead, a plan of routine examination of the eye is presented which should give the examining physican an opportunity to recognize or suspect pathology and thereby institute treatment, or, if he deems it advisable, refer the patient to an ophthalmologist for further examination.

Several pertinent questions directed toward uncovering ocular complaints may be included in the routine history. Is vision good in each eye, is there ocular pain, diplopia, photophobia, epiphora, halos about lights, fleeting attacks of blurred vision, or a family history of glaucoma?

Vision may be estimated by using a standard visual acuity test chart at 20 feet, or a reversed visual acuity test chart with mirror at 10 feet (Fig. 1). Vision under 20/20 may only be due to the need of corrective lenses. On the other hand, it may indicate the presence of pathology.

Are the eyes straight? Is there paralysis of one or more extraocular muscles? Can diplopia be elicited? Is nystagmus present? Exophthalmos? Fixation of the eyes on the finger or a source of light should first be made in the primary position to determine if the eyes are straight. Then by following the point of fixation, the eyes are rotated above, temporally, inferiorly, and nasally to demonstrate paralysis if present. While rotating the eyes through these excursions the patient should be questioned as to the presence of diplopia in any field.

A defect in the visual field may be present without the patient's knowledge. Gross defects may be demonstrated by the confrontation method. Seated before the patient and about three feet apart, the physician compares the visual field of the patient with his own. The left eye of the patient and the right eye of the observer are occluded. The uncovered eyes fix upon each other. The finger or a small test object is then brought into the temporal, medial, superior, and inferior fields to demonstrate the presence of a visual field defect. The opposite eyes are then occluded and the procedure repeated.

The eyelids should be examined for the presence of edema, inflammation, and especially for new growths. A malignant tumor obviously should be recognized and removed as early as possible. Tumors of the eyelids, and especially those involving the lid margins, quite frequently present a problem in eyelid reconstruction if resection is necessary, especially if they have attained considerable size. Thus, also from the standpoint of repair and reconstruction, their early recognition is of importance. Examine the lid margins noting inflammation, crusting, eversion or inversion.

To better visualize the conjunctiva for the recognition of acute and chronic inflammation, edema, degenerations, scarring and new growths, the lower eyelid is retracted downward and the upper eyelid everted.

In the older age group particularly, chronic dacryocystitis presents the problem of continued tearing and regurgitation of pus into the conjunctival sac. Such chronic inflammation is not only a nuisance and aggravating to the patient, but, in addition, may act as a focus of infection in inflammation of the external eye. Chronic dacryocystitis may often be demonstrated by applying gentle pressure over the lacrimal sac and observing the punctum for regurgitation of serous or purulent material.

The cornea, anterior chamber and iris are best studied using a binocular loupe and oblique illumination. Corneal inflammation, vascularization, degeneration and scarring, the anterior chamber and variations from normal of the iris are then more clearly visualized and thereby better evaluated. Look for irregularity, inequality or immobility of the pupils. The direct and consensual light and accommodative reflex should be elicited.

Of utmost importance is the part the examining physician can play in the detection of glaucoma so that early treatment may be instituted for the prevention of blindness. According to Schoenberg,[3] this disease accounts for 20,000 persons who are totally blind and 150,000 who are blind in one eye in the United States. Berens and Tolman[1] state that there are approximately one million people in the United States (approximately 2 per cent of the population over forty years of age) who have chronic glaucoma and do not know it. Roper[2] states it most aptly when he says, "As effective treatment of glaucoma depends almost entirely upon early diagnosis, it is of extreme importance to realize that the symptoms of early glaucoma are vague and may easily pass unnoticed by both the patient and the physician. The general practitioner is in a strategic position to contribute to the control of blindness, particularly blindness from glaucoma, since he sees these patients earlier and more frequently than the ophthalmologist. Too often patients are referred to the ophthalmologist too late, after considerable sight has been lost." Because of the increase in the life span, the incidence of glaucoma is expected to increase.

An estimation of the intraocular pressure may be made by manual palpation of the eyeball through the upper eyelid as the patient directs his gaze downward (Fig. 2), or by the use of an instrument such as the Schiotz tonometer applied directly to the cornea (Fig. 3). The accuracy of manual palpation is not high, but if skill has been developed in this procedure by the examiner a very high or low tension may be recognized. Because of this, instrumental tonometry should become a part of every physical examination, the technique for evaluating the intraocular pressure by this method being readily mastered. It is only by this routine method of estimation of the intraocular pressure that the large group of potentially blind patients from glaucoma may be detected and therapy instituted.

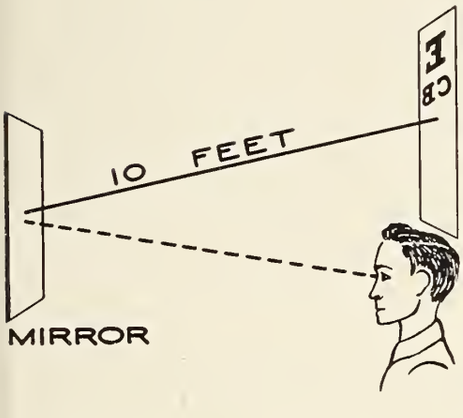


Fig. 1.



Fig. 2.

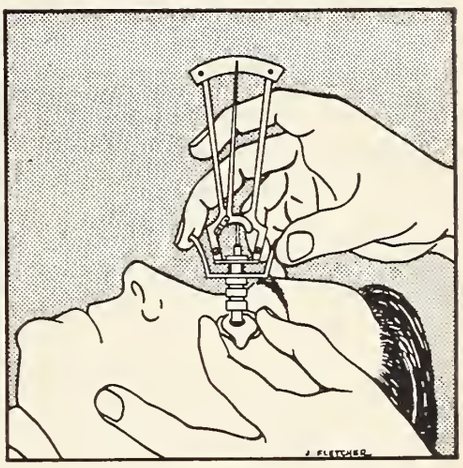


Fig. 3.

The ophthalmoscopic examination of the fundus is frequently quite difficult through the undilated pupil, especially in the elderly patient whose pupils are quite often miotic. If visualization of the disc and retina cannot be obtained through the undilated pupil, a drop of a mild mydriatic such as 3 per cent euphthalmine or 5 per cent ephedrine may be instilled. However, in patients over forty particularly, the danger of precipitating an acute attack of glaucoma must always be considered. It is therefore imperative that the presence of glaucoma be ruled out before the pupil is dilated. Following the fundus examination a drop of a miotic such as 1 per cent pilocarpine or 0.5 per cent eserine should be instilled in the eye.

A darkened room is preferable for examination of the fundus. The transparency of the lens and media is noted. The nerve head is then visualized, noting its size, shape and color and if its margins are clear and well defined. Is there hyperemia, congestion, elevation, hemorrhages and exudates as seen in optic neuritis and papilledema or pallor as seen in optic atrophy? The retinal vessels are then followed from the nerve head to the periphery noting variation in their calibre and character. Arteriosclerosis of the retinal vessels, if present, should be recognized. The macula lies two disc diameters temporal to and slightly below the center of the disc. If there is difficulty in locating the

(Continued on Page 480)

Acute Yellow Atrophy of the Liver Following Chloramphenicol (Chloromycetin) Therapy

By Vernon C. Abbott, M.D. John J. Marra, M.D., and James W. Gell, M.D.
Pontiac, Michigan

A RELATIONSHIP between chloromycetin administration and liver necrosis has recently been suggested.[8] The following case merits reporting since it shows, in our opinion, such a direct relationship.

Case Report

Clinical History.—The patient, a fifty-three-year-old, white housewife, was admitted to the hospital on May 7, 1953, for treatment of a fracture of the right ankle of approximately two weeks' duration. She had fallen off a step and suffered a triad malleolar fracture with compounding medially which had been treated at another hospital by simple suturing of the external tissue wound. A Penrose drain had been sutured into the wound. Soon after, the wound began to drain and there was no improvement noted. Because of this, the patient was transferred to Pontiac General Hospital.

A physical examination at that time showed a well-developed, well-nourished, white woman in no acute distress. The rest of the physical examination was within normal limits with the exception of the right foot. Here, the right ankle showed a gross deformity with an infected, sutured wound draining purulent material from the antero-medial surface. The wound was slightly painful. Urinalysis was negative. Blood examination revealed 12.4 grams of hemoglobin. Red blood cell count was 4,300,000. White blood cell count was 10,900, with 65 polymorphonuclear cells, 29 lymphocytes, 5 monocytes and 1 eosinophil.

The wound was opened widely and counter incisions were made on the lateral aspect to drain an abscess formation. Culture from the draining wound revealed the presence of B. coli and staphylococcus aureus. At this time, bacterial sensitivity tests revealed the organisms to be sensitive to aureomycin and chloromycetin. There was slight or no sensitivity with the other antibiotics, namely, terramycin, ilotycin, streptomycin, penicillin, polymyxin and bacitracin. X-ray examination on admission, showed a triad malleolar fracture with marked lateral dislocation.

Four days after admission, the patient had a manipulation and reduction of the fracture and application of plaster cast performed in the surgical operating room. X-ray after application of the cast showed a somewhat posterior dislocation of the foot with lateral displacement. Two days later a pin was placed in the os calcis for skeletal traction and the cast removed, resulting in improvement of the position of the fractured fragments. X-ray at that time, showed only slight displacement posteriorly, of the fractured fragments.

X-ray one month later, revealed no significant change in the position of the fragments. There was very slight evidence of bony union. About four days later, after application of pressure pads, the fracture fragments and the dislocated tibial astragalar joint showed excellent position and alignment. A repeat x-ray, approximately one month later, showed the joint to be maintained in good position. There was evidence now of a small amount of callus formation. The patient showed fairly good therapeutic response and was discharged from the hospital on July 14, 1953, approximately two months and one week after admission, in an afebrile state and much improved, but with a draining sinus anteriorly.

The patient was then followed as an outpatient at the hospital clinic and was seen at about weekly intervals. X-ray taken on July 30, 1953, showed slight callus formation and good position of the fragments of the fibula and tibia. However, there was evidence of nonunion of the fragments of the medial malleolus, and clinically, the ankle joint was limited in all motions. Repeat bacterial sensitivity tests at this time revealed a growth of E. coli and nonhemolytic staphylococcus aureus. The organisms proved sensitive to chloromycetin and resistant to the other antibiotics. Chloromycetin was then prescribed. The patient continued to take capsules of chloromycetin, 250 mg. every six hours four times daily, up to the time of her last admission on October 25, 1953.

At this time, the patient was extremely weak and somewhat irrational for a preceding period of twenty-four hours. The patient developed a progressive icterus with nausea and continued vomiting. There was a high fever and she was admitted to the hospital after being transported there by ambulance. The patient's course in the hospital was rapidly and progressively downhill and she expired the day following admission.

Urinalysis on the last admission, revealed a dark yellow urine with the presence of bile and albumin. Blood sugar was 100 mg. per cent. Serology for syphilis was negative. Sedimentation rate was 33 mm. in one hour. The white blood count was 12,800. Hemoglobin was 13 grams. Differential count revealed 67 polymorphonuclear cells, 24 lymphocytes, 2 eosinophils and 7 monocytes. Physical examination on the last admission, revealed an extremely ill, markedly icteric woman who was moderately obese and thrashing frequently about the bed. The sclerae were markedly icteric. There was no lymphadenopathy. The heart and lungs were negative. The abdomen was soft and the liver, kidneys and spleen were not palpable.

About three hours following death, an autopsy was performed. The significant findings on postmortem examination included marked icterus of the skin and mucous membranes. A bivalved plaster cast covered the right lower leg enclosing the foot and leg to a point just below the knee. There was no adenopathy. The subcutaneous tissues were markedly bile stained. The

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liver was small and the lower edge was felt two inches above the right costal margin. The liver weighed 1,000 gm. The surface was smooth and the capsule was transparent. Sections of the liver showed a mottled yellowish-brown to reddish-brown appearance with complete loss of liver markings. The liver parenchyma was extremely friable and tore with the slightest manipulation. The cut surfaces showed marked congestion.

The gallbladder was contracted and free of stones or other focal disease. There was no obstruction in the biliary system. The ducts entering the duodenum were grossly normal and patent. The kidneys were swollen, weighing 180 gm. and 200 gm. on the right and left sides, respectively. They showed marked discoloration as a result of bile staining. The bone marrow appeared red and cellular. The site of the fracture wound was dry and a crust of grayish scaly material covered the old sinus tract opening. The joint showed no gross pathology.

On microscopic examination, the major findings were confined to the liver and kidneys. Examination of the liver showed complete loss of normal lobular architecture. The liver tissue was almost entirely replaced by a diffuse necrotic process in which only an island of liver cells was recognized. These remaining few islands of cells showed extensive degenerative process with cloudy swelling, fat infiltration and pyknosis of the nuclei. The necrosis was present in all parts of the liver lobules and not limited to any one particular part of a lobule. It involved the periportal, midzonal, and the central areas of the lobule to an equal degree. In some places, the destructive process was so extensive and involved such large areas, that no liver tissue was recognized; only a reticular network remained. There were large amounts of bile pigment scattered throughout the remaining liver tissue cells.

Examination of the kidneys revealed the vessels to show marked congestion. The glomeruli showed some swelling and often completely filled the glomerular spaces. The major findings were limited to the lining tubular cells of both the proximal and convoluted tubules. These cells appeared frayed, showed marked swelling and granularity, and many of the nuclei of the tubular cells were completely lost. A few tubules showed nothing more than fragments of nuclei. Many of the tubules contained hyalin and epithelial cell casts. A large number of the tubular cells showed infiltration with bile pigment, and bile casts were often noted in the lumen of the tubules.

Examination of the bone marrow, with sections taken from the sternum, ribs and lower right leg, showed a grade three cellularity on the basis of one to four grading. There was a normal myeloid-erythroid ratio. The cells showed all stages of development and appeared in normal proportions. Sections from the soft tissues of the injured leg at the site of fracture revealed evidence of fibrosis and a cellular infiltrate of lymphocytes. Sections from the injured ankle joint showed no evidence of osteomyelitis, and a good union of the fractured parts was observed.

The final anatomical diagnoses were: (1) acute diffuse necrosis of the liver, probably secondary to chloramphenicol intoxication, (2) severe jaundice of all body viscera and tissues, (3) cholemic nephrosis, (4) traumatic fracture of right ankle, healed. (5) chronic inflammation of skin and dermal appendages in the region of the fracture of the right ankle.

Drug Therapy.—On the first hospital admission, the patient received 600,000 units of penicillin daily for four days. She received 250 mg. of aureomycin daily for forty-six days. She received chloromycetin, 250 mg., four times daily for two days. Following the discontinuance of aureomycin, terramycin was instituted, 250 mg., four times a day for seventeen days. The patient was then discharged home without medication for thirty-five days. After thirty-five days, gantrisin, grains 7½, four times a day, was administered for six days. No medication was administered thereafter for an interval of five days, whereupon, chloromycetin, 250 mg., four times a day, was prescribed. The patient continued to take chloromycetin, 250 mg., four times a day until her final admission to the hospital in October, 1953. A total of 218 capsules had been prescribed. No other medications were administered during this time.

Discussion

Since chloramphenicol was the only drug given the patient the last fifty-odd days of her life, and since there was no known exposure to other potential hepatotoxic agents, we assume a direct relationship between the drug and hepatocellular destruction. Although the patient had received other antibiotics during her course of hospitalization, she showed no evidence of illness and there was an interval of thirty-five days after leaving the hospital, at which time, no medicine or antibiotics were ingested.

In 1933, Madison and Squier[5] pointed out the danger of bone marrow depression following the use of drugs containing a nitrobenzene component. This danger was further emphasized in 1934 by Kracke and Parker.[3] Smith et al[10] in 1948 studied the toxicity of chloramphenicol in dogs. They demonstrated the production of a moderate anemia in dogs given the drug intramuscularly. No change in white blood cell counts, differential counts or other toxic manifestations were demonstrated. Smadel,[9] in 1949, suggested that the presence of the nitrobenzene radical in chloramphenicol would lead to the suspicion that the drug might be toxic to the hemapoietic system. His clinical studies up to this time, showed no such manifestation, nor did they show evidence of kidney or liver damage resulting from the use of the drug. It was not until April of 1950, that Volini[11] reported hematopoietic changes in humans following chloramphenicol therapy. The first fatal case[7] of aplastic anemia following chloramphenicol therapy was reported

in December of 1950, and it was not until January of 1952, that the second fatal case[4] was reported. During 1952 and 1953, a considerable number of cases were reported and, at the present time, there is little doubt that the drug may, in occasional instances, demonstrate a toxic effect upon the hemapoietic system.

This effect need not be limited to the bone marrow. Liver damage may be an early manifestation of an idiosyncrasy to chloramphenicol. It is interesting to speculate as to whether this patient may not have later shown evidence of bone marrow damage, had not the liver destruction been fatal. The speculation that liver damage may show its appearance before other evidences of toxicity is borne out by other following reports from the literature. Hargreaves et al[1] in 1952 reported a case with jaundice occurring ten days after the beginning of chloramphenicol therapy. This patient showed no evidence of hematological disorder during the period of his jaundice (three days). He died two and a half months later of aplastic anemia, and at autopsy his liver was normal. These authors reported three other cases of aplastic anemia following chloramphenicol therapy with transient elevations in the serum bilirubin during the course of their disease. Clinical jaundice was not reported in these cases. Hawkins and Lederer[2] in 1952 reported on two children in whom jaundice developed thirty-nine and forty-nine days following the start of chloramphenicol therapy. Purpuric manifestations were noted eighty-six and 120 days after the start of the drug and death from aplastic anemia occurred 135 and 154 days after the onset of therapy. Autopsy findings showed no gross evidence of hepatic damage but microscopic examinations of liver sections showed infiltration of the portal triangles with lymphocytes and plasma cells. Wolman[12] in 1952 reported a case of jaundice of two days' duration occurring in a child approximately five weeks after chloramphenicol therapy. The child died one month after the episode of jaundice and autopsy showed fatty degeneration of liver cells and some periportal round cells infiltration. It is interesting to note that evidence of hepatic damage in these cases occurred before any sign of hematological disorder.

In 1952, Rheingold and Spurling[6] noted jaundice developing terminally in a patient with aplastic anemia following chloramphenicol therapy. Some evidence of liver necrosis was observed at autopsy. Rich, Ritterhoff and Hoffman,[7] in reporting their case of fatal aplastic anemia, noted marked necrosis throughout the liver. The fact that jaundice was not observed in this case may have been due to the fact that the liver necrosis occurred terminally, and sufficient time had not elapsed for jaundice to become clinically evident.

Salm's[8] case of acute liver necrosis occurred in a five-year-old boy who developed jaundice seven weeks after chloramphenicol administration. The patient died two weeks later. At autopsy, virtually complete liver necrosis was found. No hematological or bone marrow studies were available.

Summary and Conclusions

A case report of fatal acute yellow atrophy of the liver associated with chloramphenicol therapy has been reported. No evidence of hematopoietic damage was observed in this patient. The history of idiosyncrasy to drugs containing a nitrobenzene radical is briefly reviewed, as is the history of occasional hematopoietic damage resulting from the administration of chloramphenicol. Ten case reports from the literature are briefly reviewed in which liver damage secondary to chloramphenicol idiosyncrasy is postulated. The evidence of damage to the liver varied from a transient serum bilirubin elevation to massive necrosis of hepatic tissue. It is suggested that such a reaction need not be limited to one system. Damage may occur during the course of a toxic reaction which is manifested mainly as hematopoietic damage or it may occur as the only manifestation of chloramphenicol idiosyncrasy. This case is reported with the hope that all patients using chloramphenicol be closely observed for possible hepatotoxicity.

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St. Luke's Hospital Clinico-Pathological Conference

Edited by
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THE patient was a white man, seventy-three years old, who was well until approximately one year before entering the hospital. At that time, he fell a distance of two feet, landing heavily on his back on a concrete surface. He subsequently experienced severe and persistent back pain, so that for the ensuing three months he was unable to return to his work as an insurance agent. Work was then resumed on a part-time basis. The patient stated that he had not been well during the past year but did not describe specific complaints. During the past year there had been no anorexia, constipation, melena or loss of weight.

On the day before admission, the patient did not feel well and retired at 7:00 p.m. About three hours later, he developed a penetrating dull pain on both sides of the lower abdomen. He was restless, did not sleep well, and during the night had three bowel movements. In the early hours of the morning, he got out of bed, fell, and was so weak as to require assistance in returning to bed. Nausea developed but vomiting did not occur. His physician was called and examination revealed a state of shock. The patient was then admitted to St. Luke's Hospital.

Physical examination revealed a well-nourished, white man who was pale and apprehensive. The skin was cool and moist. There was cyanosis of the hands and feet. The pulse was 100, respirations 30, temperature 100 degrees (F.), and systolic blood pressure 60 mm. Hg. The diastolic component was not heard. The head and neck were not remarkable. The breath sounds were normal and the heart sounds were not audible. The abdomen was flat and the upper portion was soft. There were no scars or hernias. The liver border was 5 cm. below the right costal margin and the spleen was not palpated. The lower abdomen was moderately tender, and there was diffuse resistance to palpation. A moderately large, poorly defined focus of marked tenderness and resistance was noted in the left lower quadrant. Bowel sounds were hypoactive. Rectal examination revealed no lesions, a small prostate, and soft brown stool. The external genitalia were not unusual. A weak pulse was palpated in the upper extremities. A pulse was not detectable in the lower extremities. The deep tendon reflexes were active and equal.

The urine was yellow, slightly turbid, acid, and of specific gravity 1.010. There was 2-plus proteinuria, and no reducing or ketone substances. The sediment revealed 5 leukocytes, 2 erythrocytes, and 2 finely granular casts per average high power field. Hematologic examination revealed 14.4 grams of hemoglobin per 100 cc. There were 4,400,000 erythrocytes and 17,600 leukocytes per cu. mm. Differential count of 100 cells revealed 74 segmented granulocytes, 10 band cells, and 16 lymphocytes. The non-protein nitrogen was 53 mg. per 100 cc. Chest x-ray revealed a cardiac configuration consistent with left ventricular prominence. The thoracic aorta displayed marked tortuosity and dilatation with focal calcification. X-rays of the abdomen revealed a faintly discernible oval shadow on the right side with slight calcification of the periphery. Distention of the small intestine or colon was not seen. Erosion of the vertebral bodies was not seen. The impression was marked diffuse dilatation and tortuosity of the thoracic and abdominal aorta.

The patient remained in a state of shock. On the second hospital day, he climbed over the guard rails and fell to the floor. After this, he complained of a sharp and severe non-radiating pain in the left chest. On the fourth hospital day, a large area of dark blue discoloration developed over the skin of the entire left flank and scrotum. Over the next few days, the state of shock receded, the blood pressure rose to 140/105 mm. Hg, and the patient was able to sit up on the side of the bed for five-minute periods. Bowel movements were productive of a soft, brown semi-liquid stool. The abdominal pain gradually became intense, respirations were labored, and death occurred on the tenth hospital day.

Discussion

Dr. H. M. Bishop.—Several of the clinical findings are suggestive of an intraperitoneal lesion. These include fever, leukocytosis, nausea, reduced bowel sounds, and localized pain and tenderness in the abdomen. These findings are suggestive of rupture of the liver or spleen, acute diverticulitis with abscess formation, or carcinoma of the colon with perforation and acute peritonitis. Rupture of the liver or spleen is usually preceded by trauma, and is often accompanied by pronounced anemia. In this patient, the hemoglobin was 14 grams per 100 cc. and the abrupt onset appears to have been spontaneous. In addition, acute chest pain and extensive subcutaneous hemorrhage are not typical of rupture of an intra-abdominal viscus. Diverticulitis with abscess formation is ordinarily not accompanied by profound shock of this long duration. Carcinoma of the colon is often preceded by a history of digestive disturbance, and there are loss of weight, obstruction of the colon, hyperactive bowel sounds, and microscopic or gross bleeding from the rectum. With perforation and acute peritonitis, high fever, abdominal distention, and an exceedingly tender abdomen with diffuse rigidity are expected. These signs are not mentioned in this record, and I shall dismiss these diagnoses.

As I review this case, it seems to me that the important clinical features indicate that the lesion is not within the peritoneal sac. In my interpretation, the combination of important findings includes a seventy-three-year-old man with abdominal pain of sudden onset accompanied by profound shock, radiographic evidence of advanced arteriosclerosis of the abdominal aorta, a large subcutaneous ecchymosis of the flank, and absent arterial pulsations in the lower extremities. These findings strongly suggest a lesion of the vascular system in the retroperitoneal region. The x-ray of the abdomen showing dilatation of the aorta with calcification makes this structure the probable site of the morphologic change and tends to preclude uncommon lesions of smaller arteries. Thus, I am not led to consider aneurysm, rupture, or thrombosis of the superior mesenteric or renal arteries. Such conditions are often caused by emboli, and these usually come fom the heart valves. In this case, there are no murmurs to suggest valvular disease, no evidence of heart failure, and no history to

indicate bacterial endocarditis of the mitral or aortic valves. Saddle embolus at the aortic bifurcation is suggested by the absent pulsations in the lower extremities. However, this is ordinarily not accompanied by pain and

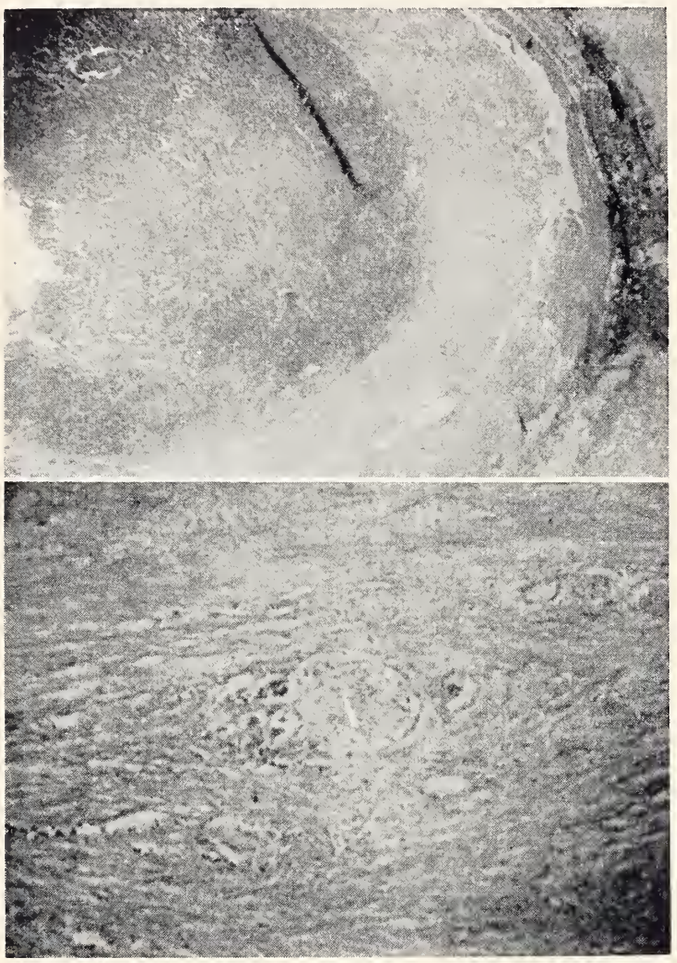


Fig. 1. Recent thrombus, circumflex branch of left coronary artery.

Fig. 2. Metastatic carcinoma of prostate gland in perineural lymph space.

rigidity of the abdomen, or by bleeding into the subcutaneous tissues of the flank. There remains saccular aneurysm of the abdominal aorta with rupture and extensive retroperitoneal hemorrhage. You will note that the patient fell from bed on the second hospital day, and that the ecchymosis was first noted on the fourth hospital day. I think it very likely that the massive hemorrhage occurred at the time of or shortly after this fall, and that an erythrocyte count after the second hospital day would have shown a pronounced anemia. The count we have, with 4,400,000 erythrocytes, was taken on the day of admission which was probably before the massive hemorrhage occurred. Now, there is one thing that puzzles me about the diagnosis of saccular aneurysm with rupture. That is the acute chest pain that the patient complained of on the second hospital day. We know that in dissecting aneurysm, the dissection may proceed from the thoracic aorta distalward, or in the reverse direction in a retograde manner. A diagnosis of dissecting aortic aneurysm with retrograde dissection into the thoracic portion, and rupture of the abdominal portion with massive retroperitoneal hemorrhage would bring all of these important clinical features under one explanation and one pathologic process. Therefore, my diagnosis is dissecting aneurysm of the aorta with rupture and retroperitoneal hemorrhage.

Dr. F. E. Luger.—Is it not possible that the chest pain indicates some lesion unrelated to the aortic aneurysm? I am thinking of coronary thrombosis and myocardial infarction.

Dr. H. M. Bishop.—I think this is a distinct possibility.

Dr. Bishop's Diagnosis

Dissecting aneurysm of the aorta with rupture and retroperitoneal hemorrhage.

Anatomic Diagnosis

Saccular aneurysm of abdominal aorta with rupture and retroperitoneal hemorrhage.

Recent thrombus, circumflex branch of left coronary artery.

Adenocarcinoma of prostate.

Dr. J. C. Smith.—Autopsy examination revealed advanced arteriosclerosis of the aorta with dilatation and calcification. A small saccular aneurysm was present in the upper abdominal portion and a large saccular aneurysm was present in the lower abdominal portion between the renal arteries and iliac bifurcation. Rupture of the larger aneurysm was evident from the massive recent retroperitoneal hemorrhage that extended from the diaphragmatic insertion into the pelvis. Both common iliac arteries revealed saccular aneurysms of arteriosclerotic type, and all were nearly filled with thrombi, blood clot, and atheromatous debris. The heart weighed 520 grams, and the circumflex branch of the left coronary artery revealed a canalized thrombus. Just proximal to this, the lumen was occluded by a recent thrombus (Fig. 1). An infarct of the myocardium was not identified. The kidneys revealed arteriolar nephrosclerosis. The prostate gland disclosed a small partially differentiated adenocarcinoma of the left posterior lobe. Extension of tumor cells to the perineural spaces of the posterior capsule was demonstrated (Fig. 2).

Davis, Parlante, and Halsted[1] reported on cases of coronary thrombosis that they believed to result from shock. Between the years 1942 to 1949 at the Los Angeles County Hospital, there were 3,365 case records with a diagnosis of coronary thrombosis. During this time, there were forty cases associated with antecedent shock. The diagnosis was confirmed by autopsy examination in eighteen. In these cases, the causes of shock included surgical operation in six, arsenic or barbiturate poisoning in four, spinal anesthesia in three, postoperative peritonitis in two, and burns, accidental trauma, and insulin coma, one each. The patients were between the ages of forty-five and eighty years. Fourteen were men and four were women. The authors emphasized that coronary occlusion resulting from shock is not often accompanied by pain over the precordium. They found no infarct of the myocardium when the shock was of less than twelve hours duration.

The adenocarcinoma of the prostate may have been the cause of the prolonged low back pain because of extension to the adjacent perineural lymph spaces. Distant metastases were not found. Moore[2] has found that such occult or latent carcinomas of the prostate occur in approximately 20 per cent of men past the age of fifty years.

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2. Moore, R. A.: Incidence of occult adenocarcinoma of the prostate. Arch. Path., 32:787, 1941.

Detroit Physiological Society

Meeting of November 18, 1954

PELVIS TENSILE STRENGTH

By F. Gaynor Evans, *Department of Anatomy*, and Herbert R. Lissner, *Department of Engineering Mechanics, Wayne University.*

Tensile strain distribution in the pelvis, produced by dynamic loading of the ischial tuberosities, was studied by means of the "stresscoat" technique. Twenty-two intact pelves removed from the body and eight within the body were tested. The free pelves were tested with 39 to 112 inch pounds of energy while those within the body had 200 to 450 inch pounds of energy applied to them. During the tests the pelvis behaved like an elastic body, the different strain patterns arising from (1) lateral or medial rotation of the iliac crest, (2) lateral displacement of the acetabula, (3) lateral or medial rotations of the ischial tuberosities, or (4) various combinations of these movements. Rotations of the iliac crests produced anteroposterior tensile strain in the iliac fossae or the lateral aspect of the iliac alae, depending on the direction of rotation. Lateral displacement of the acetabula caused tensile strain within them as well as in the long axis of the iliopubic rami. Rotations of the ischial tuberosities caused tensile strain in the long axis of the ischiopubic rami. The aspect of the rami involved depended on the direction of the rotation. The tensile strain pattern in the iliopubic rami indicated that the rami functioned as a tension bar. The soft tissue underlying the ischial tuberosities is an excellent energy absorbing material. Fractures produced by static and dynamic loading of the pelvis were similar to those seen clinically and arose from failure of the bone because of the tensile stresses within it.

This investigation was supported by a Research Contract with the Aero Medical Laboratory. USAF, and (in part) by Research Grant A-377 (C4) from the National Institutes of Health, USPH.

HAND-SCHULLER-CHRISTIAN SYNDROME
(Xanthomatosis: Eosinophilic Granuloma)

By Brenton M. Hamil, M.D., *Edsel B. Ford Institute for Medical Research, Henry Ford Hospital, Detroit, Michigan.*

The syndrome commonly referred to as Hand-Schuller-Christian disease encompasses one group of pathologic conditions in children with essential changes in the reticulo-endothelial system and characteristic deposition of cholesterol and its esters in these cells in the tissues involved, leading to the classical description of so-called "foam cells" by which this condition is recognized pathologically. Trauma, either from injury or infection, has seemed to play a part in the initiation of the manifestation of the pathologic process. Whether the lipoid deposition has been due to an avidity of the cells for the lipoid substance or is a compensatory mechanism resulting from failure of proper fat metabolism and therefore an increase in the amount available to the cells, seems to have been the basis of most disputes. Some pathologists still adhere to the original opinion expressed by Virchow that the lesion represents a neoplasm. Others insist that the pathologic process and changes incident thereto are the same as that described resulting from chronic infection and labeled eosinophilic granuloma.

Rowland and others have considered that there is a constitutional anomaly of lipoid metabolism and therefore classified this disease along with other so-called "storage diseases" recognized as being due to disturbances in lipoid metabolism.

The Hand-Schuller-Christian Syndrome is characterized clinically by the triad of lipoid defects of membranous bones: diabetes insipidis; exophthalmos; and also in some cases gingivitis and stomatitis and adiposogenital dystrophy.

We should also include under this same classification the disputed clinical condition now called Letterer-Siwe disease and probably also eosinophilic granuloma.

The clinical course of a patient from age eighteen months with all of the manifestations of this syndrome apeparing at some time was presented with serial slides of x-rays and an outline of diagnostic measures and treatment through the age of eight and one-half years of normal development.

During this last summer she has shown premature development of the breast, but careful clinical and diagnostic appraisal shows this to be a part of premature pubertal development which is characteristic of her family heritage. Urinary gonadotropin assay results were presented.

The clinical symptomatology of the Hand-Schuller-Christian Syndrome is readily seen to be in all instances the result of the development of reticulo-endothelial tumor masses at various sites.

The problem remains to be proved why the reticulo-endothelial tissues under the stimulus of trauma or infection use lipoid substances in this neoplastic destructive manner.

Meeting of December 16, 1954

STUDIES ON PELVIC DEFORMATION AND FRACTURES

By Robert I. McClaughry, *Wayne University*

Prothrombin solutions stored in the frozen state form a derivative of prothrombin; simultaneously an accelerator of prothrombin conversion appears. Serum contains a prothrombin conversion accelerator which is similar to prothrombin in many ways. It was the purpose of these studies to determine whether or not this accelerator is associated with the existence of a prothrombin derivative.

Bovine serum in which prothrombin was not detectable was used as the starting material in Seegers' method for prothrombin purification. About one fifth as much protein was obtained as with plasma. Under two-stage analysis, 6.5 per cent of the serum protein was prothrombin.

A derivative of prothrombin was demonstrated in the serum protein by conversion to thrombin. When dissolved in 25 per cent sodium citrate solution, roughly 30 per cent of the protein was converted to thrombin. Thus, approximately one quarter of the serum protein is not detectable as prothrombin, but will form thrombin under suitable conditions.

The serum protein was also an accelerator of prothrombin conversion. The mechanism of this action is like that of stored prothrombin or serum accelerator; it is unlike ac-globulin, thromboplastin, or the platelet-plasma thromboplastin-like activity.

The serum protein by electrophoretic analysis contained only components of the same mobility as those found in purified prothrombin. The component thought to be a derivative of prothrombin was greatly increased.

These studies again demonstrate the coincidence of occurrence of a prothrombin derivative and an accelerator of prothrombin conversion. Here the two activities are associated with proteins isolated from serum. The possibility that the accelerator is derived from prothrombin, while not conclusively demonstrated, seems to merit consideration.

INFLUENCE OF BRAIN STEM ACTIVATION ON SENSORY MESSAGES

By F. A. Morin and J. D. Green, *Departments of Anatomy, Wayne University College of Medicine, Detroit, and University of California, Los Angeles.*

In recent years, evidence has been presented by neurosurgeons (Penfield et al) and neurophysiologists (Moruzzi and Magoun, Magoun et al) that the brain stem reticular formation is the site of integrative functions of the highest level. The mechanisms of arousal, and wakefulness, depend on the integrity of the brain stem reticular formation. Our purpose was to study how sensory messages reaching the cerebral cortex were modified by simultaneous activation of the midbrain reticular formation. Cortical potentials were elicited in cats by stimulating peripheral structures (skin, peripheral nerves, cochlea) and recorded oscillographically. The results so far obtained indicate that during reticular stimulation the evoked potential's amplitude diminishes considerably. The positivity of the potentials was often less affected than the negativity, thus suggesting an effect even on efferent cortical discharges. These effects are more prominent at higher frequencies of peripheral (tactile) stimulation and on cortical areas ipsilateral to the stimulated side. Cutaneous impulses in the medial lemniscus do not appear to be affected to the same extent. These results suggest that the midbrain reticular formation can inhibit sensory messages, probably through diencephalic relays. Such inhibitory effect is parallel with desynchronization of cortical rhythms during wakefulness and attention. These phenomena may, therefore, represent the physiological correlates of that state of consciousness during which external stimuli are attenuated, such as in deep concentration.

PERIODIC HEALTH APPRAISAL—EYES

(Continued from Page 473)

macula, the subject is directed to look at the light in the ophthalmoscope. Both the central and peripheral retina are examined searching for the presence of areas of inflammation, loss of transparency, hemorrhages, exudates, pigment deposits, tumors, and retinal detachment.

The physician, during his routine physical examination, can and should play an exceedingly important role in discovering the presence of unsuspected ocular pathology. In so doing he can contribute immeasurably toward the prevention of blindness.

References

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2. Roper, K. L.: Modern approach to glaucoma. Merck Rep., 64:10 (Jan.) 1955.
3. Schoenberg, M. J.: A report on the progress of the glaucoma campaign during the past three years. New York State J. Med., 45:738, 1945.

Making Friends for Medicine

We have stressed, this year, a program of indoctrination of our membership. This has been coupled with meetings, at the county level, on developing and expanding better public relations.

The high level of scientific medicine, practiced and available to the American public, has not been under adverse comment by the people of our country and certainly not in Michigan. The health records of our nation stand close scrutiny and reflect only the constant scientific progress of our profession.

What then has brought about the flood of comment in the lay media of public information on Health and Medical Practice, too often in a highly critical vein?

Perhaps it has been the very spectacular development of new methods of diagnosis and treatment, or has it been the fact that the cost of medical care is still not classified in the public mind into its parts: (1) medical service, (2) hospital care, and (3) laboratory and drug costs? In any event, practicing doctors of medicine must continue to assume the responsibility of explaining and clarifying these matters in the public mind.

There are also other means of winning and retaining friends for medicine. The State Society, through its manual, suggests at least twenty-six projects for the consideration and action of County Medical Societies by which they may increase their service to medicine and to the public.

It has been my privilege to attend many of the meetings of committees of county societies, who have been discussing and planning concerted action in extending their public relations. The spirit and enthusiasm displayed was most heartening. It cannot be denied that the best relations begin in the doctor's office. From here, wider activity must become a product of joint activity. Even the smallest societies can play a part, but the determination and enthusiasm of a committee should be disseminated widely to all the members. Only then may we expect a fully indoctrinated membership.

Let it no longer be said that organized medicine "takes only a negative stand against change" but has a positive program which will surely win friends for medicine.

Robert H. Baker

President, Michigan State Medical Society

President's Message



Editorial

THE EISENHOWER PLAN

WE have read the proposed plan for the Nation's Health, S.886. It is very ambitious, over 127 pages, and contains much which the medical profession is and can whole-heartedly support. The first 55 pages are devoted to "reinsurance." We are satisfied the President has been sold a bill of goods with a high sounding name. What is proposed is not reinsurance but a method of subsidizing certain proposals of insuring groups and categories not actually insurable. They cannot pay their costs, and hence cannot be insured or reinsured, but they can be made beneficiaries by a hidden subsidy.

Mortgage Insurance

The language is intricate, the thought much befogged, and we seem to find much which resembles the Kaiser plan of medical service. In the old days, the AMA had a provision in its code of ethics prohibiting "contract practice," but that is hinted in many of the provisions. We fear the old Truman socialized medicine bureaucrats who are still under Civil Service, are sufficiently near the top rank to have colored the program, and at least smoke-screened the President's advisors.

A provision is made to aid in the teaching of more nurses, and graduate training of professional nurses and public health personnel, increased public health service and mental health. We have suggested before, and do so again, that a simple bill be passed by the Congress disclaiming the control granted by subsidies according to the Supreme Court. By such act on the part of Congress a way might be opened for much needed aid to the struggling medical schools. Now they do not dare even hope for desperately needed capital investments for modernization and expansion.

MUSKEGON-LeFEVRE PLAN

THE older members of the Michigan State Medical Society were quite familiar with the founding, objectives and motivation of the Michigan Foundation for Medical and Health Education, Inc. The vision was a great fund with large donations and the ambition of being full grown at once, so benefits could be made immediately available. Many generous donations were made but the vast majority of members could not be included because of more modest finances, and many other demands on their generosity.

During recent years no special effort has been made to augment the fund but many calls for help are now coming to the Foundation. During the years of GI Bill activity, most medical students were getting some GI assistance, but that source of help to medical and other students is rapidly terminating.

The Fund has some $11,000 of income from investments which are on loan to medical students. Some are due to begin repaying. Many calls are coming in since GI aid is past and many donations are needed.

Wm. M. LeFevre, M.D., Councilor of the Eleventh District of the Michigan State Medical Society, has made a suggestion which we believe could easily be followed by most of our members. We reprint herewith his letter in the *Muskegon County Medical Society Bulletin*. We commend it to every member who can establish a new habit and in so doing perform a good deed:

COUNCILOR'S LETTER

The Michigan Foundation for Medical and Health Education, Inc., functions under the guidance of the Michigan State Medical Society and is one of its very important public relations activities. This organization was incorporated some ten years ago and very actively solicited funds for its endowment account during its first few years of existence. Whereas considerable publicity has been given it in recent years, it has not attracted much attention, and I am sure many of the younger members of the county and state societies do not realize its importance and purpose. Activities of such an altruistic nature deserve much more attention than has been accorded this one.

The corporation has and is receiving subscriptions from physicians and laymen throughout the state. These funds are invested in stable securities and the earned interest is expended in health and medical educational projects. The primary object of the corporation is to improve the quality and increase the quantity of medical care in Michigan.

The costs of the Michigan Rural Health Conference have been underwritten by the foundation each year. Additional funds have been allocated to a student aid

revolving fund. Under this plan, loans are made to junior and senior medical students who have found themselves financially unable to carry on their education. These students accept the loans with the provisions that they practice three years in a rural community after completing their education, and that they repay the loan starting one year after starting pactice. No interest is charged until after that time.

Some of the early contributions to the foundation were direct gifts to the student aid revolving fund, making it possible to start loans to students before that fund was built up from earned interest. So some $11,000 is still present in that fund represented by notes from recipients of loans.

Up to the present time a total of seven students have been helped. One of these students has now progressed to the stage of repayment of the loan and will start this procedure presently. The other six are still in the process of their education.

The invested funds of the corporation amount to $113,000.00 and the interest earned amounted to about $3,300.00 last year. From this account students have received variable amounts according to their needs. Several other requests for help have been received from students but they had to be refused because of a lack of available funds. More students could be helped if the capital account could be increased.

Many rural communities in Michigan are without adequate medical care and can be helped by such activities as the Foundation for Medical and Health Education. Helping such communities is very definitely embodied in the oath of Hypocrates.

The foundation has repeatedly requested help from the profession in Michigan as well as from laymen, but it would be very good if we could say that the profession alone was back of it and was supporting this worthwhile project.

The donation of five or ten dollars from each of us once a year would add many thousands of dollars to the capital fund and make it possible for several other deserving men and women to receive a medical education and serve a needy community in Michigan.

A copy of this editorial, with my check for $10.00 is being sent to Dr. E. I. Carr, President, Michigan Foundation for Medical and Health Education, 300 West Ottawa Street, Lansing, Michigan. I intend to repeat that check on each of my birthdays. Why don't you do likewise, and enjoy with me the pleasure of having helped in a small way some deserving student of medicine.

Wm. M. LeFevre, M.D.
Councilor, Eleventh District

JONAS E. SALK, M.D.

A NEW name has been added to the medical immortals. The accomplishments, development of a satisfactory vaccine to control poliomyelitis, was conclusively and dramatically proven. Never before in the history of medicine or any other science, so far as we know, has such a stupendous experiment been carried out. Never before has the announcement of results been more dramatic. Dr. Salk had proven his work to his own conscience, and had been sponsored with unlimited funds by the National Foundation for Infantile Paralysis.

He knew his results by trial with about 5,000 children in the Pittsburgh area. We all know of the massive experimentation done last year, 1,829,916 children becoming part of the final and conclusive study. Thomas Francis, Jr., M.D., of the University of Michigan, who made the evaluation study, with over fifteen million punch cards, on April 12, 1955, before an invited audience of about 500 of the nation's and the world's great medical men and men of science declared:

"The vaccine works. It is safe, effective, and potent. . . . The vaccine has produced an extremely successful effect among bulbar patients in the areas where vaccine and inert substances had been tried interchangeably. . . . There can be no doubt now that children can be inoculated successfully against polio."

The report was contained in a 113-page booklet and a nine-page typewritten final release with the above quotation. Many spoke—scientists and administrators from every field of research in the medical sciences. The manufacture of the vaccine was authorized by the federal department; also its use and sale.

Dr. Salk, in his remarks, states that he has already improved the vaccine and its method of use:

"Only two inoculations of the Salk polio vaccine, spaced two to four weeks apart, should be given is 1955 instead of three inoculations over a five-week period, as was done in the 1954 field trials. The third inoculation, or booster shot, should not be given before at least seven months have elapsed, but certainly before the onset of the 1956 polio season. The maximum effect of the booster inoculation can be achieved only if it is administered at least seven months beyond primary inoculation. This should provide immunity at least into 1956, and the booster should extend that immunity for an indefinite period, perhaps years."

MEDICAL PRACTICE LAWS

WILLIAM A. KOPPRASCH, M.D., of Allegan, on January 21 entered suit against the Board of Trustees of the Allegan Health Center, members of the medical staff by name, the Allegan County Medical Society, the Michigan Hospital Association, and the Michigan State Medical Society for interfering with his practice of medicine, stating that they do not allow him to take patients in the Allegan hospital, will not accept him on the staff or in the medical society, and have

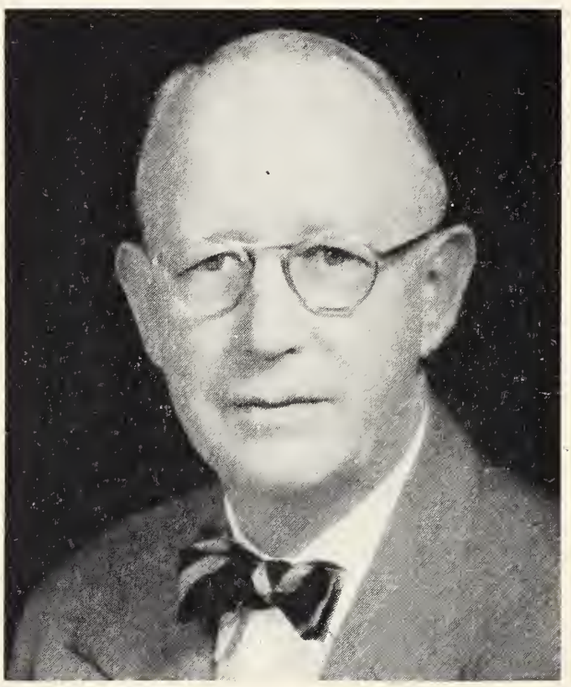
(Continued on Page 509)

Arthur C. Curtis, M.D.

Portrait of a Professional Perfectionist

"As a youngster, it seems that I was always a stranger in somebody else's house," said Dr. Arthur C. ("Whitey") Curtis.

Perhaps more than anything else this explains how Dr. Curtis, one of the nation's outstanding dermatologists, can be one of the most endearing and thoughtful people at the University's Medical Center, at the same time one of the most exacting and professionally disciplined.



The son of an itinerant minister, "Whitey" traveled everywhere and worked at everything. In this somewhat harsh yet liberalizing milieux, the boy soon developed a repertoire of places and faces which fortified him when he became a student "on his own."

In and out of other people's homes, in and out of one job after another, a cool head and a keen sense of personal responsibility were inevitable. It was also inevitable that others turned to this young man for advice and help; he had been around.

It was also inevitable that a sense of self-perfection developed, that an intensity to prove himself emerged. Even today when his closest friends see him as somewhat mellowed, the same intensity prevails. It is an inward spirit; outwardly he still maintains an atmosphere of inspiring confidence.

Take his golf as an example.

Back in the days when "Whitey" contemplated changing from internal medicine to dermatology and syphilology, he was an accomplished golfer. But when the medical transition took place, golf got lost in the shuffle. He gave it up entirely.

"I had other things to do," was his explanation. Other things indeed! He began an intensive study at the New York Skin and Cancer Hospital, the University of Buffalo, and the Mayo Clinic.

But now, having accomplished a remarkable task, he has returned to golf. He says, "Today, I am playing golf again. In fact, I am back where I was twelve years ago: I am mad at my game!"

There can be no doubt that the early years made "Whitey" Curtis the kind of man he is today: amiable yet reserved, understanding yet determined, fun-loving yet self-disciplined.

Actually any lunch box biography of "Whitey" Curtis contains two basic food stuffs. There are two Curtis's: the Elder and the Younger. It is difficult to tell them apart.

The Elder Curtis was a minister; the Younger Curtis, the minister's son. The Reverend Mr. Curtis had a sufficient store of realism and natural wisdom to influence both his parish and his family. A classicist, a professor of languages, a leader in the ecumenical movement, the Elder Curtis obviously ignited the imagination of the Younger Curtis at every turn of their mission.

"My father once told me, 'Son, you must see religion and you must see it in its various phases.' " That's exactly what "Whitey" did; he went on a veritable pilgrimage to his friends' churches until he found one that suited his needs.

"My father believed in a single Protestant church, but he was never a fanatic," Dr. Curtis declared. Today the Younger Curtis displays the same mission intellectually. He is an intense, critical, and creative teacher, as well as an imaginative organizer of research. He has his history in tow; he recalls his courses in philosophy as though they happened yesterday; and he approaches the customs and mores of people with the avidness of a trained sociologist.

His friends chorus the same theme: "Whitey" Curtis does everything with the intensity of an artist. Yet he maintains a slight touch of Socratic irony in his manner. For example, he has few or no "canned" speeches in his desk drawer; he works at each individual lecture, each speech as if it were to be the last. He drives and drives until one would think he might collapse at the first breath on the podium.

But the irony pokes through. "He is one of the easiest, clearest, smoothest talkers in public I know," said his good friend, Dr. Reed Nesbitt.

Dr. Curtis provides us with another insight into this aspect of his character. "Dad never stuck to the Book," said "Whitey." "He knew it so well, he didn't have to stick to it." This is often the case with well-disciplined minds; their command of fundamentals is so secure that they can make the turns and deviations which furnish life with originality and spark.

"My father would deliberately read Scripture in the original Greek, so he could start an argument with his Deacons," said Dr. Curtis.

"Dad took his sermons from life and from the lives of great people. He would talk about Abe Lincoln, or Hegel, or some other dramatic figure. And the parishioners loved it," said "Whitey."

The Elder and the Younger walked hand in hand as long as they could. "Whitey" hit the academic road, but the Reverend continued to influence his son.

On one occasion, when the parishioners had gathered for a picnic, soda pop had been ordered for the minister and his family. Elder Curtis said to Younger (who incidentally was named after one of the pillars in the Congregational Church): "Drink up that soda pop, Son, so we can have some beer with the rest of the folks!"

Dr. Curtis recalls such incidents of his youth warmly, and he relates them fondly. "Why, my father was one of the best card players in the parish." Today Younger Curtis is considered one of the most enthusiastic poker players in the Medical Center.

One of his most precious possessions is his father's Phi Beta Kappa key, hung against velvet and encased in a small gold frame. "My wife gave it to me for a Father's Day present not long ago," said Dr. Curtis.

Another possession is a small wood figurine, resembling a curious artifact from some primitive society. "Dad carved that," said Dr. Curtis, "and it used to be on the family barn." The arms are half gone, the paint has worn off, and the crevices are deep with age. But the Younger Curtis had it mounted on a solid walnut stand so that it might be displayed in his hospital office.

No one should leave Dr. Curtis, now President of the American Academy of Dermatology and Syphilology, without documenting a bit more solidly his varied career. "As a kid, I worked everywhere and at everything," he said. "I had to, or I didn't eat."

"Everything" is almost an understatement: undertaker's helper, hash slinger, baby sitter (in Dr. Newberg's home), newspaper advertising man, librarian, paymaster, waiter, postmaster, and book salesman. "I've done them all," he said, "and I got through 'med' school!"

Perhaps it would be more fitting to list his professional accomplishments as a tribute to an outstanding medical teacher. The list is long and it is legion. Anyone needing such academic documentation would have no trouble finding honors, associations, and accomplishments. But the boyhood experiences, by contrast, represent the true triumph.

A final story, and the rest is a matter of remarkable record:

Dr. Harry Towsley tells of the time a fishing party, including Dr. Curtis, was caught a considerable distance off the shore of Lake Superior without a motor.

"The motor had clogged up with rust," said Towsley, "and it was 'Whitey's' job to get it unclogged before we all got smashed to bits by the hard waves and the approaching rocks."

Not once through the ordeal, related Towsley, did he recall Dr. Curtis looking anxiously in the direction of the rocks. "He just worked hell out of that motor until he got it going."

"Whitey" Curtis keeps his eye, his mind, and his heart on his job until it is done. When it's done, he goes off to another one, just as earnestly, just as doggedly.

If history could be reversed, the Elder Curtis might have found his son a pretty good subject for one of those sermons!

—Louis Graff

Michigan Foundation for Medical and Health Education, Inc.

President's Annual Message to the Membership

By Earl Ingram Carr, M.D.
Lansing, Michigan



Earl I. Carr, M.D.

This is the tenth annual meeting of the Michigan Foundation for Medical and Health Education, Inc. We are not ten full years old, however, because the organization meeting in 1945 was late in the year on September 19, and the first annual meeting was held January 17, 1946, four months later.

In the beginning, we set our sights high and not unreasonably high, but we have not yet attained them. Through these years the struggle has been sufficient to have attracted considerable attention so that inquiries are coming from national organizations, from other state societies, and from individuals in other states and Canada seeking the privilege of loan. We have been invited to be included in the standard reference work on Foundations entitled The American Foundations and Their Fields (7th edition).

Our Student Loan Fund having extended to approximately $11,000 in loans outstanding, $10,950 to be exact, has caused us to feel pinched for cash this year. In fact, for the first time, we have, at the moment, unprocessed applications for aid from upperclass medical students. We were also forced to delay attention to another important commitment, contrary to our heretofore punctual habits. No accounts payable remain today.

A year ago, this body disposed of a clamor from some directions for a professionally directed fund-raising campaign by resolution opposing such an effort "at this time." Your president and secretary, however, prepared a soliciting envelope and included it in the Secretary's Letter. Immediately following, $1380.00 came in, $1,000 of it from a pledge at organization time and $100 from a repeated contributor. The balance of $280 came in small amounts, surely as a result of the effort. It is fair to admit that the envelopes cost us $88.00 plus. Great satisfaction comes to this writer, though, because the $280.00 of contributions was made by eighteen individuals who may be giving for the first time and now have experienced participation in the Foundation. You have heard this speaker plead before for contributions of any size from many givers. The greater the number who give, the stronger the Foundation!

We do not yet know the cost of the eighth annual Rural Health Conference held January 20-21-22, at Kellogg Center, East Lansing, except that expenditures were held within the underwritten amount. We also know that this was the largest conference yet, in diversity of attendance, in programs and, we think, in enthusiasm. This year, the requested unusual theme was an approach to youth, with participation by youth. Phases of career-planning, child health, religion, education and recreation were handled by fifty-two speakers of renown. Again, we were the sponsors with more than 100 co-sponsors.

The Foundation sponsored the lecture by Dr. Albert B. Sabin on "Vaccination for Poliomyelitis" at the 1954 Michigan Clinical Institute and the Andrew P. Biddle lecture by Dr. Charles W. Mayo on "United Nations: Our Hope for the Future" at the annual meeting of the Michigan State Medical Society.

The total resources of the Foundation advanced in 1954 by $2,277.27 to a total of $113,185.65.

Two activities are requested of you and of all doctors of Michigan:

1. Cultivate benefactors for the Foundation.
2. Influence all doctors to send a check of any size as often as possible.

January 27, 1955.

Annual Report of the Secretary

By Wm. J. Burns, LL.B.
Lansing, Michigan

The Secretary has executed the duties of his office according to the By-Laws and as provided in Robert's Rules of Order, pursuant to the instructions of the members of the Board of Trustees, with the continued advice and guidance of President Carr and of Treasurer Gardner, to whom the Secretary again expresses gratitude and appreciation.

A letter was sent on October 14, 1954, to the Treasurer of the Woman's Auxiliary to the Michigan State Medical Society concerning the interest account on the $1,000 Savings Bond (Series G 2½%) maturing September 1, 1955, which was assigned to the Foundation. No reply or interest has been received from the Woman's Auxiliary since that date. Another statement will be sent covering the interest to maturity of the bond (next September 1).

The Michigan Foundation for Medical and Health Education Lecture, to be given on the occasion of the 1955 Michigan Clinical Institute (with the speaker's expenses to be paid out of the Biddle Fund of the Foundation) will be presented on March 9, 1955, by Alexander Brunschwig, M.D., New York City, who will speak on "The Surgical Treatment of Cancer of the Cervix that has Recurred after Radiation Therapy."

The Biddle Lecture, given on the occasion of the 1954 Michigan State Medical Society Annual Session (with the speaker's expenses paid out of the Biddle Fund of the Foundation), was presented in Detroit on September 29 by Charles W. Mayo, M.D., Rochester, Minnesota. Dr. Mayo's subject was "The United Nations: Our Hope for the Future."

The Student Loan Fund has been utilized to aid the medical education of the following medical students:

Name	*University*	*Total Amount*
L. Edmond Eary, Jr.	University of Michigan	$1,600
Benjamin F. Koepke	Wayne University	$2,000
Donald P. Jackson	Wayne University	$2,500
Robert E. Pearson	Wayne University	$1,500
John C. Shelton	University of Michigan	$ 950
Robert O. Webster	University of Michigan	$1,600
Russell F. Smith	University of Michigan	$ 500

Robert E. Pearson, who began practice in Boyne City in August, 1954, has been written urging that he begin reimbursements to the Revolving Fund in order that additional medical applications may be served by the Fund.

Recommendation to Board of Trustees

It is recommended that the Board of Trustees again adopt the following resolution:

"That all acts and commitments consummated by the Committee of the Whole and the Officers during the past year be ratified by the Board of Trustees."
January 27, 1955.

CANCER OF THE CERVIX

(Continued from Page 462)

the problem becomes a surgical one, and providing there is no spread beyond the pelvis, an appropriate operation should be advised. The reason for this is that there is evidence that proper radical surgery carried out under these conditions may still afford the patient a chance for five-year cure. In a series of seventy-five such patients, radical surgery afforded a five-year over-all survival in 30 per cent of the series. Where the recurrence fortuitously occurred in or around the cervix, the salvage was eleven of eighteen patients, or 60 per cent of the series; and in this group exenterations were not necessary.

References

1. Brunschwig, A.: Am. J. Obst. & Gynec., 68:776-780, 1954.
2. Truelsen, F.: Cancer of the Cervix (monograph). Copenhagen: Rosenkilde and Bogger; London: H. K. Lewis and Co., Ltd., 1949.

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

SALK VACCINE PLANS

Plans for use of the Salk vaccine in Michigan if and when it is licensed are receiving increasing attention both in the counties served by full-time local health departments and in the thirteen counties still without organized public health service.

Directors of the state's forty-seven full-time county, district and city health departments are working with their practicing physicians, school officials and interested community groups, to be ready to start at once on giving the three injections of vaccine to first and second grade children in all their public, private and parochial schools. In the 10 counties that participated in the field trials last spring, all boys and girls who were included in the program and were not given the vaccine will be given the injections this spring.

In the four full-time health departments that are at present headed by an acting director who is not a physician, a physician will be designated to be responsible for the vaccine injections.

In the thirteen so-called unorganized counties in the state, counties not yet served by full-time local health departments, the county board of supervisors is the official agency that will authorize acceptance of the program for their school children and be responsible for the designation of a physician and for setting up the machinery for carrying out the program. These counties are Berrien, Cass, Clinton, Gogebic, Gratiot, Huron, Ionia, Jackson, Lapeer, Livingston, Marquette, Montcalm and Tuscola.

ADDITIONAL MULTIPLE SCREENING PROJECTS

Two additional multiple screening surveys are now being planned by the Michigan Department of Health. The first will be held in Barry County from March 28 to April 5, in cooperation with the Barry County Health Department and the Barry County Medical Society. It is planned to screen 3,000 persons in various industries in Hastings and Barry County.

The second project will be conducted in Livingston County from April 25 to May 20. An estimated 3,000 persons will be screened in co-operation with the Livingston County Medical Society and the Livingston County Chapter of the Michigan Division of the American Cancer Society.

DRIVE FOR COMMISSIONING RESERVE GROUP

The Public Health Service is putting on a concerted drive for commissioning physicians, dentists, veterinarians, sanitary engineers and nurses as inactive commissioned officers. These persons would be a potential professional group so in case of a national or area emergency of great magnitude, they would be available.

It is the desire of the Service that emphasis be placed upon recruitment from other than the official health agency group. The purpose is to have a reserve group which could be placed on active duty to augment the official health agency group when needed. Such duty would be temporary.

Time spent in the United States Public Health Service as a physician can be used to satisfy the demands of Selective Service. The Public Health Service has the same pay schedule as the Army, Navy, and Air Force. A career in the Public Health Service has some features not present in other government services.

The Public Health Service and the Michigan Department of Health hope that you will be alert for possible recruits. Those interested should contact Harald M. Graning, M.D., Regional Medical Director, Department of Health, Education and Welfare, Region V, 69 West Washington, Chicago 2, Illinois.

BIRTHS EXCEED 190,000

Late reports of births have brought Michigan's provisional total for 1954 to 190,759, setting a new record for the state.

NEW RHEUMATIC FEVER FILM

Ten copies of the new motion picture, "Stop Rheumatic Fever," have been received by the Michigan Department of Health from the Public Health Service, together with supporting educational material. The film may be borrowed without charge from the Visual Education Unit of the department.

The department's film loan library now numbers 722 prints. Films are on a wide variety of subjects. They are all 16 mm and most of them are in color, available for loan to any interested groups, without charge except for return carrying cost. Last year 5,062 loans were made and 502,792 persons saw the films.

The film loan catalogue is available upon request.

Eighty per cent of ovarian tumors are cystic, and 20 per cent are dense and are most often malignant.

* * *

Most relatives of cancer patients, if given proper explanations and encouragement by the physician, are the patient's greatest source of comfort during the trying period of therapy. It is up to the physician to draw them into his camp.

* * *

Long exposure to the sun's rays by persons past middle life should be avoided.

* * *

Circumcision in infancy apparently prevents penile cancer.

* * *

All precancerous skin lesions should be removed.

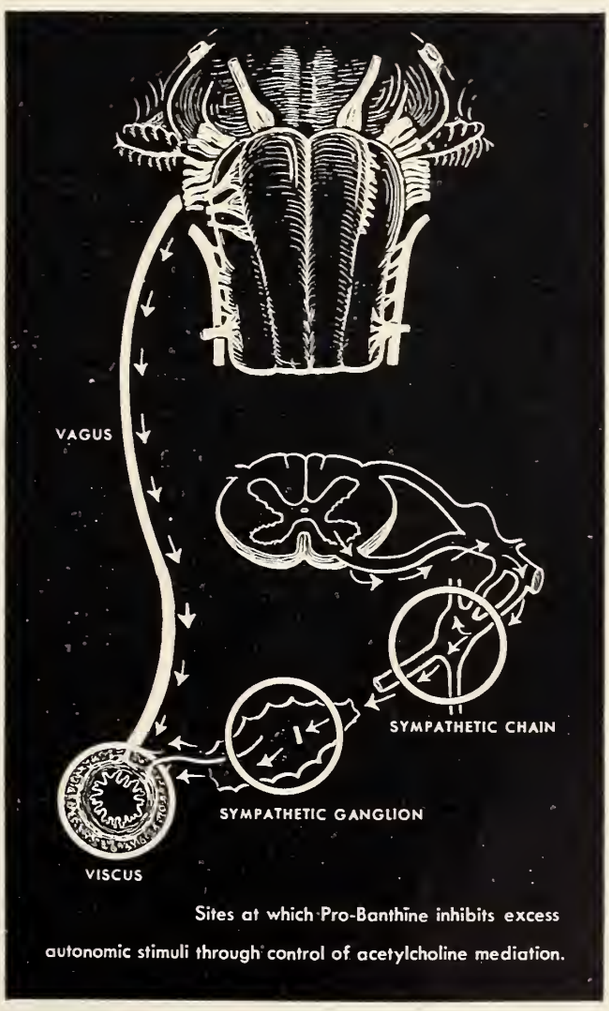
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Pro-Banthīne consistently controls gastrointestinal hypermotility and spasm and the attendant symptoms.

Pro-Banthine is an improved anticholinergic compound. Its unique pharmacologic properties are a decided advance in the control of the most common symptoms of smooth muscle spasm in all segments of the gastrointestinal tract.

By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use[1] in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.



Sites at which Pro-Banthīne inhibits excess autonomic stimuli through control of acetylcholine mediation.

Roback and Beal[2] found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents.

In Roback and Beal's[2] series "Side effects were almost entirely absent in single doses of 30 or 40 mg. . . ."

Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

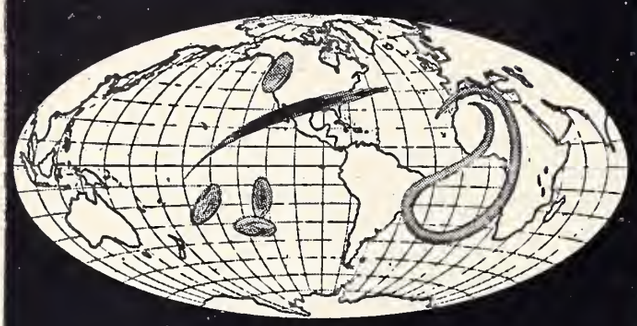
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1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

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Tuckahoe, New York

Legal Opinions

CHIROPRACTORS "NOT QUALIFIED . . ."

Opinion of Thomas M. Kavanagh, Attorney General

CHIROPRACTORS:
SCHOOLS:

Former opinion holding that chiropractor was not qualified to give students an adequate physical examination and to certify as to their fitness to compete in interscholastic athletic contests as required by rule of Superintendent of Public Instruction, reviewed and approved.
Opinion No. 1894

January 7, 1955

Mr. Charles C. Lynch, D.C.
Secretary-Treasurer
State Board of Chiropractic Examiners
2208 West Grand Boulevard
Detroit 8, Michigan

Dear Sir:

By letter to my predecessor you refer to O.A.G. No. 842 by which it was held "that a chiropractor's certificate would not satisfy the requirements of Rule No. 3 of the Department of Public Instruction." You also cite O.A.G. No. 1247 which concluded that a lawfully licensed chiropractor is a legal practitioner of a school of medicine within the meaning of our statutes and hence entitled to the privilege of treating patients in county hospitals.

You inquire whether, in view of such latter opinion, said Rule No. 3 of the Department of Public Instruction would now be held to be satisfied by a chiropractor's certificate reciting that a student who desires to engage in interscholastic athletic activities has passed an adequate physical examination and is, in the opinion of the chiropractor, fully able to compete in athletic contests.

The rule in question reads as follows:

"No student shall be eligible to represent his high schoool for whom there is not on file with the superintendent or principal, a physician's statement for the current school year certifying that the student has passed an adequate physical examination and that, in the opinion of the examining physician, he is fully able to compete in athletic contests."

By O.A.G. No. 1247 it was concluded:

"Chiropractic is clearly a school of medicine recognized by the laws of Michigan. CL 1948, Secs. 338.151-338.159 define and regulate this school.

"A lawfully licensed chiropractor is a legal practitioner of a school of medicine recognized by the laws of Michigan within the meaning of PA 1913, No. 350, as amended, and hence is entitled to privileges in treating patients in county hospitals governed by that act equal to those accorded to the practitioners of the other schools of medicine recognized by our laws."

Such holding was in accord with the authorities [illegible] cited. However, it is likewise true as pointed out in said opinion:

"In practicing their profession in public hospitals and elsewhere chiropractors are, of course, limited to the practice of chiropractic as defined by law and may not invade medical fields reserved to the practitioners of other schools of medicine."

Such limitation upon the scope of the field of practice of a chiropractor is based upon the statute which provides:

"The license provided for in this act shall entitle the holder thereof to practice chiropractic in the state of Michigan, and for the purpose of this act chiropractic is defined as 'the locating of misaligned or displaced vertebrae of the human spine, the procedure preparatory to and the adjustment by hand of such misaligned or displaced vertebrae and surrounding bones or tissues.'" *Sec. 338.156, C.L. 1948; Sec. 14.596, M.S.A.*

As contrasted therewith, the Medical Practice Act defines the practice of medicine as:

"***In this act, unless otherwise provided, the term 'practice of medicine' shall mean the actual diagnosing, curing or relieving in any degree, or professing or attempting to diagnose, treat, cure or relieve any human disease, ailment, defect, or complaint, whether of physical or mental origin, by attendance or by advice, or by prescribing or furnishing any drug, medicine, appliance, manipulation or method, or by any therapeutic agent whatsoever." *Sec. 338.59, C.L. 1948; Sec. 14.539, M.S.A.*

The rule requires that such certificate be based upon "an adequate physical examination" of the student. Such exactment may not be fulfilled short of an examination reasonably calculated to disclose any weakness or ailment which would render the student's participation in athletic activities harmful to his health. That is equally true whether or not the diagnosis and treatment of any such ailment came within the scope of medical practice permissible to the chiropractor. The limitations upon the authority of the chiropractor to diagnose as well as treat for various ailments is apparent from the above quoted statutory provisions. The giving of an adequate examination would necessarily require the invasion of fields of medical practice not legally open to a chiropractor. For that reason the Attorney General is in accord with the conclusion reached in O.A.G. No. 842. Accordingly, your inquiry is answered in the negative.

Very truly yours,
THOMAS M. KAVANAGH
Attorney General

Fluoroscopy and radiography are the most important diagnostic procedures in gastric cancer.

* * *

Surgery is the only form of treatment—either curative or palliative—in gastric cancer.

* * *

In metastatic cancer of the liver, the alkaline phosphotase level in the blood is often disproportionately elevated.

* * *

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In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

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Communications

September 30, 1954

Dear Dr. Haughey:

Pursuant to our conversation of yesterday, I think it is very advisable that considerable effort be made by the Michigan State Medical Society to promote this idea of a statistical review of cases of carcinoma of the lung in all hospitals.

This procedure would prove to be very valuable, because:

1. Absolute facts would be involved, such as biopsies, autopsies, and pathological reports, et cetera.
2. Complete histories are available on the patients' charts.
3. A questionnaire would bring out all salient factors, so that a statistical survey, such as the one from Mount Carmel Mercy Hospital, would be of value when used with other information, such as known carcinogenic agents to date.

The method of obtaining this information should be under the supervision of the Chairman of the *American* Medical Association's Cancer Committee. This Committee should receive the report from all individual *State* Medical Society Cancer Committees, audit this data, and co-operate with the National cancer organization.

The Cancer Committees of the *State* Medical Societies should stimulate the Cancer Committee of each *County* Medical Society in their work in obtaining this material.

The Cancer Committee of the *County* Medical Societies should in turn stimulate each *hospital* in the county to assemble information from all records in the hospitals concerning cancer of the lung. To make these records as complete as possible, they should be supplemented with a questionnaire mailed to each individual patient, or a relative of the deceased patients.

When the hospitals have completed their survey, the information should be forwarded to the County Medical Society's Cancer Committee, in turn to the State Cancer Committees, and finally to the American Medical Association for evaluation of data from the United States and Canada.

If this idea is fostered and supported by the State Medical Society, I can see where it would be a long-range proposition, taking at least two or three years to complete. However, at the end of the rainbow will be found information, not otherwise procurable, which could be the "uranium weli" for the control of malignancy of the lung.

Kindest personal regards.

Sincerely yours,
LOUIS J. GARIEPY, M.D.

Malignant melanoma and retinoblastoma are the most common malignant tumors of the eye. In both conditions, treatment should be begun in time to prevent spread of the disease. Prompt and accurate diagnosis can considerably increase the five-year survival rate.

* * *

Malignant melanoma of the eye is found most frequently in adults from 50 to 70 years of age. In most cases, the first symptom is impairment of vision.

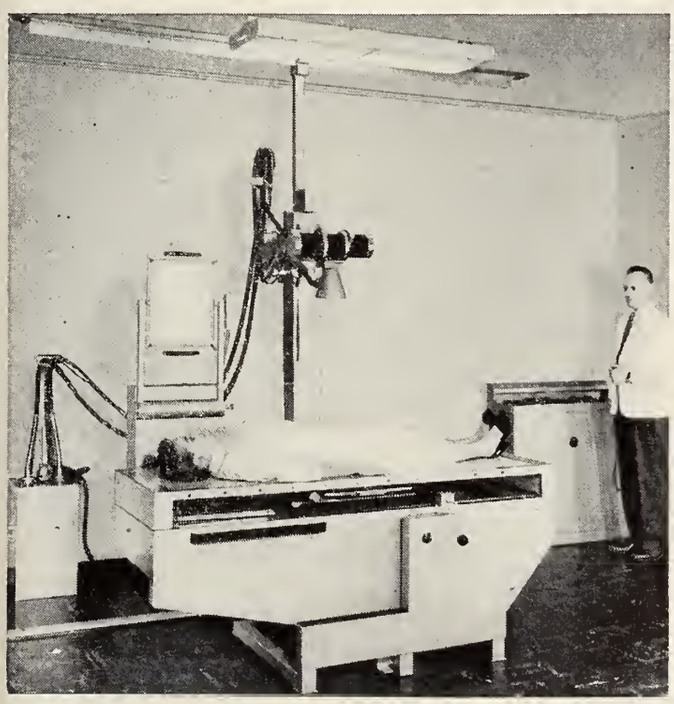
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Full-Wave Rectified
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Fully Automatic Control

Many of the unusual and ingenious features of the control and transformer of this new X-ray Unit were originally in X-ray Generators designed and produced in large quantities by H. G. Fischer & Co. for the Armed Services—all of which were approved by the U. S. Bureau of Standards and performance—proven in service by the Armed Forces. These special features are now available to the Medical Profession in this new superior, 200-Milliampere X-ray machine at a price as low as many comparable 100-milliampere units.

The unit is available in either 100 or 200 milliampere rating and for single or two-tube operation. A full 100 kilovolts are available at ALL milliampere settings.

The tubestand is furnished in either of two types at the same price —mounted on floor rails or floor-to-ceiling mounted. The tube arm on both types swings laterally through 90° to clear the table for vertical positioning and for single-tube fluoroscopy in both vertical and horizontal positions. A manually operated stereoscopic shift provides a lateral shift of 6″ on both sides of center.

The table is precisely counterbalanced for finger-tip tilting. A motor drive of the quiet, but powerful, roller chain type is available. A full-size 12″ x 16″ fluoroscopic screen is mounted on the table. It can be equipped with a spot film device that functions for one central, two horizontal, two vertical, or four corner radiographs on an 8″ x 10″ film.

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The entire unit can be installed in an 8′ x 11′ room with an 8′ ceiling height.

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. . . . . NEWS MEDICAL

MICHIGAN AUTHORS

James H. Maxwell, M.D., Ann Arbor, is the author of an article entitled "The Rational Use of Antibiotics in Otolaryngology" presented at the Fifty-Ninth Annual Session of the American Academy of Ophthalmology and Otolaryngology, September, 1954, in New York, and published in the *Transactions, American Academy of Ophthalmology and Otolaryngology,* November-December, 1954.

Alexander Blain, III, M.D., and **Stuart W. Hamburger, M.D.,** Detroit, are the authors of an article entitled "Refractory Symptomatic Prolapsed Gastric Mucosa Relieved by Gastrectomy," published in *Annals of Surgery,* January, 1955.

Francis S. Gerbasi, M.D., Long Beach, California, and **Alexander Blain, III, M.D.,** Detroit, are the authors of an article entitled "Surgical Aspects of Dissecting Aortic Aneurysms," published in *Angiology,* June, 1954.

* * *

Lawrence A. Pratt, M.D., and **Kenneth A. Wood, M.D.,** Detroit, are the authors of an article entitled "Bronchial Adenoma" published in *The Grace Hospital Bulletin,* July, 1953.

Hermann Pinkus, M.D., Monroe, is the author of an article entitled "Histopathology of Allergic Dermatoses," read by invitation at the Decennial Congress of The American College of Allergists, Miami Beach, Florida, April 9, 1954, and published in *Annals of Allergy,* November-December, 1954.

Delmar F. Weaver, M.D., Detroit, is the author of an article entitled "Complications Resulting from Chronic Mastoiditis with Cholesteatoma," published in *AMA Archives of Otolaryngology,* January, 1955.

S. Albert, M.D., Ralph M. Johnson, M.D., and **Hermann Pinkus, M.D.,** Detroit, are the authors of an article entitled "The Effect of Transplanted and Spontaneous Mouse Mammary Gland Carcinomas on Lymph Nodes," published in *Cancer Research,* November, 1954.

Walter M. Whitehouse, M.D., Ann Arbor, is the author of an article entitled "Correlation of Surgical Pathology with Telepaque Cholecystography in Doses of Two Grams," published in *Surgery, Gynecology and Obstetrics,* February, 1955.

D. Emerick Szilagyi, M.D., and **Paul R. Overhulse, M.D.,** Detroit, are the authors of an article entitled "Segmental Aorta-Iliac and Femoral Arterial Occlusion," read before the Section on Surgery—General and Abdominal, at the 103rd annual meeting of the American Medical Association, San Francisco, June 25, 1954, and published in *The Journal of the American Medical Association,* January 29, 1955.

Ralph M. Johnson, M.D., S. Albert, M.D., and **Hermann Pinkus, M.D.,** Detroit, are the authors of an article entitled "Serum Proteins in Mice Bearing Induced and Spontaneous Mammary Gland Carcinomas," published in *Cancer Research,* December, 1954.

Hermann Pinkus, M.D., S. Albert, M.D., and **Ralph M. Johnson, M.D.,** Detroit, are the authors of an article entitled "The Uptake of Radioactive Phosphorus by Mouse Lymph Nodes during Sensitization to a Foreign Protein," published in the *Journal of Immunology,* November, 1954.

* * *

James E. Mahan, M.D., of Allegan was honored on February 21, in connection with the celebration of the golden anniversary of the founding of Rotary International, when he was granted the Red Rose of Rotary award. Only three of these awards have been given since the founding of the Allegan Rotary Club in 1924. Dr. Mahan was "singled out for his benevolence and sympathetic regard for his fellow man; giving of his energy regardless of time or circumstances." Dr. Mahan has served as secretary of the Allegan County Medical Society for many years.

* * *

The 1955 Industrial Health Conference will be held in Buffalo, New York, April 23-29. Michigan men taking part in the program are: Ralph G. Smith, Bureau of Industrial Hygiene, Detroit Department of Health; D. E. Van Farowe, Michigan Department of Health; Warren A. Cook, University of Michigan Institute of Industrial Health, Ann Arbor; Miss Helen DeCoursey, R.N., Kelsey-Hayes Wheel Company, Detroit; Frank A. Patty and Mrs. Kathleen Kumler, General Motors Research Laboratories, Detroit; Grant U. MacKenzie, D.D.S., Ford Motor Company, Dearborn; T. P. Schreiber and R. C. Frank, General Motors Research Laboratories, Detroit.

* * *

The March, 1955 number of the *Journal of Chronic Diseases,* the third number issued recently received is deserving of special comment. The editors are **Joseph Earl Moore, M.D.,** of Baltimore and **David Segal, M.D.,** of New York. The editorial board of twenty well-known

(Continued on Page 496)

A Summary of Recent Research*

Wine in Modern Medical Practice

> "...in response to the demand within the medical profession that the true values or deficiencies of wine be ascertained, that there be a clear separation of fact from folklore, and that there be an impartial analysis and study of those features which can be scientifically measured . . . ."*

a series of independently conducted research programs has been in progress for many years under the sponsorship of the Wine Advisory Board of California.

Some of the most important new research findings have been incorporated in a small brochure* specifically written for the medical profession. The booklet considers the role of wine in the treatment of the convalescent and the geriatric patient, as well as its use in the specialized fields of gastroenterology, cardiology, urology, etc. There is mention, too, of the psychobiologic effects of wine, such as its capacity to add a touch of interest and "elegance" to restricted or special dietaries.

A copy* is available to you, at no expense, by writing to:

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*"Uses of Wine in Medical Practice"

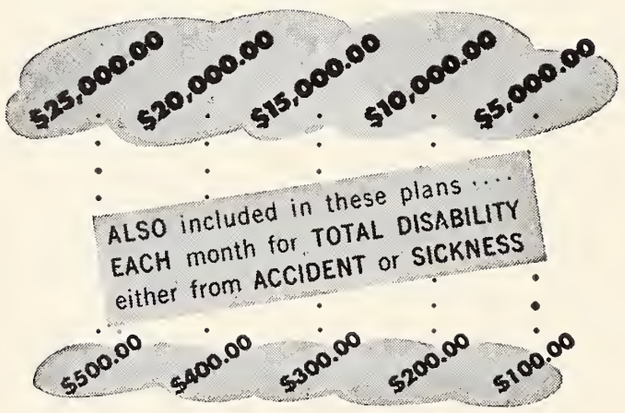
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HOSPITAL INSURANCE ALSO FOR OUR MEMBERS AND THEIR FAMILIES

$4,000,000 Assets
$20,000,000 Claims Paid
52 Years Old

Physicians Casualty & Health Ass'ns.
Omaha 2, Nebraska

(Continued from Page 494)

men is headed by Carl E. Badgley, M.D., of Ann Arbor. The papers are wonderfully well selected, including Studies of Chronic Diseases in Industry, Management of Arthritis, Cirrhosis of the Liver, Idiopathic Cardiomegaly and Systematic Lupus Erythematosis with a review of 126 cases. There are three very good scientific editorials dealing with cirrhosis, gout and home care of chronic illness. The pages are 7"x10", side stitched. The journal is published by the C. V. Mosby Company.

* * *

Surgery Where It Hurts.—The cancer-cigaret issue has hit Michigan in its most tender spot—the budget. In the past six months, receipts from the state three-cent cigaret tax have fallen off more than $600,000, which is no amount to be sneezed at.—*Inside Michigan,* March, 1955.

* * *

Inside Michigan, in its March, 1955, cover has a large picture showing a row of spectators looking at a television screen illustrating an operating room procedure—probably taken at last year's MCI session and previewing the program this year. The caption is "What's New, Doctor?" That is also the title of the first article, with a picture of Doctor McCo'l, and a scene in the exhibit room.

* * *

An international symposium on cardiovascular surgery was held March 17, 18, 19, 1955 under the auspices of the Henry Ford Hospital in Detroit. Among the sixty participants were leaders from all over the world, with registrations from Australia, Italy, France, South America, Mexico, Canada, England, Sweden, New Zealand. Michigan participants were: Conrad R. Lam, M.D., Robert F. Ziegler, M.D., Harper K. Hellems, M.D., John W. Keyes, M.D., all of Detroit, and Herbert Sloan, M.D., Ann Arbor. On account of the great demand for seats, no publicity was given locally, the complete attendance list of 450, filling the Clinic Building Auditorium, was by invitation. A book of the proceedings will be published.

* * *

The Federal Government employs about 10 per cent of the active physicians, 9 per cent of the active dentists, and 6 per cent of the active graduate nurses. Thirteen per cent of all hospital beds are in federal hospitals, and about 7 per cent of the total number of patients admitted to hospitals each year are admitted to federal hospitals.—Hoover Commission report, 1955.

* * *

A summer camp for diabetic children will be opened for the seventh season under the auspices of the Chicago Diabetes Association, Inc., from July 17 to August 7, 1955 at Holiday Home, Lake Geneva, Wisconsin. Boys and girls, ages eight through fourteen years, are eligible. For further information, write the Chicago Diabetes Association, 5 South Wabash Avenue, Chicago 3, Illinois.

(Continued on Page 498)

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Brooklyn, N. Y.

Wartenberg Pinwheel

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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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(Continued from Page 496)

Research grants have recently been made by Eli Lilly and Company to twelve institutions, including eight universities, one of which is the University of Michigan. The grant for the University is to provide a fellowship in the department of chemistry under the direction of R. C. Elderfield, M.D.

* * *

Homer Howes, M.D., of Detroit, was elected historian at the annual business meeting of the American Academy of Allergy, held at the Statler Hotel, New York, February 8, 1955.

* * *

The twenty-eighth annual Spring Congress in Ophthalmology and Otolaryngology of the Gill Memorial Eye, Ear and Throat Hospital was held in Roanoke, Virginia, April 4 to 9, 1955. Among the guest speakers were Albert D. Ruedeman, M.D., Detroit, Richard Schneider, M.D., Ann Arbor, and John Sheldon, M.D., Ann Arbor.

* * *

The fourth annual Symposium for General Practitioners on Tuberculosis and other Chronic Pulmonary Disease will be held in Saranac Lake, New York, July 11 to 15, 1955. It is approved for twenty-six hours of formal credit for members of the American Academy of General Practice.

This five-day course is designed particularly for general practitioners and presented over a period short enough so that they may readily attend. Many of the sessions are informal panel discussions with ample opportunity for questions from the audience.

Sessions will be held in the various sanatoria, hospitals and laboratories in the Saranac Lake area. The faculty will consist of physicians, surgeons and scientists from Saranac Lake as well as guest lecturers.

Information and copies of the program can be obtained by writing Dr. Richard P. Bellaire, General Chairman, Symposium for General Practitioners, P.O. Box 2, Saranac Lake, N. Y.

* * *

The 54th annual meeting of the American Proctologic Society will be held at the Hotel Statler, New York, June 1-4, 1955. Presiding will be A. W. Martin Marino, M.D., of Brooklyn, N. Y., president. All meetings are open to the medical profession.

At the sessions on Wednesday, June 1, lectures on basic sciences will be given by the following distinguished authorities: Henry T. Randall, M.D., Clinical Director of the Memorial Hospital-Sloan Kettering Division of Cornell University Medical School—"General Principles of Water and Electrolyte Balance in Gastro-Intestinal Tract Surgery;" Benjamin G. Shafiroff, M.D., Associate Professor of Clinical Surgery, N. Y. U. Medical School—"Autonomic Nervous System of Colon and Rectum;" E. A. Rovenstein, M.D., Professor of Anesthesia, N. Y. U. Medical School—"The Pharmacology of Local Anesthetic Agents;" Frank L. Meleny, M.D., Professor of Clinical Surgery, College of Physicians and Surgeons,

(Continued on Page 500)

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The Michigan Alcoholic Rehabilitation Foundation is a non-profit organization devoted to the proper hospitalization of alcoholics seeking to stop drinking.

Contributions to the Foundation are deductible and should be sent to 2379 National Bank Bldg., Detroit 26, Michigan.

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(Continued from Page 498)

Columbia University—"The Rationale for the Prophylactic and Therapeutic Employment of Antibiotics as an Adjunct to Surgery of the Alimentary Tract."

Other featured speakers include Herman Steinberg, M.D.; Parker Vanamee, M.D.; Herbert S. Kupperman, M.D.; Arthur Purdy Stout, M.D.; Maurice M. Richter, M.D., and Ernest W. Lampe, M.D.

From Thursday, June 2, to Saturday, June 4, technical papers by members and guest speakers will be presented. These reports have been selectd by the Program Committee, whose chairman is Dr. Norman D. Nigro of Detroit.

The American Proctologic Society was founded in 1899 and now has more than 550 members, the largest organization in its specialty field in the world. Outstanding and recognized ability, knowledge and competence are the criteria for membership.

* * *

Representatives from two medical schools in Michigan will attend the fifth annual convention of the Student American Medical Association at the Sherman Hotel, Chicago, Illinois, May 6, 7, and 8.

A highlight of the three-day meeting, which includes the official deliberations of the sixty-seven-member House of Delegates, will be the first annual banquet, held May 7. Dr. You Chan Yang, Korean ambassador to the U. S., will speak on "Medicine and Diplomacy." The three national winners of the SAMA-Blue Shield essay contest will be announced at this dinner.

John A. Oates, Jr., of Bowman Gray School of Medicine and President of SAMA, invites all members of the medical profession who are in the Chicago vicinity during the convention to attend the meeting.

Louis J. Regan, M.D., a prominent physician-lawyer and one of the nation's foremost experts on malpractice, will headline a panel on forensic medicine Saturday afternoon, along with Irving Goldstein, Chicago attorney and leading authority on trial technique. Mr. Goldstein will also preside as judge at the moot court featuring SAMA members and representatives of the American Law Student Association.

Forty technical exhibitors, representing the drug and equipment industry, will display their products at the convention. Some lucky medical student will win a seven-day all expense paid "Millionaire's Dream Vacation" to Miami Beach, Florida. In addition, several other awards will be made to members who register at the booths in the technical exhibit area.

Sunday's program highlights the appearance of Nicholas Dallis, M.D., creator of "Rex Morgan, M.D.," the popular newspaper feature. Dr. Dallis will present the story of his cartoon strip and introduce the artist team who draws it.

With an expected registration of over 1,000 medical students and interns, the convention promises to be the largest gathering in the short, but successful, history of SAMA.

Say you saw it in the Journal of the Michigan State Medical Society

INGHAM COUNTY MAY CLINIC

The twenty-seventh May Clinic of the Ingham County Medical Society will be held Thursday, May 5, 1955, at Hotel Olds, Lansing, Michigan.

Afternoon Session—1:30 P.M.

Registration.

"Anesthetic Management in Acute Emergency Situations"—F. H. Van Bergen, M.D., Director of Anesthesiology, University of Minnesota Medical School, Minneapolis, Minnesota.

"Combined Chemotherapy in Infectious Diseases"—Wesley W. Spink, M.D., Professor of Medicine, University of Minnesota, Medical School, Minneapolis, Minn.

"Surgical Management of Cancer"—Owen H. Wangensteen, M.D., Professor of Surgery, University of Minnesota Medical School, Minneapolis, Minn.

"The Complete Investigation of the Suspected Cervix"—Allan C. Barnes, M.D., Professor of Obstetrics and Gynecology, Western Reserve University, Cleveland, Ohio.

Social Hour—5:15 P.M.

Subscription Dinner—6:30 P.M.

Speaker—Leo G. Rigler, M.D., Professor of Radiology, University of Minnesota Medical School, Minneapolis, Minn.



A. C. Furstenberg, M.D., of Ann Arbor, recently was honored upon completion of twenty years as Dean of the University of Michigan Medical School. Dr. Furstenberg was presented with the Bene Merenti Medal from Pope Pius XII. The presentation was made by Rev. Frank J. McPhillips of the Student Chapel of the University of Michigan. Postmaster General Arthur E. Summerfield read a congratulatory message from President Eisenhower. Many medical and lay leaders spoke at the presentation or sent greetings.

Congratulations, Dean Furstenberg!

* * *

Coals to Newcastle

By virtue of their offices, the president and president-elect of the American Medical Association are deluged with fan mail. Every time one or the other makes a speech and newspapers publicize it, the mail pours in. Here is a letter, a gem, which President-Elect Elmer Hess received from a lady in Texas:

"I noticed in the paper where you are ailing with a cough. Please try this, as I have seen TB patients cured from trying it. Get yourself a small bottle about three inches tall. Put one-third of salt (table salt) and two-thirds of whisky in the bottle. Shake well. Take a swallow several times a day."

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Plan now to give yourself a holiday soon. You'll *like* Dearborn Inn, doctor! Advance reservations are advisable.

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"What's New, Doctor?" is the title of the lead article featured in *Inside Michigan,* the magazine which has the slogan "Providing enlightenment on public affairs."

The cover of the March *Inside Michigan* also featured the activities of doctors of medicine, specifically the Michigan Clinical Institute of 1955. The cover was a photograph reproduction of co'ored television, via closed circuit, sponsored during Michigan Clinical Institutes through the co-operation of Smith, Kline & French Laboratories of Philadelphia.

"The entire MCI program is designed to bring Michigan doctors of medicine definite information useful in their daily practice," stated *Inside Michigan,* "not just what is going on in the experimental laboratories. MCI stresses the 365 days of rapid medical progress."

Thanks, *Inside Michigan.*

* * *

George J. Curry, M.D., Flint, has been appointed Chairman of all State Regional Committees on Trauma, American College of Surgeons, in the United States and Canada.

Duncan Cameron, M.D., of Lincoln Park, has been made Chairman of Section 5 of the State Regional Committee on Trauma, ACS, the position occupied for a number of years by Dr. Curry.

Congratulations, Doctors Curry and Cameron.

* * *

Joseph P. Hoet, M.D., Professor of Internal Medicine at the University of Louvain, Belgium, was special guest speaker at a luncheon meeting arranged March 11 in the Sheraton-Cadillac Hotel, Detroit, during the Michigan Clinical Institute.

Dr. Hoet reported on his studies on the relation of pregnancy and diabetes to members of the Michigan Diabetes Association, Michigan Society of Obstetricians and Gynecologists, and the Detroit Pediatric Society. The luncheon was arranged by a committee composed of Richard M. McKean, M.D., Chairman; Lawrence F. Segar, M.D.; Harold A. Ott, M.D., and Manes S. Hecht, M.D., all of Detroit.

Dr. Hoet flew from Louvain to Detroit; following his Michigan appearance, he went by airplane to New York to conduct a two-week postgraduate course at the New York Academy of Medicine.

* * *

Michigan had a total of 4,565 acceptable beds available for the care of tuberculosis patients (on December 31, 1954), with a patient census of 4,331 on that date, according to reports of the Michigan Department of Health.

* * *

The American Association of the History of Medicine will hold its annual meeting in Detroit on May 12-13-14, 1955, at the Park Shelton Hotel. Alfred H. Whittaker, M.D., Detroit, is Chairman of the Committee on Arrangements. F. A. Coller, M.D., Ann Arbor, is guest speaker at the annual banquet; he will speak on "The Relation of Surgery to Science." For information and program, write Dr. A. H. Whittaker, 1427 E. Jefferson Avenue, Detroit, or Samuel X. Radbill, 7043 Elmwood Avenue, Philadelphia 42.

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George J. Curry, M.D., Flint, was given a signal honor during the recent Michigan Clinical Institute in Detroit. Recognizing the postgraduate medical training of residents and interns, especially in the field of trauma and orthopedics, which has been the altruistic avocation of Dr. Curry for many years, the Michigan State Medical Society, the Michigan Regional Committee on Trauma of the American College of Surgeons, and the Michigan Industrial Medical Association joined hands in presenting a scroll to Dr. Curry at the conclusion of the Second Assembly (trauma program) of the Institute. The award, presented jointly by Robert H. Baker, M.D., Pontiac, President of the Michigan State Medical Society, Vernon C. Abbott, M.D., Pontiac, Chairman of the Trauma Committee, and Lyndle R. Martin, M.D., President of the Michigan Industrial Medical Association, was a highly illuminated and embossed scroll. The phraseology of the scroll, received as a surprise by Dr. Curry, read as follows:

"This token is presented to George J. Curry, M.D., of Flint, in deep appreciation and grateful recognition of distinguished service rendered by him to medical education; as a great stimulus to resident training and in the study and management of problems relating to surgery of trauma."

The University of Michigan Eighth Annual Conference on Aging will be held in Ann Arbor, Michigan, June 27-30, 1955.

Topic of the conference is "Aging—Applying Today's Knowledge, Today." The program will be focused on gaining greater skill in the use of principles, practices, methods and techniques needed for more effective service to older people.

A series of Workshops will offer advanced leaders, experienced workers, and newcomers to the field an opportunity to study the application of present-day knowledge to the solution of problems of older people in the fields of employment, housing, community organization, health, religion, education, use of leisure time, legislative action and advanced planning.

For information, write Wilma Donahue, Division of Gerontology, 1510 Rackham Building, Ann Arbor.

* * *

A course in neuromuscular diseases of children with special emphasis on cerebral palsy will be offered by M. A. Pearlstein, M.D., Chicago, at the Cook County Graduate School of Medicine, beginning June 20. Tuition for this intensive two-week didactic and clinical course in the diagnosis and management of the neuromuscular diseases of children, including field trips to itinerant clinics, is $225.00 (including costs of luncheons during the course and cost of transportation and hotels during the itinerant clinics). Registration is limited. Write Cook County Graduate School of Medicine, 707 South Wood Street, Chicago.

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The annual Symposium on Trauma and Nutrition, sponsored by the Michigan Regional Committee on Trauma, American College of Surgeons, will be held May 19 at the Rackham School of Postgraduate Studies, Ann Arbor. The program feature is that every speaker is a house officer from a hospital in Michigan, Windsor (Ontario) and Toledo (Ohio) having approved residencies or internships. The papers are judged, with the winner being presented with the "Frederick A. Coller Award." The best paper is based on originality and importance of the work, as well as completeness and excellence of presentation.

* * *

Conference on Anesthesiology.—Wayne University College of Medicine offers a comprehensive unit course in anesthesiology, April 21-23, 1955. The course, a series of didactic preparations and panel discussions and related subjects, is intended primarily for the part-time anesthetist or general practitioner seeking anesthesia. Experts in the field of anesthesiology will present the lectures; adequate time will be allowed for discussion. The last day of the session will be devoted to a round table dealing with particular problems in anesthesiology presented by the registrants. Fee $40. For complete program and further information, write F. E. Greifenstein, M.D., Professor of Anesthesiology, Wayne University College of Medicine, 1401 Rivard, Detroit.

* * *

Postgraduate medical education in the United States.—The two and one half year survey made by the AMA's Council on Medical Education in Hospitals is being reported, currently, in *The Journal of the American Medical Association* (issues from February 26 through June 4). Following the publication of all articles, the entire series will be reprinted in monograph form, to which will be added a section on the "History of Postgraduate Medical Education." For copies of the reprint, write Edward L. Turner, M.D., Secretary of the Council, 535 N. Dearborn St., Chicago 10, Illinois.

* * *

Retired Vice Admiral Ross T. McIntyre, M.D., who was wartime Surgeon General of the Navy, has been appointed Executive Director of the International College of Surgeons with headquarters in Chicago. Dr. McIntyre has served in many responsible positions such as Chairman of the President's Committee on National Employ the Physically Handicapped Week, Director of the American Red Cross National Blood Program, and as personal physician to the late President Roosevelt.

Commenting on this appointment, AMA Secretary George F. Lull states: "Admiral McIntyre has had a wide and varied experience in matters of medicine and health and Dr. Max Thorek and his Executive Board (International College of Surgeons) are to be commended for their selection of a man of Admiral McIntyre's caliber."

* * *

At the 1954 AMA Clinical Session in Miami, J. S. DeTar, M.D., of Milan, was a member on the Reference Committee on Reports of Board of Trustees and Secretary, and Ralph A. Johnson, M.D., Detroit, was on the Reference Committee on Hygiene Public Health and Industrial Health.

Say you saw it in the Journal of the Michigan State Medical Society

Cook County Graduate School of Medicine

INTENSIVE POSTGRADUATE COURSES
STARTING DATES, SPRING 1955

SURGERY—Surgical Technic, two weeks, April 18, May 2
Surgical Technic, Surgical Anatomy and Clinical Surgery, four weeks, June 6
Surgical Anatomy and Clinical Surgery, two weeks, June 20
Surgery of Colon and Rectum, one week, May 9
General Surgery, two weeks, April 25; One week, May 23
Gallbladder Surgery, ten hours, June 27
Thoracic Surgery, one week, June 6
Esophageal Surgery, one week, June 13
Fractures and Traumatic Surgery, two weeks, June 13

GYNECOLOGY—Office and Operative Gynecology, two weeks, April 18, June 13
Vaginal Approach to Pelvic Surgery, one week, May 2

MEDICINE—Two-week Course May 2
Electrocardiography and Heart Disease, two weeks, July 11
Gastroenterology, two weeks, May 16
Dermatology, two weeks, May 9
Hematology, one week, June 13

RADIOLOGY—Diagnostic Course, two weeks, May 2
Clinical Uses of Radio Isotopes, two weeks, May 2
Radium Therapy, one week, May 23

PEDIATRICS—Intensive Course, two weeks, April 11
Clinical Course, two weeks, by appointment
Neuromuscular Diseases, two weeks, June 20

UROLOGY—Two-week Urology Course, April 18
Ten-day Practical Course in Cystoscopy every two weeks

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Bermuda-Nassau Cruise.—An attractive brochure, describing in detail a Bermuda-Nassau eight-day cruise which will follow the American Medical Association's convention in Atlantic City, June 6-10, is available by writing the International Travel Bureau, Palmer House, Chicago 3, Illinois.

* * *

Frank E. Smith, M.D., Executive Director of Blue Shield Commission of America for eight years, has become associated with the International Travel Service, Inc., Palmer House, Chicago 3, Illinois.

* * *

"What it Costs People to be Sick" was the title of an interesting article published in the December 24 issue of *U. S. News and World Report.* Quoting figures "based on the latest study of the Social Security Administration brought currently through estimates by the Economic Unit of *U. S. News and World Report,*" this special article points out some favorable information on doctors' fees. The story said:

"Government experts attribute most of the rise in hospital expense to higher charges resulting from better pay scales for hospital workers and the higher cost of food.

"Dentists and physicians, on the other hand, are getting a somewhat smaller share of the nation's private medical outlays. This finding runs counter to criticism of physicians' fees.

"Physicians' fees used to account for 30 per cent of the out-of-pocket cost; now they are 29 per cent. Dental bills are less than 10 per cent today, compared with more than 12 per cent in 1948.

"These fees tend to stay fairly constant for periods of years. The last big jump came during World War II. Today many physicians are charging the same for office calls and sickroom visits as they did shortly after the war."

The report said that medical care is costing people a total of 12.4 billion dollars a year, of which 2.1 billion is met through health insurance.—From *AMA Secretary's News Letter,* January 7, 1955.

* * *

"According to the Record" is the name of a new highway safety motion picture which is being enthusiastically received in all parts of Michigan. It is a color sound motion picture, 28 minutes, available through State Police Posts to adult and 'teen age audiences. The MSMS Committee on Study of Prevention of Highway Accidents, of which John R. Rodger, M.D., Bellaire, is Chairman, highly recommends to medical groups the use of this movie.

* * *

Let Government Make All Autos! Someone mailed Dr. F. J. L. Blasingame, AMA Trustee from Texas, the following clipping, entitled "Private Security," from the *Dallas Morning News:*

"Ninety-five of every 100 workers are now covered by some kind of private—not government—benefit program. This is not the brag of private business. It is a government figure.

"Nine of ten have life insurance. Eight of ten have

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hospital insurance, and more than half of those have surgical policies. Six of ten are covered for sickness and accident. Five of ten have medical care. Six of ten have their own company pension coverage.

"Yet, there is growing pressure in Washington for the Federal Government to get into the medical business. It makes just as much sense as the government going into the automobile business so that those who don't have a car can have one—at taxpayers' expense. That pressure is for political 'care,' not medical care."

* * *

"CA" subscriptions outstate are up 1000 since September, thanks to the Michigan Division of the American Cancer Society with headquarters in Grand Rapids. This excellent publication in the cancer control field now reaches 1662 doctors of medicine on a complimentary basis, upon request, through the sponsorship of the Michigan Division, ACS.

In addition, the Southeastern Michigan Division (Detroit) mails copies of "CA" gratis to all physicians in its area (Wayne, Oakland, and Macomb counties).

* * *

A $100,000 gift from the California Medical Association has been received by the American Medical Education Foundation. The donation represents a treasury grant of the CMA and brings California's total contribution for 1954 to $117,230, including contributions to AMEF from 255 individual California physicians.

Another outstanding contribution recently received by the Foundation was a check in the amount of $7,230 from the Arizona Medical Association, representing a $10 per member dues increase voted for AMEF by the association. Arizona and Utah have accepted the Illinois Plan as a method of collecting contributions from their state medical society memberships. Using the plan for the second year, Illinois still leads the nation in total contribution of $163,120.

* * *

The Michigan Chapter of the American College of Chest Physicians will hold a special meeting Friday, May 13, 1955, at 8:30 P.M. in the Auditorium of the Henry Ford Hospital, Detroit.

The speaker will be Dr. Richard R. Trail, Medical Director Papworth Village Settlement, London, England. His topic will be: "Modern Therapy and Rehabilitation in Tuberculosis." This meeting is open to all members and others interested in medical rehabilitation of tuberculosis.

Prior to the meeting there will be a subscription dinner at 6:30 P.M. at the Wayne County Medical Society, 4421 Woodward Avenue, Detroit (TEmple 1-6400).

* * *

The American Board of Obstetrics and Gynecology will conduct the next scheduled examinations (Part II) oral and clinical for all candidates at the Edgewater Beach Hotel, Chicago, Illinois, from May 11 through May 20, 1955. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I examinations will be notified of their eligibility for the Part II examinations as soon as possible.

Office of the Secretary: Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio.

The United States Public Health Service has recently made the following preliminary observations based on a study still in progress.

Approximately half of the known active tuberculosis cases are hospitalized, and one-half are at home. Of the latter group, two out of five have drug therapy recommended. The rest are at home with no recommendations known to health departments for drug therapy.

It is difficult to determine which of the unhospitalized cases are active. Preliminary tabulations show that on the average 20 to 35 per cent of the known active cases at home have not had a clinical examination or x-ray within the preceding twelve months. A similar proportion have not had a determination of their bacteriological status. Even though rest and restriction of activity is still considered an essential part of the treatment for tuberculosis, approximately half of the cases at home were not given any specific recommendations in this regard.

These preliminary observations indicate that there are marked variations in the adequacy of care that patients are receiving at home, and that many of them are getting no more home care than in the pre-drug era. Yet many of these cases need a combination of hospitalization, surgery, and laboratory control. The drugs should not make us less active in finding cases, keeping patients and their contacts under public health supervision, and educating the public about tuberculosis.

Michigan Week will be celebrated May 15 to 21, throughout this state. Dr. Grover Dillman, President of Michigan Tech at Houghton, is the 1955 Chairman.

The active co-operation of all Michigan's doctors of medicine is one of the important items Michigan Week needs most. Members of the medical profession are invited to watch daily newspapers to learn how best they can co-operate in making successful "Michigan Week" to attract others to come to Michigan either for a temporary holiday or for permanent residence.

ACUTE YELLOW ATROPHY OF THE LIVER

(Continued from Page 476)

7. Rich, M. L.; Ritterhoff, R. J., and Hoffman, R. J.: A fatal case of aplastic anemia following chloromycetin therapy. Ann. Int. Med., 33:1459-1467 (Dec.) 1950.
8. Salm, R.: Acute necrosis of the liver following chloramphenicol therapy. Edinburgh M. J., 60: 334-336 (July) 1953.
9. Smadel, J. E.: Chloramphenicol (chloromycetin) in the treatment of infectious diseases. Am. J. Med., 7:671-685 (Nov.) 1949.
10. Smith, R. M., et al: Chloromycetin: biological studies. J. Bact., 55:425-448 (March) 1948.
11. Volini, I. F.: Hemopoietic changes during administration of chloromycetin. J.A.M.A., 142:1333 (April) 1950.
12. Wolman, B.: Fatal aplastic anemia after chloramphenicol. Brit. M. J., 2:426 (Aug.) 1952.



THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

DRUGS IN CURRENT USE, 1955. Edited by Walter Modell, M.D., F.A.C.P., Associate Professor, Clinical Pharmacology, Cornell University Medical College. New York: Springer Publishing Company, Inc., 1955. Price $2.00.

SPORTS INJURIES. Prevention and Active Treatment. By Christopher Woodard, Honorary Consultant to British Olympic Teams, 1948 and 1952. London: Max Parrish, 1954. Price $3.00.

THE ROLE OF THE PITUITARY IN CANCER. The Clinical Value of Pituitary Lipid Treatment. By Henry K. Wachtel, M.D. New York: The William-Frederick Press, 1954. Price $2.00.

REPORT FOR 1953-1954. W. K. Kellogg Foundation, Battle Creek, Michigan.

VIRAL AND RICKETTSIAL DISEASES OF THE SKIN, EYE AND MUCOUS MEMBRANES OF MAN. By Harvey Blank, M.D., Squibb Institute for Medical Research, Columbia University, University of Pennsylvania, and Geoffrey Rake, M.B., B.S., University of Pennsylvania, Wistar Institute of Anatomy and Biology, Squibb Institute for Medical Research. With a foreword by Donald M. Pillsbury, M.D., University of Pennsylvania. 36 full color illustrations, 6 plates, 63 black and white illustrations. Full color insert. "Reactions to Smallpox Vaccination." Boston and Toronto: Little, Brown and Company, 1954. Price $8.50.

While this monograph covers a subject which is somewhat limited in scope, it should be received with appreciation because there has been no previous book or summary of the subject. The book covers a field in which research is progressing rapidly and the literature is extensive but scattered and usually dismissed with little attention. It includes items which are still not understood.

Basic information on each disease is included, as well as detailed discussions of the clinical and therapeutic side. The combination of clinical and scientific information makes this book a great help to both the clinician and the laboratory investigator.

The authors should be commended for the illustrations which are numerous and excellent. The references are good and a bit of humor is injected by pointing out some of the old folklore on the subject. The details regarding diagnostic methods in viral and rickettsial diseases are well presented, a subject with which the average physician is not well acquainted. Recently recognized diseases, such as herpangina and cat scratch disease, are included.

This book is of particular interest to the dermatologist and ophthalmologist, and includes items of interest to dentists, pediatricians and public health workers as well. In summary, it is an outstanding book for the subject covered.

H.E.A.

LEG ULCERS. Their Causes and Cures. By S. T. Anning, T.D., M.A., M.D. (Contab.), M.R.C.P. Assistant Physician, Dermatological Department, The General Infirmary at Leeds; Consultant Dermatologist, St. James's Hospital, Leeds; Clinical Lecturer in Dermatology in the University of Leeds. With 42 illustrations. Boston: Little, Brown and Company, 1954. Price $4.00.

This monograph of 178 pages is the author's personal experience in a leg ulcer clinic held weekly over a period of eight years. He has summarized the extensive literature on the subject, which is well done considering the bewildering volume and variety of the knowledge.

The book is concerned mainly with the etiology and treatment of the common leg ulcers associated with defective venous return of blood from the lower limb, and with ulcers resulting from arterial disease. Other types of ulcers, such as those due to perniosis, blood diseases, erythema induratum, syphilitic gummatous ulcers, ulcerative colitis and other rare causes, are only mentioned.

There is a short chapter reviewing the normal circulation of the lower leg. The discussion of the surgical aspect of leg ulcers is very brief. From this viewpoint, the book would be more useful to the dermatologist and general practitioner than the surgeon. There are no new methods of treatment presented, but in reviewing the literature and integrating it into one handy book, the author has done a good job.

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MEDICAL PRACTICE LAWS

(Continued from Page 483)

injured his practice and good standing to the extent of $250,000.

He demands redress and an injunction allowing him to practice in the hospital. We are concerned about this suit. It is a direct sequence of the decision of the Supreme Court in the case of Albert vs. Grand View Hospital et al, which was reported in our editorials in the March number of THE JOURNAL. If this suit should prevail, all the voluntary and medically established supervision of practice in our hospitals for the past half century would be voided; hospital recognition finished. Any person who has a certificate from the Michigan State Board of Registration in Medicine could demand entrance into any hospital and carry out any examinations, treatment, or surgery.

To continue the free and private practice of medicine, with guarantees of good service to our patients, it may be necessary to amend some of our laws. The Michigan State Board of Registration in Medicine does not have the regulatory power which we have voluntarily imposed upon ourselves. The Board under its powers *may* suspend the registration of a person convicted of a felony, but we hope no government agency is ever granted the regulatory powers assumed by our medical societies to provide well-trained and competent practitioners of medicine and surgery in our hospitals. If government bureaucracies assumed such power, the practice of medicine would be immediately and wholly socialized. That we cannot accept. Some other method must be found, and it is pointed up by a recent action of the Federal Government:

The Federal Register for January 13, 1955, published an amendment to Title 5, Chapter 1, Part 24 of the Code of Federal Regulations relating to requirements for appointment to positions as an "Occupational Therapist." Now Section 24 provides that applicants for these positions must be graduates of a school of occupational therapy approved at the time of graduation by "The Council on Medical Education and Hospitals of the AMA," or if graduation was prior to 1938, approved by the American Occupational Therapy Association.

Duties and knowledge and training requirements are spelled out, followed by the statement that "the necessary knowledge and training can only be acquired through a directed course of study in an approved occupational therapy school." The United States Civil Service Commission has recognized this AMA Council as an approved determining body for certifying those schools.

It would seem embarrassing for our state courts to forbid the very procedures sanctioned by the Federal Government. Perhaps arrangements may be made to constitute the AMA Councils as appropriate boards to review matters of competency of doctors of medicine to practice in their chosen fields. This procedure could be extended to and adopted by the individual states where the police powers lie.

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Column I of the appended table shows the amounts of nutrients and nutrient energy provided by 5½ ounces of enriched bread. Column II gives the percentages of the recommended daily dietary allowance[4] available from this amount of enriched bread.

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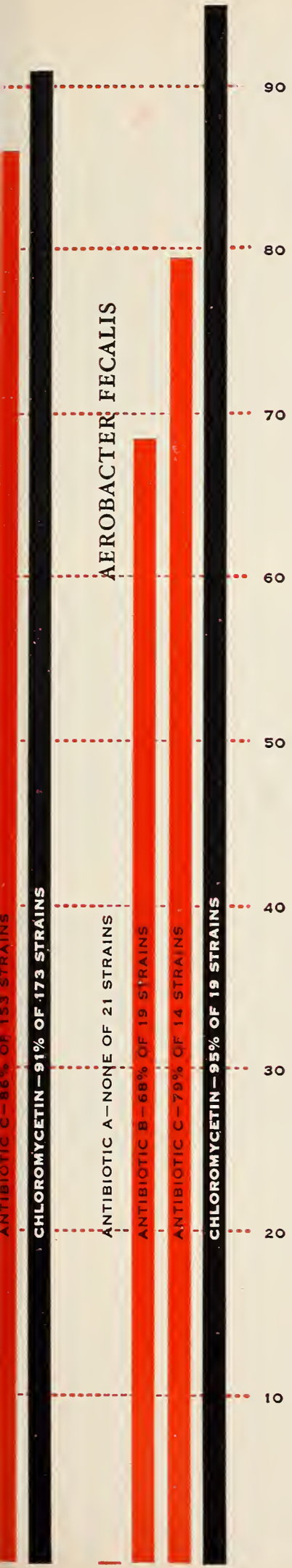
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1. Council on Foods and Nutrition, American Medical Association: A Statement of General Policy Concerning the Addition of Specific Nutrients to Foods, J.A.M.A. *154:*145 (Jan. 9) 1954.
2. Sebrell, W.H.: Trends and Needs in Nutrition, J.A.M.A. *152:*42 (May 2) 1953.
3. Bureau of Labor Statistics, United States Department of Labor, Jan., 1954.
4. Shank, R.E.: Revisions of the Recommended Dietary Allowances, J. Am. Dietet. A. *30:*105 (Feb.) 1954.
5. Sherman, H.C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Co., 1952, pp. 212, 599.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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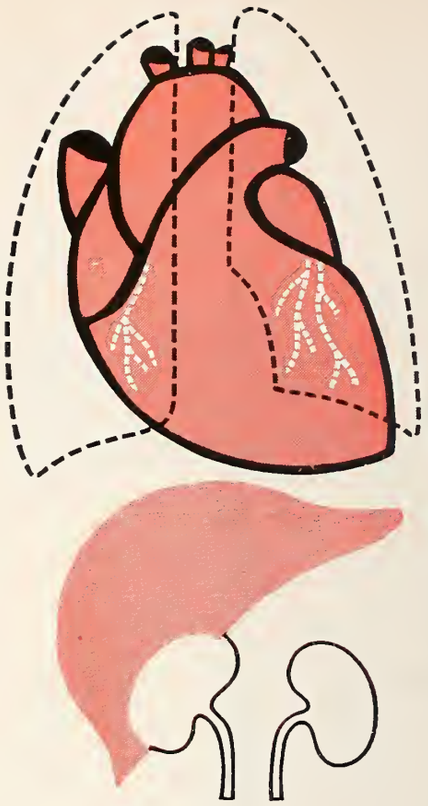
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Adapted from Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* 157:305 (Jan. 22) 1955.

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COVER

Grow old along with me!
The best is yet to be,
The last of life, for which the first was made:
Our times are in his hand
Who saith, "A whole I planned,
Youth shows but half; trust God: see all, nor be afraid."

—From "Rabbi Ben Ezra" by ROBERT BROWNING
Original art conception by DIRK GRINGHUIS

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The first solid food after surgery is toasted enriched bread, slightly buttered. This practice has become a tradition—almost a ritual—because of the very nature of toast. It is bland, easily digested, and yields little inert residue. Its golden, warm appearance is pleasing to the eye; its mild taste appeals to the palate. Its nutrient energy plays a role in the physiologic and psychologic re-awakening of metabolic processes depressed under the "nothing by mouth" conditions immediately following surgery. With increasing tolerance for food it becomes an important component of the soft diet and later of the therapeutic diet.[1] Its valuable protein, B vitamins, iron, calcium and calories help the patient to regain nutritional efficiency.



FOR THE CONVALESCENT...

Enriched bread figures prominently in the dietary regimen in convalescence after acute infections, other serious illness, or trauma.

Supplying 13 grams of high grade protein per 5½ ounces (estimated average daily consumption), enriched bread makes an important contribution to the daily protein need. Its protein, comprising flour, milk, and yeast proteins, functions in the healing of wounds and in the rebuilding of wasted tissues.[2] In addition, 5½ ounces of enriched bread supplies on the average 0.37 mg. of thiamine, 0.23 mg. of riboflavin, 3.4 mg. of niacin, 4.1 mg. of iron, 137 mg. of calcium, and 418 calories.



FOR THE CHRONICALLY ILL...

In the formulation of palatable and nutritious menus for the debilitated, chronically ill, the advantages of enriched bread serve well.

In anorexia, enriched bread or toast stimulates the appetite. It is easily masticated and readily digested, features particularly important for elderly patients. Its favorable textural influence within the alimentary tract[3] promotes good utilization of ingested foods.

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1. The Committee on Dietetics of the Mayo Clinic: Mayo Clinic Diet Manual, ed. 2, Philadelphia, W. B. Saunders Company, 1954.
2. Sherman, H.C.: Chemistry of Food and Nutrition, ed. 8, New York, The Macmillan Co., 1952, pp. 212, 599.
3. Sherman, H.C.: The Nutritional Improvement of Life, New York, Columbia University Press, 1950, p. 133.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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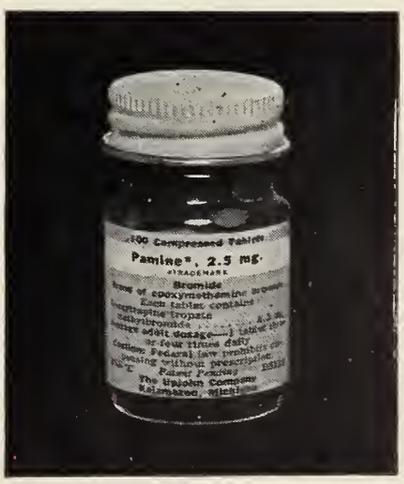
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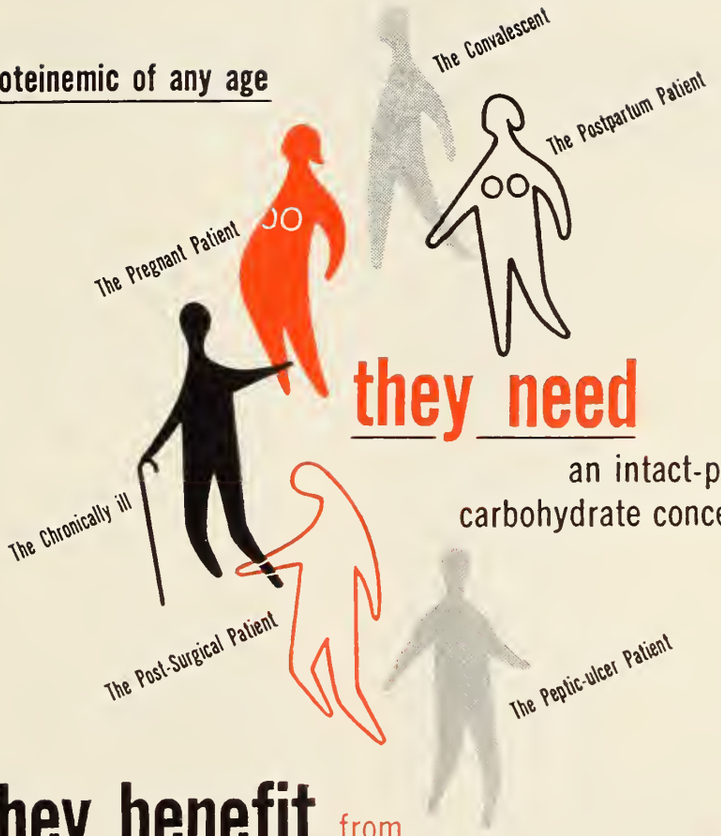
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(Continued on Page 522)

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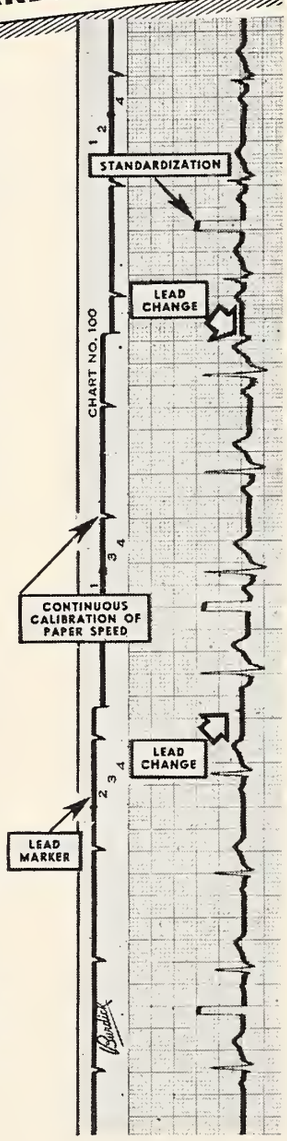
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This Business of Science Reporting

By Allen Shoenfield

Science Writer, The Detroit News

EDITOR'S NOTE: *A few weeks ago, "The Detroit News" was presented with the MSMS Award for Excellence in Medical Reporting, with individual supporting awards going to two staff members. Here is an expert's view of what goes into conscientious medical reporting today. Below are biographies of the two individuals honored.*

With the appearance of science and medical reporters on newspaper staffs, during the last twenty years, there is observed a tendency to impute to such persons special qualifications, characteristics and techniques.

This is open to question. But it is probable that, with time and opportunity, any able newspaper man may become a science writer. Few in the work today made collegiate preparation for it.

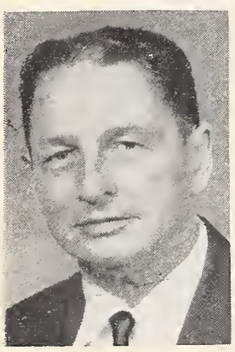
The longer the reporter specializes in science news, the more likely he is to undergo a general reorientation. There is a changing scale of values and a shifting emphasis on the several phases of his work.

He is less concerned with "news" in the usual sense, realizing that the great discoveries in the natural sciences are rarely new but are the work of many contributors, generally over a long period of time. He writes for a passing procession which looks to the newspaper for health information. He is aware that medical men can practice only as good medicine as their patients will accept and demand—and this is in proportion to the education they have acquired relative to scientific advances.

This places a heavy responsibility on the medical reporter. Among those who will read every word he has written are many who are ill and anxious and fearful. An inaccurate quotation, a misleading statement, an enthusiast's promotion of some unproved drug or treatment will raise false hopes and result in bitter disappointment. In the end, both the newspaper and the medical profession will be discredited.

For many reasons, the science reporter's assignment is not an easy one. He must render the content of a highly technical paper or address intelligible to the average reader. He must relate it to common life experience. His editors are pleased if he can infuse into it some warmth and

(Continued on Page 528)



Merle Oliver

MERLE OLIVER was graduated in electrical engineering and did postgraduate work in journalism, then served his internship at the *Ann Arbor News*.

He was on the staff of the Associated Press and the late lamented *Philadelphia Record,* and did public relations work for Carl Byoir & Associates in New York City and the University of Tampa (Florida) before joining *The Detroit News* in 1941.

Oliver was night city editor of *The News,* 1943-45, then for the next four years engaged in the sub-specialty of one-man grand juries. In recent years, he claims to have striven to deserve the title of "poor man's scholar" of *The News* staff, and says he has taken as his motto a quotation from Sir Francis Bacon: "If he read little, he need have great cunning to seem to know that which he doth not."

In Oliver's own words, he "usually is one jump ahead of the sheriff" because he has "adopted as a hobby the raising of purebred Hereford cattle, a form of recreation for which millionaires are better adapted."



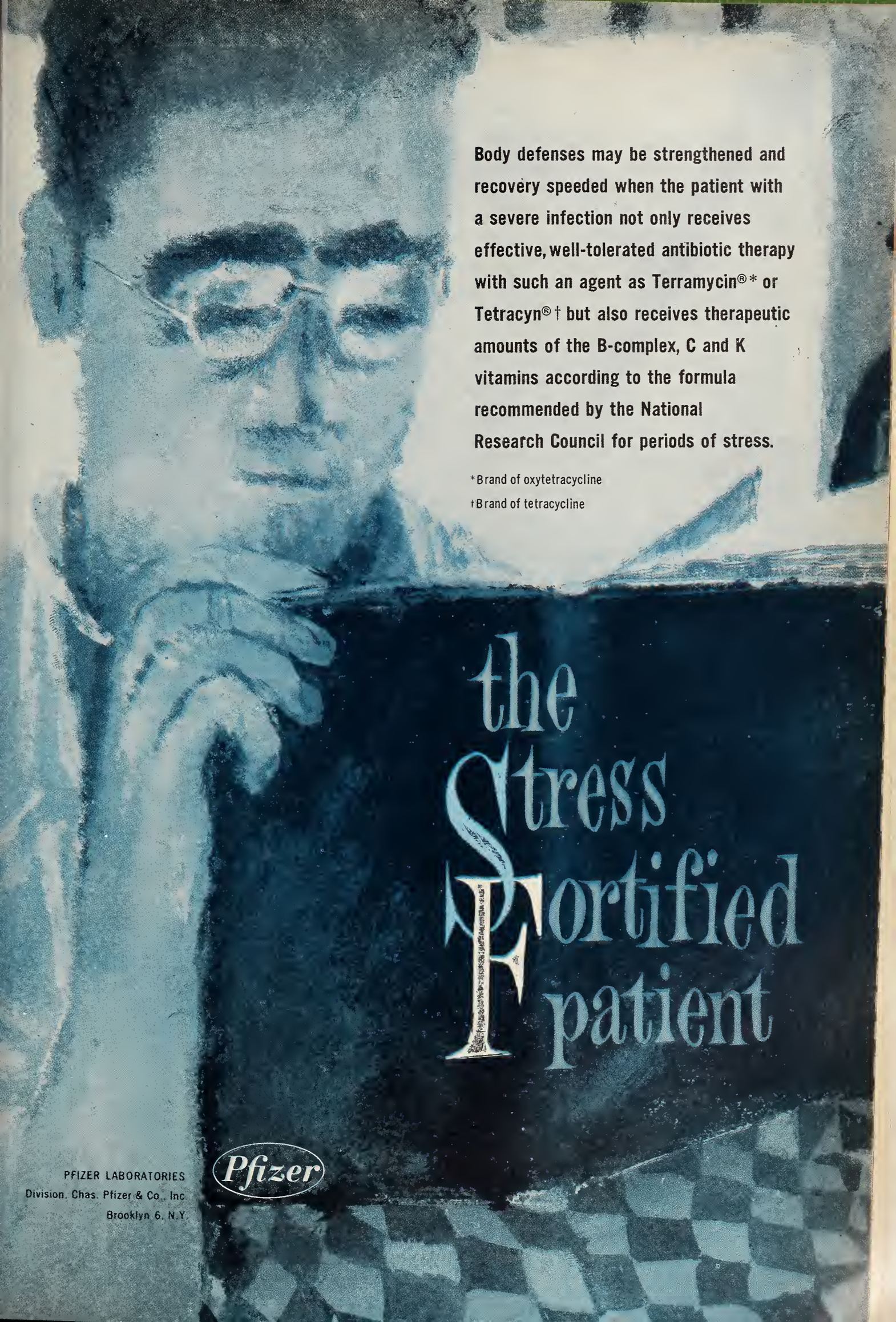
Allen Shoenfield

ALLEN SHOENFIELD, who used to shrink from the designation, "veteran reporter," is now reconciled to it, having learned that the term is generally descriptive of any newspaperman who has held one job for longer than five years. It does not imply, necessarily, a snowy thatch, a shuffling gait and an inability to remember where one puts one's "specs."

Born in Louisville, Kentucky, Shoenfield "got through the elementary schools and Louisville Male High School without distinction," carefully avoiding all science courses from a conviction that they were "too tough." His preparation for science and medical writing in later years was scarcely more thorough at the University of Michigan, from which he was graduated with an A.B. degree in 1918.

Judicious selection of courses reported to be "pipes," so, Shoenfield reports, permitted him to waste most of his days and all of his nights on the *Michigan Daily* and to become editor of *The Gargoyle,* campus humor

(Continued on Page 528)



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(Continued from Page 524)

human interest. If he succeeds, he opens himself to the usual criticism of the medical man that he has emphasized the "sensational" or "romantic" or "emotional" aspects. He is inevitably blamed for the headline which he does not write.

While the science reporter must proceed on the assumption that recent advances in every field, especially in medicine, are sufficiently dramatic to require no ornamentation by him—he must, nevertheless, exercise his imagination to perceive a story where none is immediately apparent. He must see in the production of a mouse mutant, perhaps, new light on the genetics of human cancer.

He must be open-minded and receptive, yet wary of the scientist rushing prematurely to print in order to establish priority and of the exceedingly clever "public relations counselor" for commercial enterprises promoting unproved drugs and appliances.

He must read widely, especially in medical and technical publications. He should know something of the great landmarks of medicine, the development of the several specialties, their current problems, their distant objectives. If he has no formal knowledge of the basic sciences, he must acquire it. Few scientists, important enough to be interviewed, have time or patience to offer a course in fundamentals as a preface to an account of their work.

Most essential for the science reporter are the contacts he establishes, persons on whom he can rely for informed, off-the-record comment on controversial issues and personalities. He must win their confidence, speak their language. Accuracy must be his watchword. He must have books and other sources of instant reference. He must document all that he writes.

And he is compelled, frequently, to write in haste to meet implacable deadlines—knowing all the while that his source will protest not having had the opportunity to check his copy. Some reporters resent such suggestion as a form of censorship, as impugning their competence, even as an abridgement of the freedom of the press! Those who take the long view will welcome a chance to submit copy to source when circumstances permit. This builds confidence and confidence makes for a closer working relationship between the press and the medical profession.

This was shown when, for many years, *The Detroit News* published its "Health and Hygiene" column under the aegis of the Michigan State Joint Committee on Public Health Education. A *Detroit News* medical reporter and members of the University of Michigan medical school staff collaborated on preparation of the column with *The Detroit News* bearing all costs and distributing the material without charge to other newspapers of the state. It was a unique experiment, described at length in *The Journal of the American Medical Association.*

Editors of *The Detroit News* have not found it necessary to formulate a "philosophy" of science or medical reporting nor to give reporters special instructions in mechanics.

It is notable that the National Association of Science Writers has never promulgated a Code of Ethics, although the organization repeatedly has been asked to do so.

It is not easy to understand why such a Code is needed. The Canons of Journalism, as enunciated by the American Society of Newspaper Editors, with their emphasis on responsibility, decency, accuracy, fairness should cover this type of reporting, as it does all others.

ALLEN SHOENFIELD

(Continued from Page 524)

magazine, in his senior year. This latter experience, he now feels, enabled him "to appreciate later, both the conscious and the unconscious humor of medical men."

Shoenfield joined the staff of *The News* immediately after graduation. He married in February, 1922, and the Shoenfields left for Germany where, for two years, he served as Berlin correspondent for *The News.*

On his return to the Detroit staff, Shoenfield's duties included reporting the annual meetings of the Michigan State Medical Society and the weekly assemblies of the Wayne County Medical Society in their old High Street quarters. This was a familiar but lonely assignment, he says, devoid of the stimulating challenge of competition.

"Only one Detroit paper, now defunct, was interested in medicine—but only to the extent of trumpeting the claims of a Detroit medico that he had found a cancer cure at last," Shoenfield recalls, "For the most part, any raid on a Hamtramck still in that early Prohibition era, took precedence over a surgical triumph."

Shoenfield remembers, too, that the period was characterized by a coolness, even hostility, on the part of the medical profession toward the press and any contact which might savor of personal publicity seeking. Reporters were barred from attending meetings of the House of Delegates. On occasion today, he confesses to a feeling of nostalgia in covering current medical meetings, because "so much has changed."

In the fall of 1925, Shoenfield opened the University of Michigan Bureau of *The News* for the state editor. Since then, he has made Ann Arbor the base for his operations, roving far beyond the state's boundaries to cover assignments.

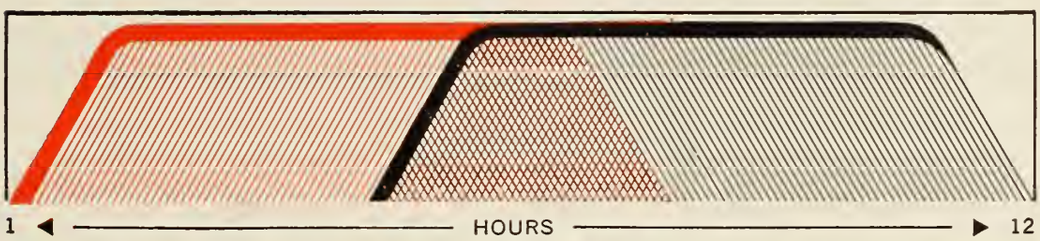
In 1934, he was one of twelve founding members of the National Association of Science Writers, which has done much to break down the old barriers and to convince scientists that reporters could be responsible and trustworthy.

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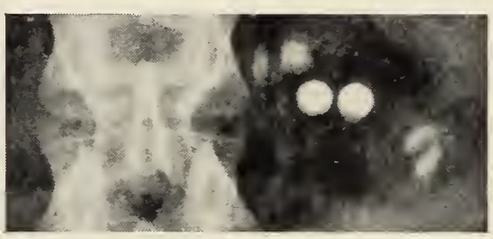


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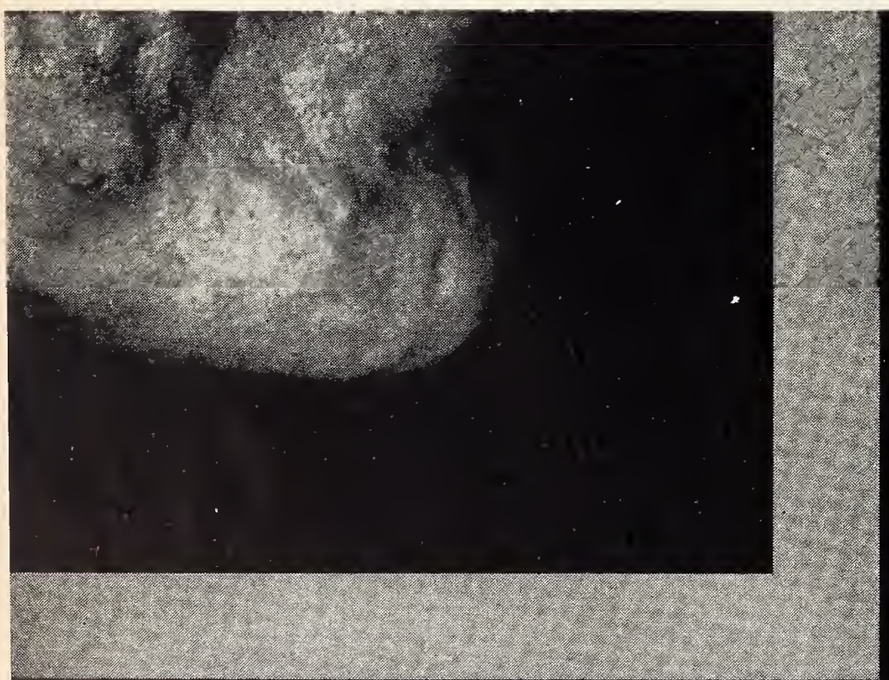
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HIGHLIGHTS OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of March 11, 1955

Thirty-four items were presented to the Executive Committee of The Council at its Detroit meeting of March 11, 1955. Chief in importance were:

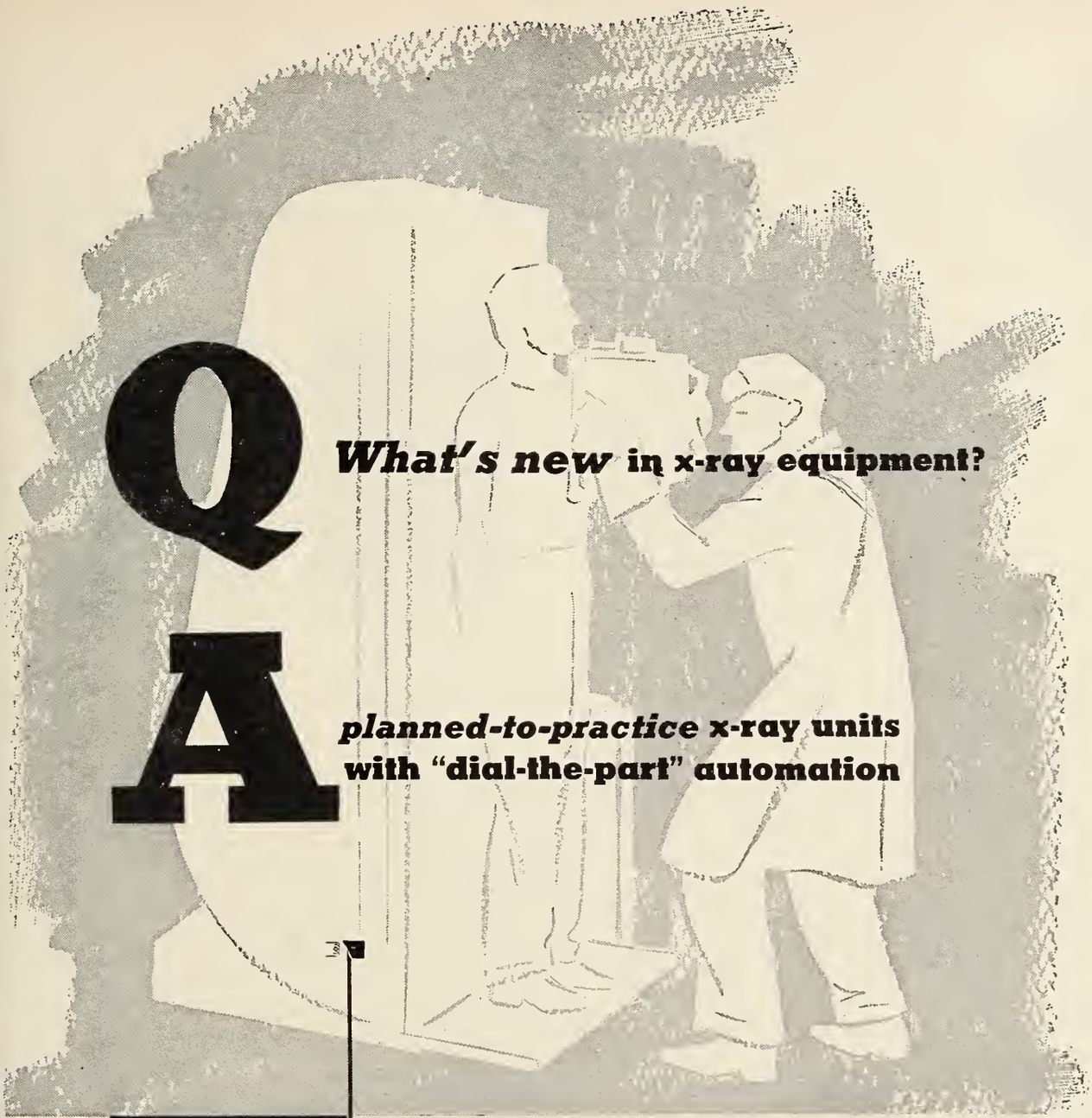
- **1955 Michigan Clinical Institute:** Chairman Wm. Bromme reported the MCI attendance broke all records with a total of 2,980, including 1,786 doctors of medicine. A vote of thanks was extended to all who in any way contributed to the extraordinary success of this year's Institute.

  Dr. Bromme also reported that the Residents-Interns Conference of March 9 was a splendid meeting and very worthwhile, with greater attendance and more participation in the meeting by the 151 residents, interns, and senior medical students present. A similar conference was authorized to be held in connection with the 1956 MCI.

  In like manner, the Operating Room Nurse Conference of March 10-11 was reported as well attended and enthusiastically received. The Executive Committee of The Council authorized co-operation with the ORN's in their 1956 Conference.
- **Committee Reports.** The following committee reports were presented and given consideration: (a) Committee on Scientific Radio, meeting of February 24; (b) Mediation Committee, meeting of March 2; (c) Mental Health Committee, meeting of January 27.
- William Bromme, M.D., Detroit, was appointed as MSMS representative to attend the Kentucky State Medical Association's Officers Conference in Lexington, April 7.
- The Council Chairman was authorized to set dates for meetings of the MSMS Executive Committee of The Council with similar executive committees of (a) the State Bar of Michigan, and (b) the Michigan Hospital Association.
- The Past Presidents' Club organizational meeting of March 10 was reported by L. W. Hull, M.D., Chairman. The Past Presidents' Club is to be considered a special committee of The Council until The Council as a whole has opportunity to consider making this group a permanent committee of The Council.
- President Robert H. Baker, M.D., Pontiac, was appointed as official representative of MSMS at the Ohio State Medical Association Annual Session, Cincinnati, April 19-22.
- H. Waldo Bird, M.D., Detroit, was appointed MSMS representative to the Committee on Psychiatric Nursing of the Michigan League for Nursing.
- Schedule of Meetings for 1956 Annual Session of The Council and for the County Secretaries-Public Relations (three days) Seminar, January 25-29, 1956, was presented and approved.
- V. George Chabut, M.D., Northville, was appointed as MSMS representative to the Fifth National Conference on Physicians and Schools, Highland Park, Illinois, October 12-14; Goldie B. Corneliuson, M.D., Lansing, was appointed MSMS representative to the Joint Conference on Maternal Mortality Committees, Chicago, March 19-20.
- Inside Michigan—March, 1955, Number — featured as its lead article the 1955 Michigan Clinical Institute, including cover; a vote of thanks was extended to Arthur A. Hagman, publisher, for this worthy story.
- An "Industrial Medicine Number" of THE JOURNAL, as requested by the Michigan Industrial Medical Association, was authorized, upon recommendation of Editor Wilfrid Haughey, M.D., Battle Creek.
- Matters of mutual interest were discussed with A. E. Heustis, M.D., Michigan Health Commissioner.
- Resolution on the passing of Edith Cowles Haughey, wife of Editor Haughey, on March 11. was authorized to be drafted and forwarded to the family of Dr. Haughey. Mrs. Haughey was one of the pioneer founders of the Woman's Auxiliary to MSMS.

ATOMIC PLANE

The *Chicago Tribune* carried an article on January 28, 1955, that the United States has made a marked advance in its race with Russia to develop intercontinental missiles and eventually will have atomic powered airplanes capable of indefinite flight. This information was reported by General Nathan F. Twining, Air Force Chief of Staff, in testimony before the House Armed Services Committee. He stated that although many different engineering problems still have to be solved, American scientists have reached a point where they can predict a practical nuclear powered aircraft. "We have hopes that this will be a truly intercontinental weapon freeing us from the dependencies on overseas bases and supply systems," Twining said. The development program, he said. has been given a high priority.



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Heart Beats

L. Paul Ralph, M.D., of Grand Rapids was elected President of the Michigan Heart Association at its Sixth Annual Heart Day held in Detroit on Friday, March 11, 1955, in conjunction with the Michigan Clinical Institute. Dr. Ralph has been active in the Michigan Heart Association since its organization in 1949 and has served as a member of the Board of Trustees since that time.

Secretary of Defense Charles E. Wilson was re-elected Chairman of the Board of Trustees of the Association. Mr. Wilson was instrumental in the formation of the Association, and he has continued to have an active interest in its activities.

Other Association officers elected on Heart Day were: President-Elect—E. A. Irvin, M.D., of Detroit; Vice Presidents — Mr. Frank N. Isbey Detroit; Mrs. Fred Miner, Flint; Carleton Dean, M.D., Lansing; Secretary—L. Fernald Foster, M.D., Bay City; Treasurer—Mr. Charles T. Fisher, Jr., Detroit.

The following persons were elected to the Board of Trustees for a three-year term: J. William Hagerty, Detroit; George Jacoby, Detroit; Franklin D. Johnston, M.D., Ann Arbor; Cyrus H. King, Detroit; John D. Littig, M.D., Kalamazoo; Mrs. James McEvoy, Detroit; L. Paul Ralph, M.D., Grand Rapids; H. H. Riecker, M.D., Ann Arbor; Frank Van Schoick, M.D., Jackson; Milton Shaw, M.D., Lansing; F. Janney Smith, M.D., Birmingham; Henry L. Smith, M.D., Detroit; C. E. Wilson, Bloomfield Hills; Mrs. Hugh Wilson, Ann Arbor.

Members of the Board of Trustees who were elected to serve on the Association's Executive Committee were: Paul S. Barker, M.D., Ann Arbor; M. S. Chambers, M.D., Flint; Warren B. Cooksey, M.D., Detroit; E. A. Irvin, M.D., Dearborn; Frank N. Isbey, Detroit; Carleton Dean, M.D., Lansing; Douglas Donald, M.D., Detroit; L. Fernald Foster, M.D., Bay City; Frank X. Martel, Detroit; Mrs. Fred Miner, Flint; George Jacoby, Detroit; Franklin D. Johnston, M.D., Ann Arbor; L. Paul Ralph, M.D., Grand Rapids; Frank Van Schoick, M.D., Jackson; F. Janney Smith, M.D., Birmingham; Henry L. Smith, M.D., Detroit; Donald Smith, M.D., Pontiac.

The following Committee appointments were made by Dr. Ralph following his election:

Research Committee.—Donald Smith, M.D., Chairman, Pontiac; Douglas Donald, M.D., Detroit; John D. Littig, M.D., Kalamazoo; Franklin Johnston, M.D., Ann Arbor; Ralph A. Johnson, M.D., Detroit; Muir Clapper, M.D., Detroit; J. W. Keyes, M.D., Detroit; R. A. Rasmussen, M.D., Grand Rapids.



L. Paul Ralph, M.D.



E. A. Irvin, M.D.

Program Committee.—Frank Van Schoick, M.D., Chairman, Jackson; Henry L. Smith, M.D., Detroit; Warren B. Cooksey, M.D., Detroit; Carleton Dean, M.D., Lansing; M. S. Chambers, M.D., Flint; Robert E. Fisher, M.D., Bay City; J. K. Altland, M.D., Lansing; Paul S. Barker, M.D., Ann Arbor; James H. Fyvie, M.D., Manistique; F. D. Dodrill, M.D., Detroit; Sibley W. Hoobler, M.D., Ann Arbor; Kathryn O'Connor, M.D., Detroit; Kathryn McMorrow, M.D., Detroit; Mrs. James McEvoy, Detroit; Sidney Chapin, M.D., Dearborn; B. I. Johnstone, M.D., Detroit; Leon DeVel, M.D. (Ex Officio), Grand Rapids.

Finance Committee.—Mr. Frank N. Isbey, Chairman, Detroit; Mr. Charles T. Fisher, Detroit; Mr. J. William Hagerty, Detroit; Mr. Cyrus King, Detroit.

Memorial Contributions Committee. — Mr. George Jacoby, Chairman, Detroit; Mr. Frank N. Isbey, Detroit; Warren B. Cooksey, M.D., Detroit; Mrs. Fred Miner, Flint; Mrs. Hugh Wilson, Ann Arbor; Sidney Chapin, M.D., Dearborn; Mrs. James McEvoy, Detroit.

Membership Committee.—M. S. Chambers, M.D., Chairman, Flint; William P. Chester, M.D., Detroit; Seymore K. Wilhelm, M.D., Detroit; S. C. Wiersma, M.D., Muskegon; H. S. Heersma, M.D., Kalamazoo; Mrs. Hugh Wilson, Ann Arbor.

Committee on Cardiovascular Clinics.—Milton Shaw, M.D., Lansing; F. D. Dodrill, M.D., Detroit; B. I. Johnstone, M.D., Detroit.

Frank Van Schoick, M.D., Chairman of the

(Continued on Page 565)

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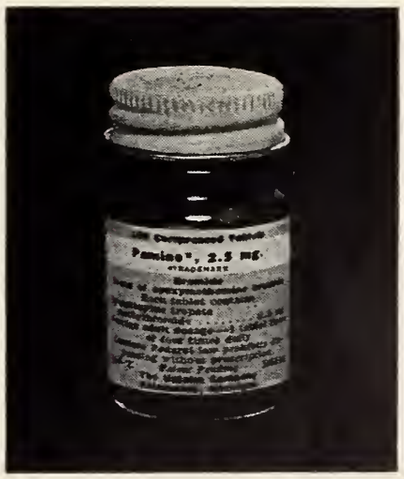
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AMA Washington Letter

THE MONTH IN WASHINGTON

This session of Congress probably is more than half over. On health legislation, two things are becoming apparent. First, Congress is not attaching much urgency to some of the early-blooming issues that were so prominent in January and February. For example, it has been in no hurry to take up such subjects as reinsurance for health plans, guarantees of mortgage loans for health facilities, expanded care for military dependents, or health insurance for government employes. Action may yet come in a rush, and some of these bills may be passed, but not all. The second fact is that Congress this year does seem willing, if not anxious, to take some action on mental health.

One explanation of the slow pace of most health bills may lie in the fact that this is only the first session, and that bills not passed this year may be enacted next year, an election year. At any rate, unless a bill is definitely voted down, it remains alive until the 84th Congress adjourns in 1956.

At the top of the list of favored mental health bills are identical measures by Chairman Priest of the House Interstate and Foreign Commerce Committee and Chairman Hill of the Senate Labor and Public Welfare Committee. These bills, which were not initiated by the Eisenhower administration, provide $1,250,000 in grants for a three-year survey by non-governmental professional groups of all phases of mental health. Presumably the survey would be conducted by a Joint Commission on Mental Health, formed by the AMA Council on Mental Health and the American Psychiatric Association, with a number of other groups participating.

Considered by these committees at the same time was the administration's proposal for a three-year program of outright grants to states for new and existing mental health programs with Congress deciding on the money needed.

The survey bill was reported favorably by the House Committee within 10 days after hearings were completed. The grants proposal was held up with the explanation that it properly should be considered with legislation not then before the committee.

The Priest committee then turned its attention to fields other than health; it also has jurisdiction over legislation on railroads, aviation, communications and federal power. Senator Hill's committee continued on health bills, next taking up his and Senator Bridges' bill for a three-year, $90 million grant program for construction of non-federal laboratory facilities for research in a wide range of chronic diseases.

The measure failed to get AMA support, the Board of Trustees deciding it was too broad and loosely written. Dr. George F. Lull, AMA secretary-general manager, pointed out to the committee that the bill gives no voice to the states and local communities in development of a planned and integrated system of laboratory and other research facilities.

Prior to final Appropriations Committee action on next fiscal year's budget for the Federal Civil Defense Administration, the AMA urged favorable consideration of the agency's request for medical supplies and equipment. Dr. Lull made the point that it was futile to plan for the medical phase of civil defense unless the profession has the supplies to work with. He warned of the medical problems that would arise from an enemy attack, including radioactive fallout. The House proceeded to approve a $30 million appropriation for stockpiling of supplies and equipment, $5.3 million less than the administration asked. However, the committee pointed out that FCDA has millions of dollars in unexpended balances.

This same appropriations bill carries approximately $750 million for the Veterans Administration medical budget for the next fiscal year. The measure contained one surprise: an unexpected $16,885,000 increase for a start on remodeling certain VA hospitals. The VA originally asked the Budget Bureau to approve $20 million for this purpose, the Bureau pared it down to $13,815,000 but the House raised it to $30 million.

Another bill that moved through the House with a minimum of controversy was one re-establishing the authority of the Secretary of Health, Education, and Welfare to channel surplus government property to health and educational institutions at no cost.

Nodular goiter may be considered a premalignant lesion and should be extirpated at an early date, regardless of the lack of symptoms or signs.

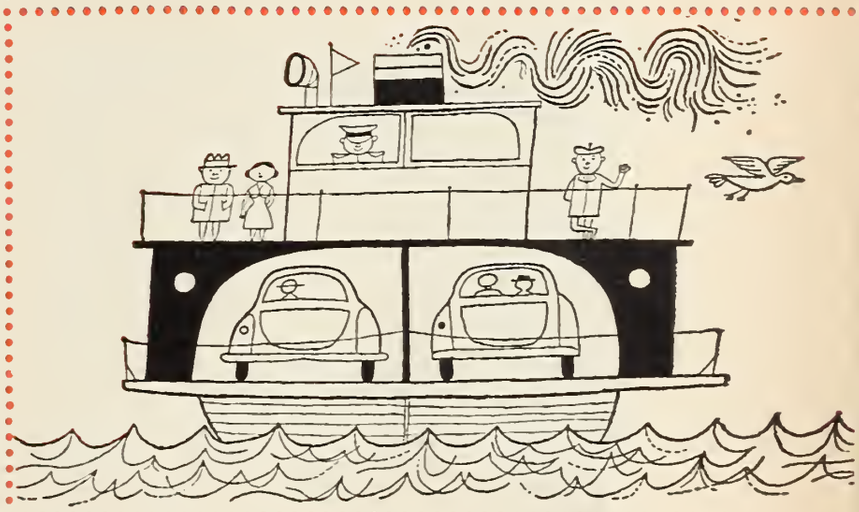
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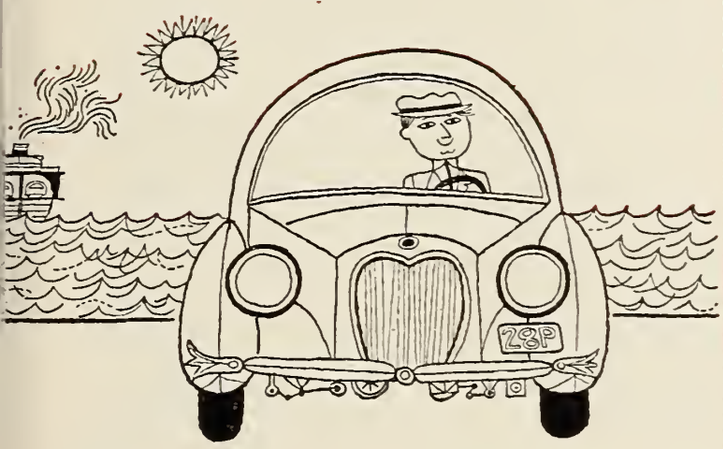
In adenocarcinoma, total thyroidectomy is the treatment of choice, if it is possible, and subsequently block dissection when glands are found clinically involved.

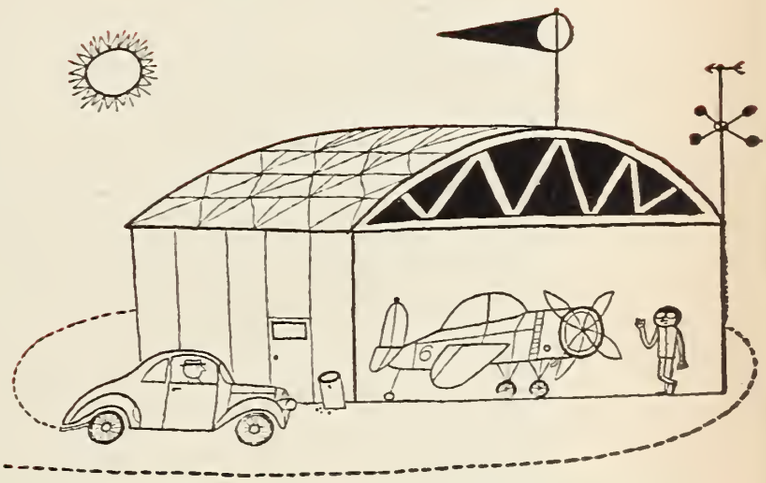






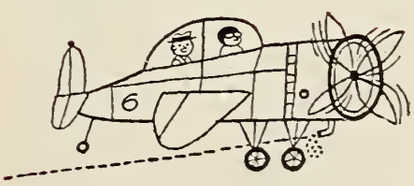






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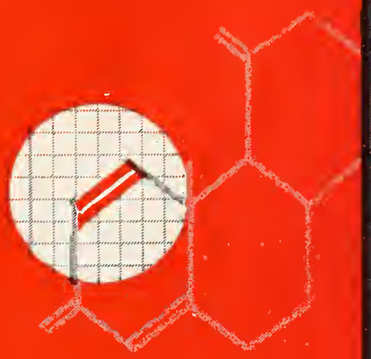
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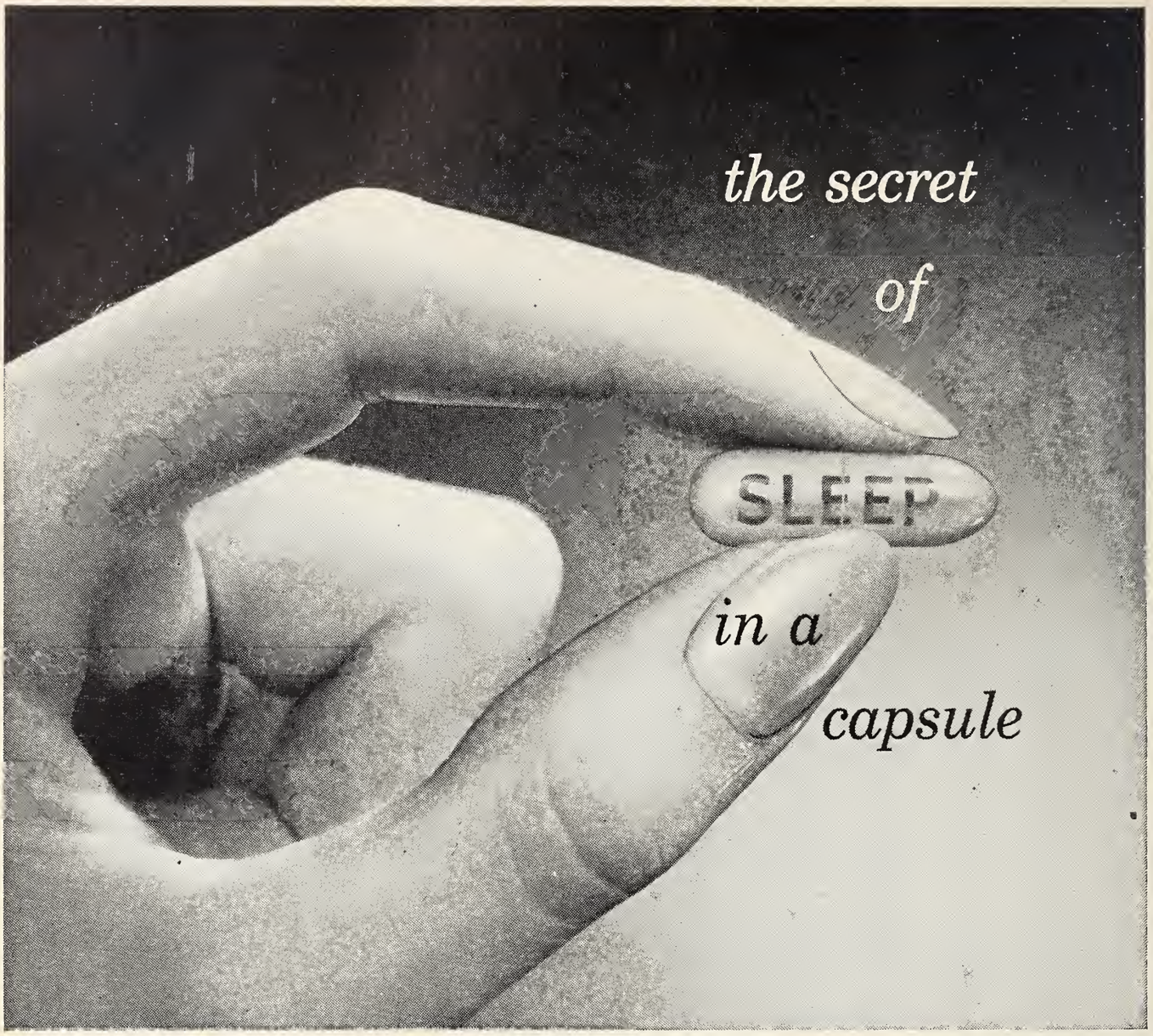
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The JOURNAL
of the Michigan State Medical Society
Issued Monthly Under the Direction of The Council
VOLUME 54 MAY, 1955 NUMBER 5

Geriatrics and the Aging Personality

By C. Howard Ross, M.D.
Ann Arbor, Michigan

There was an old geezer from Ringeau
Who won three fortunes at bingo.
He had friends by the thousand
And plans by the Townsend
And a bride at one hundred, by jingo!

IF we require a text for this sermon, there are links in that jingle for many a thought.

Our Washtenaw County Medical Society, dealing with geriatrics, is integrated with the current conference on gerontology, sponsored by the University of Michigan and the Michigan State Medical Society. It is my duty to introduce to you the elder citizen with his waverings, his problems, his variations, his types.

Twenty years ago it was my pleasure to present a paper on geriatrics before the Journal Club of the University of Michigan Department of Internal Medicine. Many of the younger men in attendance, barely knew the term, "geriatrics," and observed my words in a state of surprise, as though I spoke as a hierophant. Today, our residents rattle off terms like "compensated edentulism" without so much as batting an eye. Incidentally, I have seen the elderly gums bite into hard apples successfully; and of course, the old reference of chomping into lobster claws with the bare gums is still being kept alive.

While we deal with late senescence, do not forget the miserable plight of the sperm's tail following conception. There is nothing but a void of disaster for the little propelling wriggler.

As our 14,000,000 oldsters are squeezed through the circus hoop of life, their many ills are on one side of the ledger, but their frequent complaints are on the other side. The teeth, the gut, the heart, the bladder, the joints—all are in daily discussion.

A professor friend relates to me the problem of his household, rotating about the gut of his father. The entire family is jellied and jockeyed into position. Nothing is accomplished in this household until father has enjoyed his morning bowel movement. Then the second and third generations quit wringing their plural hands and go about their day's business.

If you recall, Shakespeare promotes the mewling and puking infant into the later years of the lean and slippered pantaloon.

In dealing with the causes of death, opposed to the urges for living, retirement should become an opportunity for life versus a hazard towards the grave.

Some scientific wag has stated that the treatment of the elderly becomes the yardstick of a civilization. The colder the climate, the more haughty an attitude develops. The warmer the climate, the kindliness towards the aged kindles. There is no graph to picture human emotion, except possibly the sine curve:



By and large, the curve of health follows the curve of *morale*. An oldster was known to have inquired: "What is the altitude of your attitude, bud?"

The hope of many an elderly man is to grow old with honor, and to die without pain. In fact,

Presented at a meeting of the Washtenaw County Medical Society held in conjunction with the Conference on Gerontology, Ann Arbor, Michigan, January 13-15, 1955.

I have preached this type of slogan to the ancient worriers.

In my personal upbringing, one ferocious grandmother taught me the thrills of English history. At the age of nine, I became an amateur historian. The submissive grandmother, on the other side of the house, acquainted us with Mother Goose and popcorn balls, and taught us to knit through a spool. I am thus the product of applied gerontology. I hasten to add that my parents produced me before they reached the age of geriatrics, although parenthetically, just barely before that event.

Dr. Hugh Cabot was wont to harangue his medical students regularly, regarding the care of the aged, and he frequently quoted reference to the eleventh commandment. I finally bit on this pièce de résistance, and asked him the leading question. He roared back at me: "Thou shalt make thy patient no worse, by God!" He also warned us that refugees from acute disease were now in their advancing years—plunging headlong into chronic ailments. There was no simple shot in the arm to prevent aging or the sadness of aging. He emphasized that senescence was as much hastened by lost hopes as by degenerating processes.

My own father and I were discussing the philosophy of the aging person. He said to me: "Now, you're a young man and therefore stupid. I'm an old man and therefore wise; so I'll tell you. On a frosty morning, I call to my wife and say: 'The morning paper!' Do I spend time on the headlines? Pass them by. Do I hover over the want ads? Flip past them. To the obituary column for me. There I pause and linger. If I find my name, I do not budge from my cozy bed. But if my name is absent, why then I get the hell out of that bed, and go to work!"

The sad deal about the end of life is our reversal of attitude. We spend so many years to build a patient up, and then become fretful that the dying man cannot wind it all up and go in a hurry!

There is little motivation to frustration and rejection. Companionship and sociability are glasses of wine to the old heart.

Over forty years ago, Josh Billings was quoted as saying:

> There's more to old age than meets the eye,
> T'aint just screen the privy and swat the fly.

Now comes the rough-shod adventure among the elderly, with some attempt at classification. Since the experts will thrill you with polysyllabic groupings, I will hasten to announce that I shall employ my own categories, so as not to tread on any gerontological toes. This list runs something as follows:

The Status Quo Boys

Here are the vitamin youngsters, clear-eyed, rosy-cheeked and raring to go. Though past sixty-five, they tolerate no obstacle in their path. If forcibly retired, they seek other employed status immediately. Work is their salvation.

With *post hoc* reference, one could mention the experience I had with two Christian Scientist ladies in the younger years of their later lives. They called themselves "kids," although one was sixty-seven and one was seventy-two. They requested to enter the service of our hospital as volunteer aides. They said: "We will not attempt to convert anyone. We will merely bring the ready smile and the willing hands."

This was a war contribution, but the result was most successful, and it was too bad, indeed, that the end of the war terminated their contribution of the "willing hands." I firmly believe that medicine could yet find great aid from such women in the Christian Science Church; both in the nurses aide field and in the realm of social service. After all, the two philosophies agree on the common ground of the welfare of mankind.

Non-Senile Senility Group

Now parade before you the wise counselors, the lecturers, and investigators. Years do not dim their vision. In Ann Arbor we have many retired professors, who have become consultants in their fields. One retired professor of physics, and his wife, conducted a hegira to a small Southern college. There he continued in his field and she, the housewife and the doting grandmother, suddenly became the successful professor of German. One of our retired professors has become three times as busy and four times as wealthy since seventy years of age confronted him with retirement status.

The Happy Warriors and the Happy Whistlers

Here are grouped the great, the near great, the half baked, and the well done. Many are world figures and satraps. I am thinking of the soap

box orators, the grey-haired lyceum thrillers, the world savers, the Churchills, the Adenauers, and the Schweitzers.

The Maha (Mahat) Eager Beavers

At this juncture, I wish to relate the tale of the retired Dutch general and the retired professor of zoology. They had both traveled far and wide over the world in their time of vigor. Now, old age was upon them, but their brains were active and their memories keen. The general objected to society passing him by. I, therefore, inveigled the general into my car, and plopped him into the professor's parlor and drove away. On a later occasion, I asked the general about the battle of wits. He said: "Oh, we had a wonderful four hours!"

"Well, what did you do?"

"We discussed 'Maha.'"

"And what is a 'Maha'?"

Here the story unfolded:

"There is a Sanscrit stem 'Maha' (Mahat), which means great, large or wonderful. The professor and I took this word all over the world. We found the 'maharaja,' or the great king; the 'maharani,' or great queen; the 'mahadeva,' or great god; the 'mahajan,' or great man, that is, money lender; the 'Mahatma,' or great-souled one. We are also very suspicious of 'Taj Mahal,' 'Mahoney,' 'Majorca,' 'Majollica,' 'majesty,' and 'Mahomet!'"

This story could go on and on, but it relates the possibilities of the wise ones associated together.

The Over-Powering Relatives

You will not be surprised to know that the "keeper" sometimes eclipses the "kept." One busy housewife expostulated in no uncertain terms and implored me to "make mother sit there, and not move or breathe." When I suggested the undertaker as an alternative, she began to realize how far over the fence she had leaned in her restrictive benevolence.

The Over-Powering Ancients

Many facets of this situation arise. I recall the cessation of respirations and the sad phone message, declaring that another grandmother had found peace at last. The nurse confronted me with this announcement: "Look me over, I have just been kissed by an octogenarian." The widowerhood has been brief indeed. An entire chapter could be written over the Gibraltar phase of the male stamina.

The Premature Saints

Watch for the bonnets and the knit-in-the-corner girls. Fortunately in this enlightened age the number is decreasing. Apparently just sitting piously and waiting for the grave is not intriguing enough to bolster up the life that confronts us. In this class could also be listed *the submissive senescent.*

The Militant Senescent

Beware of the unconquerables. I am thinking especially of my own grandmother of the historical learning. After perfecting herself in history, at the age of seventy, she lectured on English history for twenty years. One day, as a lad, I was passing the *Cincinnati Times Star* on a cold afternoon. I sailed into grandmother's house and called out: "Hey, Gran, a cup of hot cocoa, please!" There was a hush and a shush. Grandmother was in the parlor, sounding off on the Georges of England. About thirty bustled ladies of the late gay nineties were sitting on the edges of their chairs, preserving the contour of their bustles, and taking in every one of Grandmother's words.

The dear old lady re-shuffled her false teeth and began to wind up her exegesis. She had finished with the Georgian furniture, the Georgian architecture, and was delving into the Georgian lineage. As she made a quick pass from George II to George III, I popped up like a youthful amanuensis and said: "You left out Frederick, Prince of Wales."

Grandmother gave me a wolfish smile, dismissed her ladies, and poured the hot cocoa.

As I was about to leave, she produced for me a chilling forehead kiss and said: "In our family, the philosophy dictates that if I am telling the blackest lie that damns me to the darkest hell, you keep your mouth shut till the company goes!"

Needless to say that years later, grandmother, aged ninety, slept peacefully away after a very very busy day.

The Miserable Rich

The appanage of happiness disappears. The poor cerebral accident cases, selecting a group at

random, even though they be millionaires in palaces, can receive but limited amount of physiotherapy and medication. They later require companionship, which may, or may not, be lacking.

At one time, we had a home for the miserable rich in Ann Arbor, and they were cared for in exquisite fashion. If companonship cannot be obtained under these circumstances, it is generally available in the following classification.

The Miserable Poor

I realize that the poor house of the nineties, with its asperities, has now become "The County Hospital." Progress is noted. We find the cardiacs, the arteriosclerotics, the poor in spirit and purse, the hypertensives, the malignancies, the wretched traumatics, the prostatics, and, in a further ward, the elderly tuberculosis patients.

Such factors as "groans and odors" require considerable personnel training. A little later, in this paper, group activities are mentioned, but this subject belongs to a further speaker.

The Clinging Vine

Let me bring to mind the picture of two mothers-in-law in the home of an engineer. One has fixed her personality, and permeated it into the very person of her daughter. She must be literally baby fed. The paternal mother is active and heroic and says on occasion: "What that other woman needs is a good stick of a hat pin in the rump."

Professor R. W. Hegner, two generations ago, detailed to us in a course called "Wild Animals" the possible parisitology of the aged, and compared it to the activities of lower forms. He summarized it all in a poetic splash, as follows:

> Big bugs have tiny bugs
> Upon their backs to bite 'em,
> And little bugs have lesser bugs,
> And so on, ad infinitum!

The Home Body

At this pause, let me praise the elderly couple still able to remain in their own home, even though it be a wattle and daub hut, where they are masters and are surrounded by familiar sights and sounds.

A further successful adventure is described by the side-door apartment for the elderly.

An arrangement in the "little house next door" must be praised. One grandmother has become the baby sitter for an entire residential street.

Homes for the aged should not be placed far out in the country, without familiar landmarks and without recreational facilities. Exercise and activities rooms are like manna to the elderly. Projects with central dining halls have been successful.

The Senile Dementia

Committing to an institution does not always solve this problem. At times, the unbalanced patient may remain in his own home, with proper companionship, or hired attendant. I was called to the home of an elderly scientist in the middle of the night. He had performed some "research," declaring that his symptoms were due entirely to spirochetes in the ophthalmic area of his brain. He figured that the paths through his optic chiasm would transmit the image of his spirochetes to his retina. Then an observer, at the correct angle of incidence, could gaze at a mutual white object, and actually see the germs in the scientist's brain. Both of us gazing at two o'clock in the morning into the white toilet bowl did not bring forth any spirochetes, but at least that subject was killed off until the next one arose. As time passed, he became milder in his departures and found some enjoyment in life.

The High Flier

An elderly aunt of mine wore rings on her fingers and bells on her toes. She lived long and was a task for the perukier. When the doorbell rang at her daughter's house, Aunty sprang to the summons. If a table of bridge was prepared, Aunty was always fourth, leaving the younger fifth member to shift for herself.

In her eighties, she was still going strong. I challenged her enviable state. She replied: "There are some drawbacks to old age. I've had no proposals of marriage since I have turned eighty."

At the end of her life, she was being entertained as the past president of the Federation of Women's Clubs in America. The luncheon had been most inspiring. Now, she lay herself down in her daughter's home to rest up for the big evening reception. She said: "I've had such a wonderful time," whereupon she closed her eyes and died. Her activities of enjoyment were so demanding that she scarcely could find the time to sandwich in the matter of death.

The Marrying Type

There is no reason why two companionable geriatric souls should not marry. There may not be June romance in the air, but mutual understanding and respect perform as good basic substitutes. Many objections on the part of the younger generation are described by the depleted inheritance. However, my guarded answer lies in the entity of *happiness now, for happiness' sake,* as their chief condominium.

The Pale Ghost

When I was a young teacher, the superintendent of schools was a tall stately executive of great ability. Years later, he retired and moved to Florida, where he operated a citrus ranch. One day he appeared in Ann Arbor for his physical examination. Entered the pale ghost. I enquired diligently into his eating habits. He stated that he went into the grove and picked a grapefruit for breakfast. In mid-morning he sauntered into the house for a cup of tea and a cookie. Again, working in the grove, he had a tangerine for lunch. This was followed in mid-afternoon by a glass of milk and a cracker. An orange pulled from a tree furnished the supper. As a good-night snack, there was a glass of milk and a cookie. What he could pluck from a tree, pour out of a bottle or shake from a box became his sustenance.

I extracted a promise from him to drop an egg into one of his glasses of milk each day, and to engulf the contents of a tin of fish once a week.

A year later the same tall patient appeared, not much changed in appearance, except there were roses in his cheeks. He said: "I'm the same man, only I'm a little prettier."

The Poetic Centenarian

The chair-fast patient approaching the century mark requires a sense of humor, and a bit of poetry to pass the exigencies of the times. I enjoyed the friendship of such an elderly woman. She sat in her wheel chair, her lace cap bearing silver-gallooned accoutrements of decorative warfare. She was knitting away, and urging all of us to let her go quickly and unreservedly into the next world. I wrote her a Christmas ditty, something as follows:

Now Grandmother B....., so spry,
Said she'd like to merge with the sky.
But there she's a sittin'
Adoin' her knittin'
I guess she's too busy to try.

Back came a pert reply with badinage:

Now, if Grandmother B.....'s so spry,
Why can't she walk—or creep—or fly?
If you think you would care
To be nailed to a chair,
I give you permission to try!

The Gadget and the Hobby Boys

A bed-fast patient missed his daily shower and his trip to the bathroom. He designed an overhead I-beam track that suspended a metal chair on a ball-bearing shaft. He could be whizzed to the toilet and zoomed into the shower. His son gave him a good daily rubdown after the shower, and he glowed with the happiness of adventure and accomplishment.

An elderly man in Ann Arbor has become Michigan's Santa Claus. He works all year in a hobby shop, creating hundreds of intriguing toys for next year's Christmas. His own happiness is only exceeded by that of swarms of children. I find that the joy of creation is the vitamin to an old man's energy.

The Prophets of Gloom

This group can best be described by an ancient CVA patient. She had been educated in Germany, had enjoyed fifty long years of married life in this country, and was now withered and widowed. One day she said to me: "Good morning, did you bring the pill that kills?" I said: "Now you listen to me. I called God up on the telephone and He told me to mind my own business. That was His department." She replied: "Oh, very well, trot out the vitamin capsules and the tonic." If she could not have death, at least she was going to continue her life in some degree of style.

All the Way Down

A retired dean stumbled over a loose floor rug and fractured his hip. By the way, the loose rug in the home is an abomination unto the Lord.

He cautioned me that I must listen to his tale of wisdom. He spoke with the prescience of a genius: "Please understand that all the way down, I was not yet classified as ill. It was only the last millimeter that actually made me sick."

The Last Fling

Now struts the "work-till-I-drop" type. The lady about to be described said: "I have labored from the diaper to the brink of the grave."

(Continued on Page 555)

Geriatrics and the General Practitioner

By Charles Sellers, M.D.
Detroit, Michigan

NEARLY everyone recognizes that the population of this country is increasing markedly and that the most remarkable increase is in the number of persons surviving past sixty-five years of age.

This increase is not due to any appreciable acceleration of the birth rate but rather it is due to an increased survival rate after birth. And, as you know, this changing survival rate does not apply to the first few days of life. This seems to be a critical period because death rates for the first week of life have not been lowered appreciably in spite of strenuous efforts made toward such an accomplishment. The incidence of stillbirths, atelectasis, hyaline membrane, erythroblastosis fetalis, et cetera, remains almost unchanged.

Prior to 1900, the over-all infant mortality, the acute infectious diseases of childhood, infectious diseases of later life, accidents and violence kept the average age at death rather low for thousands of years.

In recent years, childhood mortality rates have been going down markedly. Many acute infectious diseases of early life are no longer epidemic. Accidents and violence still kill a great number of persons, but these injuries do not take the toll they once did due to better methods of controlling hemorrhage, shock and the various infections. The degenerative diseases are beginning to be understood a little better and hence are managed a little better.

Greater numbers of persons are surviving more of the hazards of life and live to a greater age than ever before. As a result, life expectancy in the United States has increased from about forty-six to sixty-eight plus during the past fifty years. So naturally there is an actual increase in the number of persons over sixty-five in our population, which is estimated at the present time to be 14,000,000.

A gradual social evolution is taking place, apparently, for we seem to be changing from a young or middle-aged society toward an older society, and undoubtedly this trend will continue in the future.

The basic life span probably has remained unchanged, since we have always had an occasional individual who lived to be 100 years of age. A greater proportion of children born this year, however, will live to approach 100 years than ever before in human history, providing they escape death by violence. Some persons have voiced the opinion that such children may live to be 150 years of age, but such statements probably are broadcast for their spectacular effect and small credence should be placed in them.

Where do these elderly persons live? Over 93 per cent of them live in households such as yours and mine; of this number seventy-five per cent live in their own homes; the remainder are with children, relatives and a few non-relatives. Less than 7 per cent are in institutions including domiciliary homes for the aged, mental hospitals and penitentiaries. Despite the large drift of retired persons to Florida and California, the largest proportion of older persons is still in New England.

The retired worker who contemplates moving to another city or state should think long and hard before he leaves the environs in which he is known and respected, before he deserts family ties, relatives, friends and cronies. Older persons do not acquire new friends easily and loneliness often chases them back to familiar haunts.

What is the social impact of the large number of persons now living past sixty-five years of age in the United States?

For our purpose, let us divide them into four categories: the well and working, the well and retired, the mentally ill and the physically ill.

The Well and Working

The healthy individuals past sixty-five years of age and who are working are the fortunate ones. By and large they have no immediate or pressing problems of health. They all get sick on occasion. But we should wish for no better circumstance

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than to be in good health and permitted to work well past our sixty-fifth birthday until such time as we wish to retire voluntarily or become incapacitated.

The Well and Retired

The healthy person who has been forced to retire at age sixty-five faces quite another problem. This presents one of the most far-reaching psychological effects of the aging process, especially to those who have worked hard during the major part of their lives. Forced retirement often imposes a great hardship on a man or woman accustomed to work.

A great number of general practitioners who see a large number of patients have encountered some of these persons who are over sixty-five years of age and who have been retired from their long-established occupations. The prospects are that more and more persons will find themselves in this category in the future unless some change is made in our work philosophy. Perhaps the most important service that the general practitioner can render to his patients and to the community is to advise his patients and their employers not to have a worker retire at the first opportunity but to postpone that fateful day as long as possible.

Here is a situation that may tax the ingenuity of quite astute physicians unless they have given the problem some consideration or the patient has been conditioned previously to the prospect of retirement by wise counsel and encouraged to undertake something other than his previous line of work, take up an absorbing avocation or other means of occupying his time constructively.

Preparation for retirement is most essential, and some form of avocational training should be introduced before the day of retirement, so that the suddenly retired elderly person does not have to explore a planless future for something to do.

A number of persons find that they must supplement their incomes, and this is a difficult thing for the elderly to do unless some contacts or plans are made prior to the time when it becomes a necessity. For those with sufficient income, there is a great need for socially conscious and socially adjusted individuals to help with the work in church, fraternal, political and social organizations. There is also a great need for help with the recreation and rehabilitation of retired individuals in an organizational manner.

Too many persons are retired simply because they have reached the chronological age of sixty-five years, when as a matter of fact a large percentage of them are mentally and physically quite capable of continuing in some productive capacity for an indefinite period.

Physicians, particularly general practitioners, are in an exceptionally unique position in that they are not forced to retire but may decrease the work load without losing contact with medicine and doctors. Illness may cause the only exception, and many ill physicians continue to carry on a wide range of activities because they love their work.

Retirement is rejection, and rejection is devastating both psychologically and sociologically. It decreases one's stature, deflates one's ego and takes away the incentive for that morning shower, shave and shoe-time, that makes one feel so good and dispels depression. To be "put on the shelf" intimates uselessness, and few of us would accept such an appraisal willingly. To lose contact with a line of endeavor in which one has been associated for a long time and with the friendship of fellow workers in that field is to take away one of the great pleasures of life.

Retirement is not the rosy Nirvana that some hard working persons envision it to be. After a few weeks or a few months, it becomes a dreary existence that gradually becomes more and more detached from the rest of the work-a-day world.

Our observation has been that those who fail to make a compatable adjustment to the exigencies of retirement have an average life span of approximately two years after separation from their work.

Voluntary retirement with the option of returning to previous work or similar but less arduous duties might be a splendid manner in which to point up the fallacy of idleness. Retirement for illness or incapacity is quite another circumstance and scarcely debatable.

Forced retirement at age sixty-five seems arbitrary and unreasonable. Employed persons are much happier than idle ones and, as we have said, they continue to live longer. It is doubtful if the American economy can withstand indefinitely the impact of having all persons over sixty-five cease work and expect to receive pensions no matter where the money comes from. It is a most tragic waste to the national economic community to permit persons with long training

in the various skills to become unproductive. Experience and wisdom are valuable assets not to be discarded lightly.

If retirement is mandatory on a basis of age alone, it is better to retire *to* another activity than to retire *from* all activities. Those who do the latter become our patients with problems that are not amenable to ordinary medical treatment. Physical and mental deterioration begins to take place. Dissolution sets in. Senescence becomes a reality.

The Mentally Ill

Reports on mental disease indicate an alarming increase in the incidence of aberrations of the mind ranging all the way from simple unjustified fears to overt mania. Are these reports correct? Are the increases real or are they only apparent and due to the general increase in population?

It is true that fifty years ago a great number of persons of unsound mind were kept at home. They were looked upon by their families and neighbors as being odd and sort of tolerated by being kept in the background. They did not get in the census figures of mental institutions. General practitioners were well aware of their existence, however, and some shrewd estimates of their numbers were made. Apparently the ratio of mentally ill to total population is considerably higher than it has been heretofore and the increase is real.

Among the contributory causes for increased mental illness we may cite several devastating wars; a series of economic depressions; great fluctuations in what a man's wages would purchase; great wealth and great poverty in the same precinct; a breakdown of cohesion in some families with resultant loss of security, affection and love; the spreading of false alarms by way of newspapers, radio and television; too much publicity to the mutterings of misguided persons, self-appointed prophets, demagogues, ambitious and ruthless politicians who would climb to eminence over the disturbed minds of their fellowmen; and captive economists hired by pressure groups, including some corporations and some unions, to disseminate fallacious economic theories and the mouthings of other small men.

On occasion we seem to have been living from one crisis to another. Danger is said to assail us from many quarters, and some of these hazards have been real enough to make a strong man quail. Fear, frustration and feelings of insecurity develop beyond proper proportions. Stress, apprehension, hostility and aggression are the natural psychological reactions to such a conditioning process. All this is reflected in the rising burden of mental illness that is becoming a modern national problem.

Quite naturally mental illness is not limited to the older age group; a great number of them begin insidiously at any age. Many potential cases have felt inadequate, failed to face reality and longed for greater security for some time before it became obvious to anyone that they were so troubled. The great hope of the future is that somewhere along the line of progressive mental deterioration such persons may be recognized, channeled into treatment and a greater number of them salvaged than at present.

The number of practicing psychiatrists in this country is woefully inadequate. Probably we will not have enough within the foreseeable future. We need at least three times as many for two good reasons: firstly, to treat maladjusted individuals before they become psychotic and, secondly, to assure that more psychiatric patients receive the benefits of competent counsel and treatment during the early stages of their disturbances.

We need more teachers in psychiatry. We need greater emphasis on psychiatry in medical colleges so that every graduate will be better equipped to evaluate incipient mental illness. We need a great deal more research in primary causes and new treatment of these disorders. We are pleased to note that at the recent Mid-West Governors Conference on Mental Health, Charles F. Wagg, M.D., director of the Michigan Department of Mental Health, pleaded that we sponsor more research into the causes, prevention and treatment of serious mental illness and that he deplored the time lag in applying what is already known about the prevention and treatment of these illnesses, as well as the lack of finances for proper research and training of personnel to permit better rehabilitation of the mentally ill.

While specialization in this field of medicine is obviously necessary, it seems that general practitioners could render a valuable service by taking a greater interest in mental health, and assume a greater responsibility for the early detection, diagnosis and some treatment of a number of psychiatric conditions.

It becomes incumbent upon physicians, regardless of their line of work, to be more acutely observant of the mental processes of their patients, to be a confidant and friend, and to take a little time to know and understand the whole patient, his family and the psychological and sociological matrix in which he lives.

The Physically Ill

Physical illness in elderly patients includes a wide range of infirmities and diseases, but these conditions are not limited to this group. The aging process begins in youth, and while some degenerative diseases are found frequently in elderly persons, they often have their inception long prior to age sixty-five.

General practitioners are finding that a gradually increasing number of their patients are in the older age group. Probably this will continue; it seems a natural and logical trend. Indeed, it has been suggested that the study and treatment of the aged should be a particularly suitable field for general practitioners but not as a speciality.

Gerontology, the study of the aging process, seems to confirm the opinions of many physicians that senility is not a disease entity, that the aged patient does not die from senility, but from one or more, often several, of the diseases well known as causes of death throughout the ages. Elderly patients are more susceptible to certain diseases and infections probably because metabolism is slowed down and the renewal of cells in the body takes place more slowly.

Nutrition assumes a very important role in the aging individual due to its close relationship with degenerative and chronic diseases. Both malnutrition and obesity lead to serious changes in nearly all persons including the aged.

Malnutrition is more frequently due to faulty dietary habits than to lack of sufficient food. Persons living alone, senile hermits and misers have been known to exist on the cheapest food, those most readily available or the easiest to prepare, the tea and toast routine, devoid of protein, mineral and vitamin content.

Obesity is the other side of the picture. An occasional individual may have hypothyroidism, but more frequently it is due to over-eating, a habit based on some psychological insecurity or inadequacy. We need not dwell on the greatly increased incidence of diabetes, arteriosclerosis, hypertension, coronary disease, choleocystitis, choleolithiasis, strain on heart muscle and sometimes real protein, mineral or vitamin deficiencies due to having excluded unwittingly these items from the diet in favor of excessive carbohydrate. Perhaps the lack of such items induces the urge to eat.

If we knew a little more about the nutritional needs of the individual patient, at what levels malnutrition and obesity have their beginnings and all the sequelae of the deficiencies of a specific food element, we might learn more about the beginnings of some of the degenerative diseases.

There is some evidence that the lack of vitamin B_6 or pyridoxine hydrochloride in the diet may lead to retarded growth, stomatitis, various neurological disturbances such as anorexia, nausea and sleepiness, and faulty protein and lipid metabolism which may predispose to arteriosclerosis and hypertension.

General practitioners should be able, if given an opportunity, to advise and guide elderly patients against the pitfalls of malnutrition, specific food deficiencies and obesity.

The next important advance in medicine probably will be in the field of nutrition.

The application of our present knowledge about nutrition would be of the greatest aid in the prevention and treatment of arteriosclerosis and hypertension.

For instance, the absence of a number of nutritional components from the diet contributes to the development of arteriosclerosis. These include choline, methionine, inositol, ascorbic acid, riboflavin and vitamin E. Conversely, a high concentration of cholesterol, phospholipids and neutral fats along with general over-nutrition or obesity, hypothyroidism and family inclination are factors leading toward arteriosclerosis.

This disorder does not arise from a single cause nor follow a constant pattern. A cumulative series of insults from previous infections, deficiencies and excesses over a long period of time often result in arteriosclerosis and hypertension. Preventive and remedial efforts must be directed toward changing the eating, drinking and living habits early in life. Moderation in all things is more important than any particular drug.

Rauwolfia serpentina has proved to be of value in hypertension. It has been used in India for well over a century and is a relatively safe product.

Many hypertensives respond quite well to it as they will to any new treatment. Favorable response to any product is directly proportional to the interest displayed by the physician, the rapport he establishes with the patient and the firmness with which he impresses upon him the necessity for a particular regime. Probably Rauwolfia will be accepted as one more important item in the treatment of hypertension.

The defeatist attitude after cerebral vascular accident is to be deplored. There are many degrees of this condition but, if the patient survives the first day, there are a number of things that can be done. The use of angiography, whereby a contrast medium is injected into the common carotid artery and its circulatory tree is x-rayed, may be quite valuable. Frequently, a cerebral hemorrhage can be located and decompression and evacuation of the extravasated blood may be done. Pooling of the opaque solution in an aneurism may be outlined in which case ligation of a "feeder" artery may be accomplished. If so-called cerebral thrombosis has ensued, sometimes it can be located. This occurs most frequently in the internal carotid artery at the point where it leaves the common carotid artery. Sometimes the internal carotid can be divided from the common carotid at the point of thrombosis and inserted at a higher point into the external carotid, thus reestablishing circulation to the area supplied by the internal carotid.

While stroke cases are in bed they should be turned frequently and kept scrupulously clean and dry to prevent decubitus. They should be encouraged to help themselves turn. No paralyzed extremity should be permitted to lie flaccid. All joints should be moved and extended to the natural limit to help prevent contractures. The patient should be out of bed at the first opportunity, in a wheel chair when able.

He should not be over protected or shielded from the things that interested him before the cerebral-vascular accident.

Newspapers, books, radio, television and above all a few friends keep such a person from becoming self-centered and depressed. Everything that helps an out-going personality is good for him. Much of such rehabilitation is based upon implanting in the patient a firm determination to help himself.

When arteriosclerosis invades the coronary arteries of the heart, it produces a localized ischemia and angina. Later if the obstruction becomes complete, either from advancing arteriosclerosis or from a thrombosis, it causes an infarct. This is a serious circumstance requiring complete rest, morphine for the pain, perhaps a little oxygen and an anti-coagulant. Recovery is a slow process.

A number of cardiologists believe that such patients recover about as well when they are placed in a reclining chair after the first week, ten days or when circumstances seem feasible, as they do with long term complete bed rest. The evidence is not conclusive but perhaps they should receive choline, methionine, inositol, riboflavin and vitamin E.

Rheumatic heart disease in elderly patients had the beginnings of the valvular damage a number of years previously during an attack of rheumatic fever. Mitral stenosis is the common end result. Surgical commissurotomy is for younger patients but perhaps as techniques improve and the safety factor is increased, older persons may be included in the operable category. Others must adjust their work load to tolerance and be kept under observation.

Recognizing carcinoma in its earliest manifestations is a prime objective of the entire medical profession. General practitioners are in the vanguard of the battalions against this adversary.

Setting up special cancer detection centers does not impress me very much. They could never hope to examine all the persons who should be examined for malignancy. The staff is too small and too many of the examiners are young physicians recently released from four years servitude in some great institution. Examining healthy persons becomes a great bore to many physicians. A routine creeps in.

Cancer detection should be going on every day in every physician's office as part of his daily work. General practitioners should be the backbone of this corps of investigators looking for the very first indication of carcinoma. If we are going to make an impression on the mortality rates, we must attack the disease very early, sometimes on very little evidence.

This is where a physician with a high index of curiosity about minor symptoms and small bits of evidence, a detective type of doctor, who will insist on a chest x-ray on minimal symptoms, does

the most for his patients. In no other manner are we going to be able to detect bronchogenic carcinoma early enough in the disease to remove the primary lesion surgically and get satisfactory survivals.

Summary

The problems of the aging process become more crucial with the advancing years. Those persons who keep themselves busy and manage to retain good mental and physical health have the fewest difficulties. Complexities develop when they do not maintain an active interest or are occupied in some field of endeavor or become ill.

The industrial age, with its urbanization and regimentation, has made many persons dependent upon industry for employment and resources. Self-reliance has become almost a lost art. Such persons seem to be unprepared to cope with a number of relatively uncomplicated situations. They look for paternalism in their employers, the state and federal governments.

Recently a reader sent to his newspaper this question: "Since I have retired, I feel completely useless. Why is my life prolonged when my work is done?"

Such a person is poorly prepared for retirement. He has very little imagination or self-reliance. He could do a number of interesting things. Moving to the suburbs, planting a vegetable or flower garden or raising a few chickens might give him a new lease on life.

General practitioners are interesting themselves in the aging process. They provide the medical care for many older persons. They also help many families with advice on problems that are outside the field of medicine.

GERIATRICS AND THE AGING PERSONALITY

(Continued from Page 549)

She was anxious to attend her seventy-fifth reunion and drink champagne with the last of her classmates. The daughters opposed the plan. They said: "It will kill her." The patient replied: "Of course it will kill me, but I intend to do it."

So we spruced her up to a nice tonic level and sent her off East for her last fling. She had a marvelous time, saw her old friends, drank their toasts, sang their songs, came home, smiling and fragile, and promptly and dutifully closed her eyes in death. She had lived out a wonderful life and left this world serenely, indeed.

The Dying Gladiator

Many of the chief characters of this paper are women. They seem to out-live their husbands and glow in old age. I want to present an ancient and gracious lady, dying in an oxygen tent, struggling to remain alive a little each day, so that she could complete her last book. After an hour of writing, she would become cyanotic and lapse into a comatose state. This procedure continued day after day.

Finally, the last of her scribbling had been accomplished. She told me: "Let me die now. Don't take this struggle too seriously. It is merely a physiological wind-up. My last life's work is done, and I don't relish physical immortality under these circumstances."

One midnight, I dropped into her room. She was apparently asleep. She started slightly and said: "I beg your pardon. I did not intend to drag you into death with me." I replied: "But I'm not dead." Her sharp answer: "Well, I am." I placed the stethoscope to her heart and could hear no organized textbook pattern.

I summoned a few words: "I honestly believe that you are going to leave us, but if you thought that you experienced death, tell me before you go, what was it like?" She forced out a few attempts at speaking: "Exquisite remoteness, profound contentment . . .," and was gone.

Summary

The above classifications, artificially assembled, of course, are grossly incomplete, and merely indicate that the problems of geriatrics are bizarre and profound, indeed.

I have introduced the subject of geriatrics and have outlined variations in the aging personality.

If there is any purpose to this paper, it is to emphasize that working with elderly people can become a most challenging and satisfying experience.

Circulatory Diseases of Old Age

By Paul S. Barker, M.D.

Ann Arbor, Michigan

THE infirmities of old age are commonly the result of changes in the circulatory system. The changes which normally accompany senescence reduce the reserve of the cardiovascular system, and circulatory diseases are common causes of disability and of death in old age. The purpose of this discussion is to emphasize those features of circulatory disease which are of special interest or importance in the elderly, rather than to describe the various cardiovascular conditions which occur in old age.

Normal Changes of Old Age

The changes in the circulatory system which occur normally in old age have received little attention.[12] The larger, elastic arteries become less elastic. This loss of elasticity is responsible for the tendency of the systolic blood pressure to rise with advancing years. The diastolic pressure, too, is affected and often falls slightly. It is common to find systolic pressures of 100 plus the age. Pulse pressures commonly equal or exceed the age.

At advanced age the heart is often small, firm and dark brown, with a light brown pigment in the cytoplasm of the small muscle cells but with little or no increase in connective tissue—these changes are called brown atrophy. The endocardium and valves are somewhat thickened.

On clinical examination little if any change in physical signs is detected. The heart sounds may be somewhat muffled or lacking in youthful snap. A systolic murmur may be heard at the apex or base. Premature beats and other arrhythmias are not unusual. The electrocardiogram shows arrhythmias when present, and the amplitude of the T-waves is commonly lower than it is in youth. The x-ray film commonly shows broadening and elongation or tortuosity of the aorta, and there may be calcium deposits in its wall.

These normal senescent changes are accompanied by functional changes characterized by diminished reserve. The circulation is competent to meet ordinary demands but has less reserve for meeting exceptional demands and stress. These normal changes of senescence are overshadowed by the pathological changes in the cardiovascular system which are so common in old age. Indeed, about two-thirds of the deaths in old age are caused by circulatory diseases.

Diseases of the Peripheral Circulation

Although the cardiac diseases have received the most attention, the circulatory diseases of old age are by no means confined to the heart. Arteriosclerotic changes in the peripheral arteries are responsible for much mischief. Mesenteric thrombosis is serious and often fatal, but fortunately is rather rare. More common is arteriosclerotic narrowing and occlusion of the arteries of the lower extremities, the former leading to intermittent claudication and the latter to gangrene. Arterial insufficiency in the lower extremities calls for meticulous hygiene of the feet. Priscoline and whisky or brandy in moderation have been helpful in some cases. The injection of histamine into the femoral artery according to the method of Mufson[10] has given good results, apparently promoting the development of collaterial circulation, and merits more extensive use. Sympathectomy in patients responding well to sympathetic block has also given good results, likewise promoting the development of collateral circulation. Sclerotic, embolic, and thrombotic occlusion of large arteries has been relieved by surgical procedures, often of the most spectacular type. Dissecting aneurysm and rupture of the aorta are not amenable to treatment, but it is important to distinguish them from acute myocardial infarction and refrain from giving anticoagulants.

Cerebral arteriosclerosis is a common and often pathetic infirmity of old age.[1] It leads to progressive deterioration of the mind. Major thromboses cause hemiplegia, paraplegias and aphasia and sometimes death. More common are the recurring, small cerebral thromboses, often unrecognized, presenting a great variety of manifestations and causing progressive mental deterioration. The prominent characteristics of these little strokes are

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abrupt onset, an unexplained fall, vertigo, overemotionalism, a nervous breakdown, disturbances of vision, a loss of grooming, abrupt fall in blood pressure, unexplained loss of weight, pains or paresthesias in thorax, abdomen or extremities, gastrointestinal symptoms, weakness, palsies or ataxia, change in personality, parkinsonism, insomnia, recurring episodes, often irreversible and permanent residual changes, and failure to respond to treatment. "Death takes little bites," as Alvarez has aptly stated, and the unfortunate victims of repeated little strokes may "take as long to die as they did to grow up." It is important to recognize these minor apoplexies so as to protect the patient from the consequences of an impaired judgment or altered personality and of misunderstanding on the part of family and friends, as well as from needless and expensive examinations and often misdirected treatment.

Diseases of the Heart

The normal senile heart has a diminished reserve. It is competent to meet all ordinary demands, and the presence of diminished reserve does not become apparent until it is subjected to some unusual stress. Accordingly when, in old age, unexplained cardiac failure develops, it is important to look for some extracardiac condition which imposes an increased load, such as anemia, thyrotoxicosis or infection such as bronchitis, pneumonitis or urinary tract infection.

Heart disease is common and serious in old age, and is the chief cause of death in the elderly. By far the most common type of heart disease is that due to coronary arteriosclerosis. It must be realized, however, that almost all types of heart disease are observed in the aged. Certain types of congenital heart disease have been known to persist into old age, notably tetralogy of Fallot and patent ductus arteriosus, although this is exceptional. Similarly rheumatic heart disease, a major problem of youth, is occasionally encountered beyond the age of sixty. I have seen mitral stenosis with auricular fibrillation in a woman beyond the age of eighty who had rheumatic fever while she was a student in medical school and was advised to give up the arduous work for which she was preparing because of serious injury to her heart. Mitral valvulotomy gives better results before the age of fifty than after that age. Aortic stenosis in the aged may be of rheumatic etiology, but is often sclerotic in origin; it makes the victim a poor surgical risk and may be responsible for angina pectoris, syncope and sudden death. Subacute bacterial endocarditis may occur in the elderly and be accompanied by little fever and constitutional reaction. Syphilitic aortitis and aneurysm are not common, but it is important to recognize them and to institute proper treatment which in recent years has been so much more effective. In thyreogenic heart disease, the cardiac features may so dominate the findings as to obscure the thyroid disease which is causing the cardiac disorder; it is necessary to recognize the thyroid condition, whether it be hyperthyroidism or hypothyroidism, because thyreogenic heart disease is resistant to therapy directed to the heart, but shows gratifying improvement in response to effective treatment of the thyroid disorder. Cor pulmonale, secondary usually to emphysema of the lungs, is a fairly common and distressing disease of older people, for which the usual treatment for cardiac failure is indicated although often not very effective. Chronic pericarditis in the elderly may masquerade as coronary arteriosclerotic heart disease with cardiac failure.

Hypertensive heart disease is more common in the elderly than any of the conditions mentioned above. This refers, of course, to so-called essential hypertension and not to the systolic hypertension of old age. Essential hypertension seems to be tolerated better by the elderly than by the middle-aged, possibly because a good cardiovascular apparatus is a requisite for the achievement of old age. In the treatment of hypertension in the aged, it must be remembered that the elderly are unusually susceptible to the effects of the ganglionic blocking agents, and their undesirable side effects often contraindicate their use. The commonly used sedatives such as the barbiturates and bromides are slowly metabolized and excreted by the elderly and their continued use may lead to cumulative effects.

Arteriosclerotic Heart Disease

By far the most common type of heart disease in the aged is that caused by atherosclerosis of the coronary arteries. Atherosclerosis is one of the major unsolved problems of medicine today. It is the subject of much intensive investigation. There is now general agreement that atherosclerosis is abnormal and pathological; it is a disease and

not a normal change or accompaniment of advancing years. Recent studies indicate that its development is favored and hastened by elevation of the plasma cholesterol level[13] or by alterations of the plasma lipids, and that the presence of estrogenic hormones retards or inhibits its development.[2,3] There is evidence that the process is reversible, both in the experimental animal and in man. As yet, however, there is no practical means of preventing or reversing the process. In order to reduce elevated plasma cholesterol levels, the diet must be so low in fats that it is not practicable, and men are not likely to accept estrogen therapy. Nevertheless, the future may bring an acceptable and harmless substitute for the fats of the diet which will permit the employment of effective low fat diets, or the modification of the estrogenic hormone so as to provide a substance which will prevent atherosclerosis but not have the undesirable effects of the estrogens may provide acceptable hormone therapy.

Coronary arteriosclerotic heart disease may manifest itself in any of several ways, such as angina pectoris, coronary insufficiency, myocardial infarction, various arrhythmias and congestive cardiac failure. Of the arrhythmias, premature beats are usually harmless and should be disregarded or treated with digitalis, quinidine or procaine amide; bundle branch block may be an indication of serious myocardial disease or of little significance, depending upon other clinical findings; atrioventricular heart block may cause ventricular standstill leading to syncope or sudden death and may be treated with isuprel, ephedrine or belladonna or atropine, often, however, with little benefit; auricular paroxysmal tachycardia, flutter and fibrillation may lead rapidly to cardiac failure and are usually best treated with digitalis; ventricular paroxysmal tachycardia is most serious and should be treated promptly with quinidine.

Congestive cardiac failure is usually of the left ventricular type in the beginning, followed in time by failure of the right ventricular type in addition. The fully developed picture is readily recognized as cardiac failure. It is not always apparent that persistent cough or paroxysmal dyspnea are caused by congestion of the lungs due to weakness of the left ventricle, but if this possibility is kept in mind, a trial of digitalis and diuretic measures may result in gratifying improvement. The treatment of congestive cardiac failure in the aged includes rest, digitalis and diuretic measures. Strict confinement to bed is not well tolerated by the aged and should be modified if possible to include periods of rest in a chair. Older people may be unusually susceptible to digitalis, and may develop arrhythmias and other advanced toxic effects without the anorexia and nausea which in younger people give warning of overdigitalization, so that the employment of this drug calls for close supervision. Because the elderly commonly have some impairment of renal function, vigorous diuresis may lead to alterations in electrolyte balance,[11] and the physician must be alert to this possibility. These special features should be kept in mind in the treatment of cardiac failure in the aged.

Angina pectoris must usually be diagnosed from the history of substernal pain, sometimes with radiation to the left shoulder and arm or to the left side of the neck, brought on by exertion such as walking and relieved promptly by rest. Clinical examination of the heart may or may not disclose any abnormal findings and does not contribute importantly to the diagnosis. It is true that electrocardiograms obtained during attacks of anginal pain often show downward displacement of the RS-T segment or alterations in the T-waves, but inducing attacks of agina pectoris for diagnostic purposes is not entirely safe and should be reserved for those instances in which it appears essential to establish the diagnosis even if some risk is taken. The pain is not always typical, it may be only a mild pressure sensation, constriction or similar discomfort which has the same significance as severe pain. The occurrence of the pain upon walking, especially after meals or in a cold wind, is a rather consistent feature of angina pectoris, although, of course, it may occur during rest as well. In the differential diagnosis it must be remembered that lesions of the cervical spine and esophagus and hiatus hernia are fairly common in the aged. Angina pectoris is best treated by giving nitroglycerine sublingually as needed to relieve and also to prevent the pain, and aminophyllin or peritrate by mouth and preferably alternating them in periods of one or two weeks, and by restricting the activities so as to avoid bringing on the pain. If the pain becomes more severe or more readily induced, a period of rest and administration of anticoagulants may be indicated.

Coronary insufficiency is a term applied to a

degree of coronary narrowing more severe than that of angina pectoris. The pain is similar in location, but more prolonged and not relieved by rest or by nitroglycerine. It may be accompanied by electrocardiographic changes of myocardial ischemia such as the appearance of prominent S-waves, depression of the RS-T segment or alterations in the T-waves, but the Q-waves of myocardial infarction do not appear. Fever, leukocytosis, shock and pericardial friction rubs do not follow. There is, therefore, evidence of severe coronary insufficiency and myocardial ischemia, but evidence of myocardial infarction is lacking. Treatment includes a period of rest, demerol or morphine, atropine, aminophyllin by vein, oxygen, and unless some contraindication is present, a few weeks of anticoagulant therapy in the hope of preventing thrombotic occlusion of the narrowed coronary artery, at least until collateral channels have developed. In both angina pectoris and coronary insufficiency the prognosis must be guarded, as either may be the forerunner of myocardial infarction.

Acute myocardial infarction is poorly tolerated as a rule by the elderly as compared with those who are younger, in spite of the greater opportunity for the development of collateral channels when narrowing of the coronary arteries has progressed gradually over a long period of time. It is, of course, most serious, especially if it is a second or third attack. The pain is usually substernal; it is commonly severe, but may not be pronounced. It is commonly accompanied by shock which is best treated by digitalis if pulmonary rales and cyanosis appear and by slow intravenous administration of l-norepinephrine if there are no rales in the lungs,[4,6] and by oxygen in either event. Other measures include rest, demerol or morphine, atropine. and aminophyllin intravenously. Frequent premature beats call for quinidine and auricular fibrillation or cardiac failure for digitalis. The diet should be light. Constipation is best disregarded for the first few days, but if it causes distress, a small tap water enema may be given. The bedside commode is usually better than the bed pan for moving the bowels. For the first few days, at least. the patient should be strictly confined to bed and spared all unnecessary exertion; he should have adequate nursing care and he should be fed. Complete bed rest is not well tolerated by the elderly, and the patient should be got up into a chair for a part of the time as soon as his condition permits. Anticoagulants should be given in all but the mildest attacks. Convalescence should be gradual and prolonged. Attention should be given to counteract the anxiety and depression which so often accompany myocardial infarction.

Older people with circulatory disorders sometimes have other diseases which influence the progress of the circulatory condition. For example, a crippling arthritis might prevent the strenuous physical exertion which might overtax a diseased heart or cause intermittent claudication. Abdominal disease and particularly gall stones might cause reflex constriction of the coronary arteries by means of the so-called viscerocardiac reflex.[5,7,8,9] The resulting reduction in coronary blood flow might cause a pronounced increase in the severity of angina pectoris. In such instances and in spite of the greatly increased risk, cholecystectomy may be indicated, and it often results in gratifying improvement in the cardiac symptoms. Elderly people with heart disease and especially those with angina pectoris or aortic stenosis are poor risks for surgery. Older people without heart disease, who have only the normal changes of senescence, are usually satisfactory surgical risks, although it should be kept in mind that their cardiac reserve is diminished and that they are less tolerant of stress.

Summary

In this brief discussion of the circulatory diseases of old age an attempt has been made to emphasize those features of circulatory disease which are of special interest or importance in the elderly, rather than to describe the various cardiovascular conditions which occur in the aged. Arteriosclerosis is the major disease of old age, and its cerebral and cardiac manifestations are most serious. It is a disease and not a normal change of advancing years, and there is hope that it may eventually be brought under control.

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Periodic Health Appraisal in the Aged

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HEALTH appraisal in the aged is more complex than in younger people and requires more effort and a greater display of skill in its performance. The elderly patient is less communicative, diagnostic data are less abundant and less definite, and the probability of several diseases, each independent of the other, is greatly enhanced. Few if any affections are met with exclusively in the period of senescence yet a great many disturbances augment with age or change their clinical manifestations at this period in life. Much greater effort must therefore be made by the examiner to promote better understanding and confidence and to broaden his concept of the changes induced by aging on the mind and body.

Proper Attitude of the Physician

One of the first hurdles that must be overcome is the attitude of the physician himself. Too often the approach is one of overweening tolerance towards an unwelcome task, screened behind a diplomatic expression of comforting but misapplied generalities. Or, the irritation at his own insufficiency makes the attitude of the less considerate doctor gruff and abrupt. In either event, the rapport with the patient is immediately ended, for the aged are keenly aware of their shortcomings and the general tendency to brush them off as persons of small importance. It takes tact and sincerity to bring them out of their shells, and the slightest evidence on the part of the examiner that their cause is lost increases their rigidity and reduces co-operation. Many elderly people harbor the belief that little can be done for them and it is preferable not to discuss prognosis or at least to treat that phase of the subject lightly. It is better to delimit the area of the specific problem and to deal objectively and optimistically with the disorder that may be disclosed.

Another important obstacle is the impairment in the various functions such as sight, hearing and ready comprehension which make history taking a time-consuming, painstaking task. Here again a cheerful, relaxed approach carries a high yield in confidence and fosters the friendship that is so essential for proper treatment. In a sense, both patient and doctor are involved in a losing game, and good sportsmanship demands that at least the latter act as if he liked the game rather than to display futility.

In evaluating the psychic make-up of the patient, it is well to remember that the elderly have individual personalities and need individual handling. Most old people exhibit evidence of psychic decline. Poor memory is an early change. Names, words and associations fail to come readily; retention slackens; fresh impressions fade rapidly; understanding and adaptation to new circumstances are inadequate.

Old age lends highlights and caricature to the inherent facets of the personality. Distinctive characteristics are thrown into high relief by relaxing inhibitions. The uncommunicative become laconic, and the loquacious become garrulous. When there is confusion, aphasia or psychosis, there is difficulty in effective understanding which often results in antisocial behavior.

History and Physical

When a detailed history has been obtained, the significant subjective evidence should be tabulated. The examiner is then ready to proceed with the physical examination. Here the accepted norms for younger people must be modified and broadened. The sights must be reset, for now there is atrophy in contrast to growth in the earlier decades; involution as opposed to evolution. Individual organs however do not obey this universal law—for example, the thymus involuting in childhood and the brain ceasing its physical growth after puberty. Within the metabolic processes there persists a small degree of irreversible change and a slow but steady accumulation of regressive factors. This results in a gradual loss of efficiency, often accompanied by atrophy or loss of structure.

Skin

The skin is loose, wrinkled and thinned, the folds become accentuated and the fatty parts are flabby. In the male, fat is deposited in the lower

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half of the abdomen while the legs remain lean. In the female, obese masses accumulate on the hips, thighs and ankles. Dryness of the skin, scaling, atrophy and pigmentation, yellowing and thinning with visibility of the cutaneous blood vessels are common changes. Senile keratoses become numerous, vessels dilate, the hair whitens and thins, and the nails turn lusterless and brittle.

Skeleton

Posture is affected by alterations in the chest and modifications of the spinal column. Older persons are shorter and lighter not only because of increasing curvature of the spine but through atrophy of the intervertebral discs and flattening of the plantar arches. The center of gravity, moved forward by the thoracic kyphosis, is counterbalanced by a lumbar lordosis and a shift of the pelvis horizontally. As the skeleton stiffens, this effort becomes ineffective and there is overleaning forward with some compensation attempted through bending of the knees.

Bone atrophy begins in the flat bones and with increasing years and lessened activity spreads to the long bones. Joint cartilage is altered and the costal cartilages calcify, diminishing thoracic excursion. Arthritis deformans, common in the spinal columns of old people, results from stress, strain and abuse through the years.

The skeletal structure thus requires careful evaluation if the patient is to be spared disablement from postural and joint changes and possible fractures because of impoverished bone structure.

Vision and Hearing

Detection of visual defects is highly important since these account for slowing of performance when sequential movements are attempted. Since the elderly lean heavily on vision in even simple actions, every attempt should be made to evaluate this function.

Failure in hearing is present commonly enough to warrant at least a gross test, with more precise evaluation if impaired, so that corrective measures may be tried.

Head and Neck

The condition of the teeth and gums should be noted as well as the looseness of dentures, for the jaws tend to shrink. All of these factors have a bearing on nutrition since they influence chewing, digestion and the health of the stomach and intestines.

Limitation in movement of the head and neck is often due to cervical spondylitis which may also cause headaches. Lymphadenopathy, tumors of the salivary glands and changes in the thyroid should be searched for. Audible gurgling on swallowing, double swallowing and regurgitation of food direct suspicion to a possible Zenker's diverticulum.

Thorax

With advancing age the thorax becomes emphysematous, muscularity diminishes, and the muscles of the neck and sides of the chest stand out prominently. The thoracic cage tends to approach the pelvis and diminishes the length of the abdomen, which, especially in corpulent men, extends forward outlined by the depressed lower-most ribs.

Emphysema of the lungs is a very common senile change and is one of the chief causes of lowered physical capacity. It is a very important factor in the development of senile tuberculosis, a disease which should always be suspected in old people when they have a cough or lose weight. This disease occurs in two forms: (1) from extension of a previous infection, and (2) from breakdown of lymph nodes which formed part of the childhood primary complex. Lowered resistance, emphysema, circulatory deterioration and hypersensitivity are responsible for spread of this infectious process.

Bronchial carcinoma is another lesion of relatively high incidence in the aged and should be kept in mind when searching for a cause of cough and weight loss.

In normal aged persons the heart atrophies and becomes smaller as do other organs.

Brown atrophy or lipochromic pigmentation is the most obvious cardiac modification. Atrophy of cardiac muscle is away from the base so that the papillary muscles veer toward the apex. The fibrous rings dilate and the venous ostia enlarge. The coronaries alter early.

When pathologic changes predominate over senile atrophy, the heart usually weighs as much as in persons of middle age. Changes in the valves are most common in the aortic leaflets where calcification and stenosis, with the characteristic murmur, take place. Tortuosity, widening, and the presence of calcium plaques are responsible for

the systolic murmur heard over the entire precordium. The diagnosis of mitral insufficiency in old age is difficult to establish without supplementary features.

The most common disturbances in rhythm are extrasystoles and auricular fibrillation and these can usually be recognized without recourse to the electrocardiogram. Mild degrees of decompensation should be suspected when there is shortness of breath in the recumbent position; moist rales are found at the lung bases, particularly the right; the liver is palpable and tender; and there is pitting edema of the legs.

The degree of cardiac reserve should be determined by the response to exercise.

Abdomen

In the examination of the abdomen, peristalsis may be readily evident and the pulsation of the abdominal aorta easily felt if the wall is thin. The solid organs are normally no more palpable than in younger people because of their shrinkage. Meteorism is fairly common, and, because of constipation, fecal masses may be palpated in the lower left abdomen. Hernias, both inguinal and femoral, should be looked for in both men and women. Palpation and percussion of the suprapubic area should always be done because of the frequency of retention and incontinence; and it should be kept in mind that silent chronic cystitis is common in old age, especially in women.

Perineum

In the anorectal region hemorrhoids abound, and polyps and rectal prolapses are common. Fissures and fistulas, while not as common, may also be present. Digital examination is always indicated and is particularly important in determining the condition of the prostate gland which is enlarged in four out of ten senile males. Finally a proctoscopic examination should be carried out for visual inspection of the rectum. The genitals in the male may show hydrocele, varicocele, testicular tumors and epididymitis. Tinea of the perineum extending to the perianal area may also be found. In the female, excoriation of the surrounding skin from urinary irritation, relaxation of the perineum with rectocele, cystocele and procedentia are often present. Atrophy of the vaginal mucosa with kraurosis and increased tissue friability, urethral caruncle and narrowing of the vaginal vault are common findings. Bimanual examination is often difficult for these reasons, as is inspection by speculum. The cervix is usually small and the fundus normally much reduced in size. Diligent search should be made for ovarian cysts and tumors.

Extremities

The extremities should be inspected for muscular changes, joint mobility and deformity, condition of the skin, its temperature and color, varicosities and edema. It is important to palpate for the pedal arterial pulsations even though loss of the dorsalis pedis pulse has a diminished value in older people. It is significant when one leg is found pale and cool and the contrast is emphasized after exertion and by the appearance of cyanosis.

The patellar and achilles tendon reflexes, as well as the vibratory sensation, should be determined routinely.

Laboratory Studies

After completion of the physical examination certain minimal laboratory procedures are in order. These consist of tests essential to every diagnostic study and those indicated for further evaluation of findings disclosed by the examination. The first of these should include a urinanalysis, complete blood count, blood Kahn, fasting blood sugar and non-protein nitrogen, basal metabolic rate, a Papanicolaou smear in women and a chest x-ray film. An electrocardiogram is desirable, if facilities are available. Special tests that may be required are glucose tolerance, kidney function, gastric analysis, sputum and stool studies. More extensive x-ray studies are of course to be made when indicated.

Advice to the Patient

With the survey completed and summarized, the final step is to explain the findings and their implications to the patient and those immediately responsible for his care. Here, as at the first contact, the physician must be mindful of his manner and speech lest he underline the suspicion in the patient's mind that there is little or no hope. Optimism is a part of therapy and must be maintained even though only relief can be offered.

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The Physician's Role in Community Health Programs

By Vlado A. Getting, M.D.
Ann Arbor, Michigan

MUCH has been said about the aged and about illness of the aged. It must be apparent to all that the problems of the aged are polyvalent and require the services of the entire resources of the community.

Perhaps it would be well at this time to define two separate but overlapping groups of oldsters.

First, there are the aged, of whom there are about 14,000,000. We have learned that by 1975 those over sixty-five years of age will number about 20,000,000.

The second group are the chronically ill and disabled. In this group, characterized by a disability of three months or more, 26 per cent are below forty-five years of age. Another 34 per cent are between forty-five and sixty-five years of age. Thus 60 per cent of prolonged illness is found in the younger age group. Only 40 per cent of prolonged illness is found in the over sixty-five age group.

It is this 2.1 million of the fourteen million people over sixty-five years of age that are the overlapping portion of the two groups. They are both aged and chronically ill. However, it is estimated that if a person is able to reach age sixty without chronic illness or disability, then the chances are one in four that within the next five years he will require medical care for the remainder of his life.

As physicians we must recall that aging is not a disease, nor is it necessarily accompanied by any specific disorders or illness. Many older people have no clear-cut disease, or they have a disability with which they have learned to live. Therefore, in health services for the aged we must concentrate on the normal, or apparently well individual rather than on the person with a disabling disease. Important as specific diseases and disabilities are to the health of older people, we must make a distinction between the control of these diseases and a program of health maintenance in the later years. We must determine instead the kind of health guidance which will enable older people to live their lives in reasonable security, satisfaction and health.

As physicians we have a double responsibility in developing a program for the maintenance of health of the aged. First, as private practitioners we have obligations to the individual patient. The pediatricians, and more recently, the obstetricians are showing us the best way to discharge our obligation to our patient.

Health Supervision as Well as Therapeusis

It is not enough to treat the patient when he is ill. Unfortunately, our medical schools have only recently accepted the responsibility of teaching health supervision. Many practitioners are not vitally interested in health supervision. A short time ago I addressed a woman's club on a health subject urging them to obtain regular health appraisal for themselves and their families. A few months later one of the women came to my office with this story:

"After weeks of argument I finally persuaded John, that's my husband, to see our family doctor. John's just sixty-five and about to retire, and I thought he should have a thorough check-up. John went to see the doctor but he got no check-up. The doctor called John into his office and asked him what was the matter. My husband replied: 'Nothing, doc, my wife just wanted me to come in and get a check-up.' The doctor then told my husband, 'Why, John, get out of here, stop wasting my time; you don't need a doctor.'"

Unfortunately this is not an isolated instance. Physicians must realize the need for providing their regular patients health supervision as well as therapeutic medicine. However, as much as we would like to see every person benefit from regular physical evaluation, there are not enough doctors to render this service.

A method must be developed to refer those persons who, though apparently well, may have unrecognized disease or disability. Such a method is now under evaluation in several parts of the country, including Michigan. It is the multiple screening process, whereby at a single visit to the private physician's office or to a clinic, a technician can

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apply a battery of screening tests that have been proved effective.

While it has been argued that the multiple screening procedure may give the patient a false sense of confidence, this argument is no reason to turn down the method. What case-finding procedure, what diagnostic test is perfect? Each has its limitations. It is important for both the physician and the patient to know the limitations of the diagnostic or screening procedure. Indeed, an extensive and expensive diagnostic check-up may give a false sense of security. If after as complete a work-up as possible, a patient who has been declared as free of disease falls dead as he leaves the doctor's office, we do not say that the examination method is worthless. Both diagnostic procedures and the screening procedures have their places. Each has its limitations and each can be abused. However, the multiple screening tests can bring into the physician's office early unrecognized cases of both acute and chronic illness. Through the application of diagnostic procedures the physician can then determine the presence of the disease in its most vulnerable stage, thus giving the patient the best chance for recovery. Thus, the prevention of progress and complications of disease or disability is made possible.

Oliver Wendell Holmes was not only a famous author but a professor at the Harvard Medical School. After addressing a woman's group on a health subject, he was asked by an older woman: "Dr. Holmes, what can I do to live as long as possible?" He replied, "Get an incurable disease and take good care of yourself."

Robert Munroe in his Geriatric Clinic at the Peter Bent Brigham Hospital in Boston found that a frequent precipitating factor in the bringing of aged persons into hospitals is dietary deficiencies. Malnutrition often exacerbates existing physical ailments. There are many reasons known to all physicians why oldsters fail to eat a balanced diet. A physician's guidance is necessary not only for a suitable diet to prevent malnutrition, but for the many other aspects of maintenance of good health including the prevention of home accidents, and a sense of physical and social well being.

Referral to community Para-medical Services

The physician has the responsibility of making available to his private patient those para-medical services which are available in his community. Among these are:

1. Diagnostic tests at hospitals and clinics, on a fee or service basis.
2. Bedside nursing in the home from the Visiting Nurses Association.
3. Physical therapy likewise from the Visiting Nurses Association.

A study of cerebral hemorrhage patients in nursing homes in Quincy, Massachusetts, revealed that over 50 per cent of these patients had become bedridden because of inadequate physical therapy. With proper care most of them could have been up on their feet, many able to care for themselves and some could have returned to gainful employment.

4. Speech therapy.
5. Medical social work.
6. Occupational therapy.
7. Home keeper services. This enables the patient to stay at home and prevents the breaking up of the home when the housewife is ill.

By far the largest majority of oldsters (about 85 per cent) are in their own homes.

When sick they should be treated at home whenever possible. Each physician should know all of the community services that are available to his patient.

Community Facilities

The local health department and the Community Health Council, a health division of the United Community Services, can tell the physician what services are available and how his private patient can obtain these services on the physician's prescription.

It is also the responsibility of the physician to help plan, develop and operate these para-medical and health services: (1) as a member of advisory committees, (2) as a member of the board of directors, (3) as a speaker before lay groups, (4) as a spokesman before public appropriating bodies to enable the health department to develop proper facilities.

There are many services which the health department makes available to the private practitioner in the treatment of his patients. Other services are offered by voluntary health agencies. While there is considerable variation in services offered by local health departments, almost all undertake extensive health education programs designed to bring the patient into the doctor's office for early diagnosis, for treatment and for preventive procedures and health supervision.

Many communities have developed case-finding programs—screening programs: chest x-ray, blood tests, urine tests, et cetera—all designed to bring the patient for diagnosis and treatment to the doctor's office. These procedures are intended to teach people not to take good health for granted, but urge families to select a family doctor and use him in times of health as well as in times of sickness. The answer to the health maintenance needs of the aged and the medical care needs of the chronically ill are in the hands of the family doctor, a member of a community team working together toward the same objective of better health for all adults, and a happy, contented zenith in old age.

Pre-payment Insurance for Oldsters

One of the needs of the aged and chronically ill patients is pre-payment insurance for hospital and medical care of prolonged illness. Such a program has been initiated in Massachusetts as a supplement to the regular Blue Cross-Blue Shield package. Methods must be found whereby people who retire can continue to participate in pre-payment plans. In this way they can preserve their self respect and continue to depend upon their family doctor for care. This not only affords them greater security, but confidence, and thus a more favorable chance for better results. Physicians should assume leadership for the development of these plans and cheerfully participate in their operation.

Home Care

Bricks and mortar are not the answer. Institutionalization of many oldsters is but the path to rapid vegetation, deterioration and premature death. The building of large infirmaries and homes for the aged in the country is the putting aside of the chronically ill and the aged where they can die apart from the community.

The place of the chronically ill is at home under the care of the family doctor with para-medical care such as bedside nursing and physical therapy being supplied by community agencies. If hospitalization is necessary, this should be provided in a chronic wing of the community hospital.

Living at home, the chronically ill patient is among his loved ones; he is happier and his chances for recovery are speedier. Moreover a happy, busy oldster, who has a place in his home, is much too busy to be sick and his troubles remain little ones. He has a place in the world. He is needed and can't afford to be sick.

Conclusion

The physician has a dual responsibility to the aged and the chronically ill. First, as a family doctor he must offer health supervision as well as medical care. He must make available to his private patient such para-medical services as will be necessary and as are available.

Second, the physician must assume leadership for the planning, development and operation, not only of health facilities, but all types of programs for the aged. Physicians are encouraged to accept positions of responsibility in community organizations so that the efforts of an enlightened citizenry combined with the leadership of the medical profession may lead to a new era of development in community health services for our senior citizens. Then, indeed, combined with other programs for the aged, can the goal of living through the latter years gain new meaning and purpose.

HEART BEATS

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Program Committee, appointed the following Subcommittees:

Rehabilitation Subcommittee.—Kathryn McMorrow, M.D., Chairman, Detroit; R. R. Barber, M.D., Detroit; D. L. Block, M.D., Detroit; C. Robert Dean, M.D., Detroit; Edwin DeJongh, M.D., Detroit; Robert E. Fisher, M.D., Bay City; B. I. Johnstone, M.D., Detroit.

Information and Lay Education Subcommittee.—Sidney Chapin, M.D., Chairman, Dearborn; Sibley W. Hoobler, M.D., Ann Arbor; Robert Mason, M.D., Birmingham; Kathryn O'Connor, M.D., Detroit; Henry L. Smith, M.D., Detroit; Mrs. Hugh Wilson, Ann Arbor.

Professional Education Subcommittee.—Warren B. Cookscy, M.D., Chairman, Detroit; Paul S. Barker, M.D., Ann Arbor; Douglas Donald, M.D., Detroit; Gordon B. Myers, M.D., Detroit.

The Michigan Heart Association is an affiliate of the American Heart Association and a member-agency of the Michigan United Fund.

Suggestions from the Conference on Gerontology

By A. Hazen Price, M.D.
Detroit, Michigan

THE medical man has been the key figure for generations in the preservation of individual as well as public health. He has been expected to serve on all types of boards and committees. His role has not always been an enviable one for he has been blamed if he did, and blamed if he did not, do the right thing. He has been in the public eye constantly and his deeds subject to scrutiny at all times. He has used all the newer methods in the medical management of disease so that more and more people are now living longer. They are now living to an age when cardiovascular and neoplastic diseases are much more common. As a consequence, much more of his time is consumed in the care of patients with these diseases. He is not only expected to care for the sick, but also to help keep the well older person from getting sick. For this reason, an attempt has been made to develop certain specific suggestions which the physician can apply, when possible, in his own community.

Community Committee on Aging

In those communities which have done the most for the older age group, there has been formed a committee of representative citizens to study the needs and facilities at hand in that particular area.

The physician is frequently the one who understands best the needs of the individuals, and it is our belief that he is the most logical person to initiate the formation of such a study group.

Gerontological Center

As an outgrowth of this survey, some kind of geriatric center where people can go to obtain help and guidance may be recommended. At first, it could be manned by a highly respected and understanding person in the community on a part-time basis. As the needs of the people are brought into the light, additional members may be added to facilitate the solution of the various problems encountered.

A person trained in the management of the social and psychologic aspects will be needed as the center becomes larger and better known. Frequently, this counseling center can first be located in the church or school with the clergyman or school principal as the advisor. The banker, builder, lawyer, librarian and physician can have a part in solving the many phases of the problem brought for consideration. Also the establishment within this center of a group who would serve as an agency to help find employment with or without pay would be of tremendous value. Boredom would thus be abolished for many unhappy men and women. The greatest satisfaction to the individual is oftentimes the realization that someone is trying to help him solve his difficulties.

Health Appraisal Programs

The annual health appraisal for all persons past forty years of age should be encouraged for obvious reasons. It may prevent a great deal of future disability as well as provide the first contact the patient has with a physician. If the attitude of the doctor is a cordial one, the initial impression will be good and the first step toward a good patient-physician relationship will have been established. Confidence in the physician's ability will develop if he gives a good conscientious appraisal. This not only includes a satisfactory history and physical examination, but also good advice regarding proper nutrition, control of obesity and the need for adequate rest, exercise, and recreation.

Educational Programs

Much has been said about the need of the older person conditioning himself for living in his later years. Consideration must also be given to teaching the younger generation how to understand and get along with its elders. Discussion groups for younger persons can be formed, at which time the young people can talk freely of their problems at home and suggestions offered for their solution. The families of the older person, confined to an old folks home, might well attend such meetings and perhaps come to realize that they have a real obligation to care for their parents in their own home. Parents have always assumed their responsibility toward their children but unfortunately,

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Dr. Price is chairman of the Committee on Geriatrics, Michigan State Medical Society.

children do not always recognize that they have an obligation toward their parents.

During these discussion periods, an excellent opportunity is also provided for the physician to develop in the minds of the younger generation the need of preparing themselves for the time when they too will be old. They must be made to realize that only by developing a wide range of interests while young can they hope to keep themselves busy mentally and physically as they grow older. The more resources they have to fall back upon, the easier it will be for them to maintain their zest for living.

Activity Centers

The many phases of retirement have been discussed and need little repetition at this time. The suggestion has been made that compulsory retirement might better be at seventy-five years of age and a sliding scale of selective retirement be developed between sixty-five and seventy-five years of age. This plan has merit and deserves serious consideration. Whatever the retirement age, people must start planning a long while ahead for the time when they will no longer have regular work. When the time comes that a person has nothing to do tomorrow, he soon becomes very unhappy and mental and physical deterioration develop at a very rapid rate. Industry has been accused of turning men "out in the cold" at sixty-five years of age and doing nothing further for them. I am sure this impression developed when the law first became operative and at a time when the seriousness of the impact was not appreciated. Now much greater consideration is being given this problem, and where possible, a sliding scale for retirement is being used. In big industry, this is a tremendous undertaking but one which can be worked out amicably between labor and management. The greatest advance will be made when both big and small industry gears its work in such a way as to provide the older worker with some simple, full- or part-time employment. This will fulfill the great desire on the part of everyone to continue to have a part to play and to feel that his services are needed.

In some of those communities where large manufacturing concerns are located, the unions have assumed a great deal of responsibility toward the retired worker by providing "drop-in day centers" for recreation and hobby type of occupation. This relieves much of the boredom and lonesomeness which tends to breed discord in the home, as well as prevents many psychosomatic illnesses. The physician has been caring for those persons receiving old age assistance and will now give those retired workers living on a pension the same considerate care. In some areas, however, a large percentage of his practice is made up of these patients and his remuneration is frequently inadequate. He can be depended upon in most instances, however, to co-operate with the union in their efforts to help the disabled retired worker. Through the efforts of the County Geriatric Committee, a closer relationship should be worked out between the physician and the union in each community, so that these individuals will receive proper medical care.

Living and Care Arrangements

Physicians should consider it their duty to become thoroughly familiar with all the nursing and boarding homes in their community as well as the larger homes for the aged. Many of them are being well operated, others deplorably so. If we signify our willingness to co-operate with the operators or superintendents to improve their facilities for housing or patient care, it would be to the advantage of everyone concerned. The Association of Approved Nursing Homes in this state is endeavoring desperately to improve the standards of each of its members. To this end, courses for nursing home operators in the various aspects of management are being conducted throughout the state. A two-day institute and workshop likewise is held each year to give the operators a better understanding of what their role should be in the community.

The various auxiliary groups and service clubs in each area may well have the improvement of these homes as one of their projects, so that the stigma heretofore attached to them will be removed.

As one visits the various homes for the aged, the one outstanding need is that of an adequate program to occupy the residents. A few people have natural sufficient initiative to keep themselves busy but most of them will just sit and wait. The Jewish Home for the Aged in Detroit has accom-

(Continued on Page 590)

Senescence, an Eyeful

By John M. Dorsey, M.D.
Detroit, Michigan

"Old age, on tip toe, lays her jeweled hand
Lightly in mine. Come, tread a stately measure,
Most gracious partner, nobly poised and bland."

George Santayana
Minuet on Reaching the Age of Fifty

THIS report, as its title and sub-titles bear witness, rests its case on views, instead of logic or argument. The basic principles of healthy aging to happy sagehood arise from the American views: (1) everyone must live all of his life alone,* and (2) healthy happiness is guaranteed for everyone's succeeding age only if it is cultivated by the preceding one. Health education, preventive medicine, is an improvement upon the Chinese system of paying the doctor only so long as health prevails.

Once this true and patriotic account of human identity is seen clearly, it then becomes evident that every aged one must and can help himself, and that all programs and projects *of* another one to help him are entirely beneficial, and vitalistic, but *for* that other one. The "force of habit," is wisely credited for its directive power in the definition *second nature*. One's habit of mind may be a health sustaining force or it may support personality dilapidation, well termed "habit deterioration." God helps him who helps himself. Devotion to the possibility of self help enables each person to cultivate habits of (1) reassuring appreciation that only he can be the author of his own ongoings and shortcomings, (2) empowering responsibility for animating his life-long capacity for helpfulness, and (3) pleasurable self-esteem naturally associated with his recognized self-interest and self-care.

The healthy study and practice of one's self in medicine concerns itself solely and wholly with ameliorating the life of the physician. The "healthier than thou" quackery is renounced quite as wholesomely as is the "holier than thou" hypocrisy. This report considers the health benefit in the renunciation of the two temporal disorientations: "Older than thou" and "younger than thou." The American physician's devotion to equality makes no health, race, religious, sex, or age discriminations. The American patient asks to be treated as an equal. The American judge hears and sentences his criminal as himself, the American clergyman ministers to his parishioners as himself. To see one's "old" and "young" fellowman as one's own living of each age, is to take a larger and nobler view of one's own humanity. There is only one way to pay true respect to every age, namely, to view it with the American feeling of equality.

No matter what his age everyone is always a complete person. Youth is all youth, neither half a man nor twice a child. The "young" one is wholly living his individuality, not preparing to live it; the "old" is wholly living his selfhood, not remembering having lived it. Emphasis upon "preparation for," is really emphasis upon *separation from,* the joy of living; and may be better seen as a vain effort at procrastination of life itself. The present tense provides the healthiest life tonus. The only way for me to improve each shining hour is to live it with the full appreciation that I am living me, and not attitudinizing "somebody else" or "something else," that ever selfward is my constantly rewarding orientation. If the first of life is lived joyously for itself, then the last of life can be lived joyously for itself.

The healing and strengthening habit of proper self-care, based upon the habit of an accurate self-estimate, provides a new lease on life whenever it is begun. Emerson observed a proportion between the designs of a man and the length of his life, describing every task as a life preserver. Yet who is there almost who asks himself the most vital question of all, "What is my design for living all of my life?" This task of observing, or recovering, one's natural sense of esteem for one's living, is most reliable for the prolongation of life.

Must heredity be counted as the chief factor in longevity? How commonly does a person unconsciously hold it necessary, and unconsciously intend, to die at about the age when his parent of the same sex died? Does not my consciousness of this tendency in me help me to avoid the blind carrying out of such a fatal autosuggestion?**

*"Alone" means both literally and figuratively "all one," and "all one" means *free*.

**See John M. Dorsey, M.D., "The Benefits of Senectitude." Geriatrics, 10:No. 3 (March) 1955.

Seneca counselled "man does not die, he kills himself."

Socrates described the attainment of self-knowledge as the highest, hardest, and last of all forms of knowledge. If I live my last years in the underprivileged way of senility and, on account of their atrophy from disuse, I cannot animate my vitalizing attitudes of recognized self-possession and self-reliance, then I must aid myself as best I can with my regimen of illusions prescribing "someone else" to do my self-helping for me. I hope fervently now that any such helper then will be able to realize fully that he is helping himself only. Everyone, or everything, is itself only; and that is all that is true and all of the truth about either one. However, as Emerson pointed out, "The old, who have seen through the hypocrisy of courts and statesmen, die, and leave no wisdom to their sons. They believe their own newspaper, as their fathers did at their age."

Perspective

"A man is not elder because his head is gray; his age may be ripe, but he is called 'Old-in-vain.' He in whom there is truth, virtue, pity, restraint, moderation, he who is free from impurity and is wise, he is called an elder."†

THE DHAMMAPADA

The appreciation that everyone alive is always helping himself as much as he possibly can "at the time," is hardly ever enjoyed. But this is the appreciation that one must begin with, if he would succeed in helping himself further.

It is impossible to be alive and "give up," living itself being tenacious self-help. Always my feeling that another one has "given up" is the displacement of my own giving up my further effort to find his way of helping himself. All so-called "giving up," of a live man, is really his falling back upon a securer stronghold for living himself with greater comfort. The joy of living a healthy life involves attaining (1) what is enjoyable and (2) what is healthy. Care in living up to both prerequisites insures longevity.

A life of kindness to one's fellow man in the *spirit of devotion* is healthier than kindness felt as "self-sacrifice." In every unfoldment of my development, treating my neighbor as myself is healthier for me than treating my neighbor as not myself. Alert self-vigilance, *presence* of mind, is the price of eternal youth. A man is really as old as his mind's eye. The self-observer who can see that every "giver" creates also his own "receiver," and that every "receiver" creates also his own "giver"—that one seer *can* love his neighbor as himself.

The healthy oldster does not "become" self-centered, rather he finds himself as a distinct existence, appropriately self-centered and self-circumferenced. It is the person who does not recognize that his life is all about himself who does not have his wits about him. May every one at every age, including his process of dying, continue his conscious purpose of rescuing himself from deadly automatism, by habitually honoring the genetic dynamic worthiness of his lifelong developments. Dean Stanley E. Dorst of the University of Cincinnati College of Medicine upholds the comprehensive view of medical study and practice as amounting to the physician's way of life.‡ Osler saw his medical profession similarly as his own personal living. Dr. George H. Preston, successfully retired, has written a helpful book, entitled "Should I Retire."§ Each of us physicians, wittingly or not, assumes a medical responsibility to grow old himself and thus report first-hand the benefits of senectitude.

The Long View

"Old and young, we are all on our last cruise. If there is a fill of tobacco among the crew, for God's sake pass it round, and let us have a pipe before we go!

"Indeed, by the report of our elders, this nervous preparation for old age is only trouble thrown away. We fall on guard, and after all it is a friend who comes to meet us. After the sun is down and the west faded, the heavens begin to fill with shining stars. So, as we grow old, . . . this period for which we are asked to hoard up everything as for a time of famine, is, in its own right, the richest, easiest, and happiest of life."°

ROBERT LOUIS STEVENSON

There follows a description of the way I see my aging self. The report is offered as one contribution to the rapidly growing science of gerontology, but not at all as an example. To the extent that my reader may find himself in his reading, my intention is realized. Possibly this self sketch may also serve as clinical material in that it covers much of its writer's case history. I feel certain of

†The Dhammapada. The Wisdom of China and India, by Lin Yutang. Random House, 1942.

‡Journal of Medical Education, December, 1954.

§New York: Rinehart and Company, Inc. 1952.

°Crabbed Age and Youth. New York: Charles Scribner's Sons, 1911.

the three self-evident truths: (1) I have grown only, but all of, myself; (2) I can live only, but all of, myself; and (3) I must do only, but all of, my own dying. No one else can end my life for me.

Greatly needed are more astute tributes to the greybeard such as this one of Henry Ford, the man who sensed the "self" possibilities in the well named "auto": "You take all the experience and judgment of men over fifty out of the world and there wouldn't be enough left to run it." Hopefully, which is one way of saying "medically," the foggy view "consolation of old age" will clear itself as the ever-augmenting joy of living *now* streaming along as divinely as ever. Ralph Barton Petty enjoys a heroic view of natural aging as a continuum of awakening to attainment of ever greater heights of human excellence:

"There is one idea that will, I think, carry us a long way, if we can only get it accepted. We must distinguish between deadness and length of life. After all, we don't say that a youth of eighteen is less alive than an infant of three weeks, though he is much older. Some individuals are born dead and remain dead. Some individuals are born with a low degree of vitality and grow more alive with the years. Between physical birth and physical death there is no fixed point at which men can be said to reach the maximum of liveliness. It behooves us, then, as elders, to take the view that the course of years is a passage from less to greater vitality, from inertness to activity. We can prove the idea by applying it, so that it comes back in the end to what you and I are going to do with our years.

"Whether a man shall live toward the past or toward the future, is for him to decide; and he can change his mind as often or as late as he likes. Time extends in both directions, and neither is ever closed. Let us, therefore, consider every anniversary as the opening of a new chapter, rather than as the closing of an old, and our many years gone by as an accumulated capital to invest in the years to come.

"This is only a special application of a very general idea, which I think it is now timely to proclaim. Every form and every stage of life has its own gifts, and its own pride. There is a pride of youth, and I would not have it one whit abated. But there is also a pride of age, which is ours if we will only affirm it. Let us leave off apologizing. The alternative is not boasting, which is only a compensation for self-distrust. But let us have confidence in our power, and earn our own self-respect and the respect of others by asking much of ourselves. If we expect much of ourselves we shall rise toward the high level of our own expectations."*

*Plea for an Age Movement. New York: The Vanguard Press, 1942.

In his astonishingly intrepid volume, "Senescence," the Nestor G. Stanley Hall records, "the habit of living grows so strong with years that it is ever harder to break it" . . . . "I can, at least, speak more honestly than I have ever dared to before; and if I am never read or even venture into print, I shall have the satisfaction of having clarified and unified by own soul," and "the services of vigorous senectitude to our race are probably the very greatest need of our civilization today."

My wholesome development of my old, as of every other, age, depends basically upon my convincing myself that it is all mine. It is this feeling of self-certainty with regard to all of my living which delivers me from painful but helpful signs that it is lacking, such as anxiety and depression. Augustness continuously profits in the evolution of the choicest power of self-possession, euphoric self-awareness. Only the conscious hold of self-possession saves one from being confounded, overwhelmed, and finally demoralized by the successive bereavements he must live through. The task of mourning in achieving deeper cheer is succcessfully accomplished through seemingly scattered self forces appearing as unified, from one's strengthening and healing living of at-one-ment.

I may live a long but overly sheltered and narrowly conceived life, and therefore be ever haunted by the accurate idea that there must be more living coming to me somewhere, somehow; or I may live a long comprehensively realized fulfillment of my human possibilities and thus be entirely satisfied in my fullness of time. As I observe my life ever creating itself, and taking the course which I want it to take, my responsibility for my living and growing myself as I do is most keenly felt as personal. I do as I please, but the acknowledgment of that personal satisfaction "weighs in" my responsibility for pleasing to be a long-liver or a short-liver.

Certainly I expect my death to involve no more travail and discomfort than my birth, and consider the love of natural death to be man worthy. Also, viewing God as all, including divine dust, I find myself able to feel myself "a brother to the insensible rock," and view with equanimity that ancient tale of dust to dust. Most of all it is gratifying to observe and record that the appearance of diminished activity in the aging one appears to be the issue of dispelling illusional body

selfness in the recognition of true mind, or if you will, soul selfness. In his "Ode on Solitude," composed before his twelfth year, Pope soliloquized,

> "Happy the man, whose wish and care
> A few paternal acres bound,
> Content to breath his native air,
> In his own ground.
>
> "Thus let me live, unseen, unknown,
> Thus unlamented let me die,
> Steal from the world, and not a stone
> Tell where I lie."

As I see it, the quest for true enthusiasm over life will be fully rewarded when a thanatology is evolved which clarifies what there really is, if anything, in human nature that can die! Life *can* entify only life, not death. Since no one can see clearly what his *present* life is about, except that it can be only and all about himself, to have one's attention preoccupied with imaginings about his so-called "death," which is *absent,* can only be a valuable sign of mental disorder. For death can not be lived, and even the wish to die is impossible. The so-called "death wish" is a misnomer of the wish for a different mode of existence.

Is it not healthy for me to be able to view the meaning of my ending my life with the same kindness as did Whitman in his deep appreciation of death, "My dark mother ever-gliding near with soft feet?" It does seem to me that the worst misfortune which might befall me is that I be unable to want to die. The opiate of such ignoration is quickly habit forming. The person fears death most who fears life most, and the one who lives himself with the realization that he has but one life to enjoy is the person who, in his "waxing years," is as happily satisfied as ever with the appreciation of his terminal facilities. He has discovered the disadvantage in trying to live beyond his means of living. Death may be defined well as the last act of natural self-help, consisting of one's happily terminating self-help. Dryden's lines describe my own fitfully recurring cowardice associated with dying,

> "O, that I less could fear to lose this being,
> Which, like a snow-ball, in my coward hand
> The more 'tis grasped, the faster melts away."

In my present senescence I observe that life is all about life, death is all about death, and that neither can have any significance for the other. Reasoning that "life dies" is like every other kind of reasoning, all about *itself.* Once one starts renouncing his charming illusions, it is easier for him to renounce his fascinating judgments and reasonings, so that he can rely ultimately upon his conscious freedom, his self-observations, for his living truth. It does appear "the rule," that one must face squarely his meaning of death in order to observe his so-called "physical body" as entirely his own mental construct. Force of mental habit, "second nature," may find me living myself largely as if "out of my senses," but by observing my meanings about death I may find myself "restored to my senses."

I consider it my supreme felicity whenever I am able to appreciate my age and act my age. If in his old age Democritus did put out his eyes so that his *mind's* eye could see better, the mutilation must have been a compensation for his earlier indulgence of his illusion that he could live "out of his mind." This undispelled illusion remains the one and only source of mental disorder. Seeing it as such is tantamount to "seeing through it," or "the recovering of one's senses." How often are the same kinds of observations made of the very old and the very young! "He sees what he wants to see." "He hears what he wants to hear."

Except for happily living older ones dearly in mind, I do not see how I would be able to live my present age nearly so cheerfully, buoyantly. May every older one enjoy the awareness of his health contribution to his younger one, particularly by observing himself with keen pleasure as a doctor of life itself, specializing in the distinctive nature and needs of longevity. Aeschylus recorded, "It is always in season for old men to learn." These days there is increasing ado about "happy retirement." If in his work a person is not able to cultivate immediate life satisfaction, but rather a habit of postponement of his joy of living until his retirement, then surely when he does retire his habit of putting off his joy of living must take its toll. What is essentially to the purpose of insuring wholesome retirement living is the making sure of "on the job" happiness.

Sane Sights

"The free inquirer will discover full soon that the only 'saving faith' is a perfect trust in truth, and that the only real infidelity is the belief that a lie can do

better work than truth. He will take to heart Montaigne's advice, and fear only Fear."**

MONCURE D. CONWAY

Everyone must create his own kind of wisdom. The following senescent scopes may be helpful in accounting for the fact that the magnanimous senescent sage escapes the onological "wising up" of his younger fellow man.

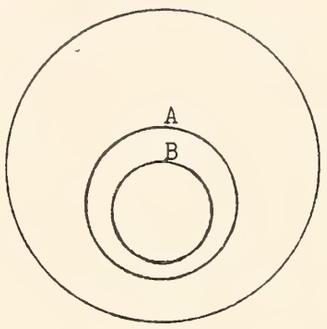


Fig. 1

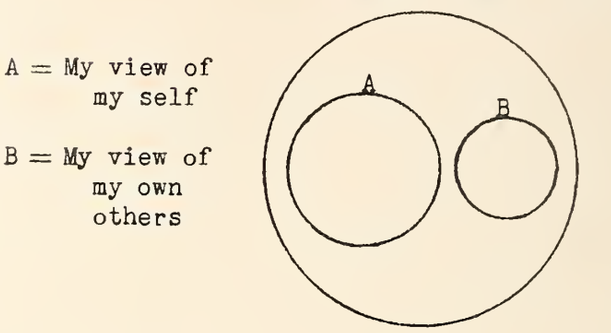


Fig. 2

1. An integral part of his senescent sagacity is the senior's full appreciation that wisdom is the systematic growth and exercise of health, not information acquired; that his life-saving self-sight is his personal development, not a communication. "We can not give conduct," acknowledged Poor Richard. The enlightened oldster sees his age as subsuming the youngster's age, not the converse.

2. With hoary wisdom is intimately associated grateful appreciation of "rejection of wiser ways," as being the very beginning of their development. The mind-conscious sage observes how continuous self-growth with "growing pains" is the process by which transcending intuitions are discovered. Constricted self-consciousness entails much painfully awkward living, but only in view of its restricting confines, e.g., "stage fright," "examination anxiety."

3. Only the self-conscious oldster can convince himself of the inevitable defeat inherent in all *fighting,* and hence renounce fighting the devil's "ignoration" with his own or any other weapons. Only the devil can defeat himself; and, if left entirely to his own devices, he negates his own nihilism. The wise old physician renounces all "fighting" of disease or accident in favor of respecting each for what it is worth as an indicator of the cost of careless living.

4. The elder seer beholds the view: Only through living my oneliness can I develop the veteran viewpoint called "wisdom." Surely the young one must live as he pleases, if he intends to enjoy his old age by living his senescence and senectitude in ways which please him. One must begin with seemingly constricted selfishness, if one would extend it to include one's all. The discouraging admonition, "You can not take it with you," does not apply to the dying self-conscious one.

5. Every veteran of selfhood renounces logic and argument as having any power of persuasion at all, and relies for conviction only upon presenting self *views.* The young one is incapable of noble service to his old one if he is incapable of seeing that he is his own old one, that all of *his* meanings about "old" exist only in his own mind.

6. The father of his father sees his fountain of health and strength within himself. He has observed that his own systematic self-exercise is all that has provided him with his well-fortified age; that his self-exertion is all that has kept his system toned up, his mind fresh and his muscles hard.

Mental order is a simple matter of accounting for all of one's living as expression of one's self order; mental disorder is a simple matter of false entries showing an imbalance in one's self-account. The difference between the sane and insane view is such an obvious one that it lends itself to illustration by diagram.

Figure 1 represents my view of my inviolable individuality in the act of living mental order with regard to my "others." The individuation A comprehends its own individuation B.

Figure 2 represents my view of my inviolable individuality in the act of living mental disorder with regard to my "others." The individuation A excludes its own individuation B.

**Idols and Ideals. New York: Henry Holt and Co., 1877.

Please note the over-all truth that Figure 2 *does* and must comprehend my view of my others as being my own, even though its individuation A repudiates this truth. Please further note that it is the individual who does not appreciate this "over-all truth" who is the very one who sees his view of his others (B) as displaced, as having existence apart from his self-view (A).

Review

"Nature abhors the old, and old age seems the only disease; all others run into this one. We call it by many names—fever, intemperance, insanity, stupidity, and crime; they are all forms of old age; they are rest, conservatism, appropriation, inertia, not the way onward. We grizzle every day. I see no need of it. Whilst we converse with what is above us, we do not grow old, but grow young. This old age ought not to creep on a human mind. In nature every moment is new. The new position of the advancing man has all the powers of the old, yet has them all new. It carries in its bosom all the energies of the past, yet is itself an exhalation of the morning."†

RALPH WALDO EMERSON

In summary, the strong and well aging mind may be defined as the free one which *now* enjoys its rewarding foundation of existing magnanimity, the ever-greatening dynamic advantages of viewing all its forces as vitalizing *present* self-power, and the immense satisfactions of its economic investments of *immediate* kindness. No one sees more clearly than the contented aged one that kindness never fatigues; that unkindness, only, brings with it the need for repose and repair pending the general re-establishment of the lovable feeling of equality; and that magnanimity is the only means of insight.

†Circles. The Works of Ralph Waldo Emerson. New York: Tudor Publishing Co., Vol. I.

Long enough now have I desiderated my beloved Shakespeare's low estimate of advanced living as "sans everything"; and my beloved Sir Thomas Browne's low estimate of death as "the very disgrace and ignominy of our natures." The healthly oldster naturally feels attractively "older" in that he is more advanced and further interested in appreciating the more of himself he is creating. The virtue of honored self-possession, the elixir of life, is the fundamental prerequisite of all healthy ages. As Emerson prescribed and practiced, the self-devoted sect will always instruct and command mankind, and "there can never be deep peace between two spirits, never mutual respect, until, in their dialogue, each stands for the whole world."

To grow one set of realities, selfhood, and attempt to live the set of another, is a form of self-deception which the human constitution cannot well tolerate. However, this truth must be seen to be appreciated as the oldest and newest truth of human nature. As one credits himself with creating all of himself, with growing his own eyes and their perceptions, his own hands and their movements, then his notions of creating "nuisance value" are renounced. The joy of recognized accomplishment is what is most needed to chasten the pleasure of sightless ambition, as well as the grief of blind failure. There is solace in the consideration that the harmoniously developed gerontic genius may be yet to come, but is already a foreseeable kind of advent. Conceiving prayer as a life line, in that it integrates the meaning of the divinity of man with all lower estimates, I offer myself the prayer: May I ever clear my mind's eye to divine the ever precious growing self-conscious baby in my very oldest fellow man.

PERIODIC HEALTH APPRAISAL IN THE AGED

(Continued from Page 562)

Summary

Still unsolved, and challenging medical science, are the great problems of medicine that arise in the latter half of life: arteriosclerosis, hypertension, cancer, chronic arthritis and rheumatism, prostatic hypertrophy, glaucoma, cataract, deafness and others. Until some of the answers are forthcoming, the physician has the obligation to prevent disease or to treat it carefully if it is present, and to balance wear and tear by a proper regime. He can do this effectively through the periodic health appraisal, thereby conserving the vigor and promoting the enjoyment of survival in the aged.

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Chronic Tearing (Lacrimation and Epiphora)

Severing of the Lacrimal Ductules

By William B. Hubbard, M.D.,
Flint, Michigan

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CHRONIC tearing is a common, aggravating, and at times disabling condition due to lacrimation (hyperactivity of the lacrimal gland) or to epiphora (failure of the lacrimal drainage system). Troublesome tearing is more often due to the latter. In a good number of cases, especially in elderly people, the cause is difficult or impossible to locate.[1,3,11,14,15] Sometimes several factors play a part. Cases of indefinite etiology are often overtreated by the oculist, who frequently adopts a wait and see attitude. Is the patient psychoneurotic; does he have lacrimation due to undiscovered reflex irritation of the lacrimal gland; is there "idiopathic" hypersecretion; is the tearing due to laxness of the tissues in the drainage area; is there a mild intermittent partial stricture; if a stricture is it sufficiently severe to warrant further studies and operation; is there more than one etiological element present? These are some of the questions that arise and are not always readily answered.

Attacking the source of the tears by severing the ductules from the lacrimal gland as they pass through the sub-conjunctival tissue on their way to the conjunctival surface may be done for both lacrimation and for epiphora. At the same time one may remove a portion of the palpebral (inferior or ocular) lacrimal gland.[6] The anatomy of the area is not complicated and the operation is not difficult and can be performed by any capable eye physician. Comparing it with dacryocystorhinostomy, a frequently performed lacrimal sac operation, it is easier on the patient, consumes less of the physician's time at the operation and subsequently, is more economical for the patient, and will succeed while at times the sac operation will fail.

Operation on the palpebral gland has been described by many authors.[2,3,4,10,11,12,13,14] Jameson[9] in 1937 enthusiastically reported six cases, stressing the fact that the glandular tissue could be ignored and only the ductules severed. His operation is described in detail by Spaeth.[13] In reviewing the literature in 1952, Duke-Elder[3] lists no reports published in verification or disapproval. It seems the operation has not enjoyed the popularity it deserves in suitable cases. Many oculists have never performed it. They fear as a complication keratitis sicca, or "dry eye." They perform many more difficult and extensive eye operations, subject to more numerous and more serious complications. Even dacryocystorhinostomy for tearing opens ethmoid cells and may cause a sinusitis. Reluctance on the part of some oculists in never attacking the source of tears may be the result of textbook writers copying recommendations and procedures which may be inadequate or improper from one textbook to another. This was the case for a long time in the treatment of caustic burns of the eye[7] and in describing the removal of foreign bodies from the cornea.[8]

It is the purpose of this paper to discuss severing of the ductules of the lacrimal gland, with or without excision of a part of the palpebral lacrimal gland, as follows: (1) to supply facts to show that keratitis sicca is a rare complication, (2) to give indications for the operation, (3) to briefly discuss the operation, (4) to cite typical case reports.

1. Following severance of the lacrimal ductules, a patient cannot express his emotions as freely through the medium of tears nor wash out a foreign body as easily by lacrimation This does not mean that the eye is "dry." Wolff[15] states that "in addition to the glands of Krause, goblet cells, which are 'true, unicellar mucous glands,' occur in all portions of the conjunctiva in great numbers. They moisten and protect the conjunctiva and cornea, so that even extirpation of the lacrimal gland becomes innocuous whilst on the other hand xerosis of the conjunctiva, involving their destruction, leads to desiccation, in spite of copious flow of tears. Parsons and Greef sustain this view. Furthermore instead of these "unicellu-

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The senior author, Dr. William B. Hubbard, was co-author of the first American papers on "Experimental Eye Burns."

The junior author, William C. Hubbard, assisted in preparing the case reports, checking references and assembling data for this article.

lar mucous glands" being reduced in acute inflammatory conditions, they are increased."

No operation should be undertaken lightheartedly. This is especially true in the one under discussion if there is trachoma or other degenerative disease of the conjunctival mucous glands. Such diseases are unusual in this country. Duke-Elder[3] says that "where chronic disease of the conjunctiva has diminished the function of the goblet, mucous glands, that, as a rarity, a keratitis sicca may develop and cause trouble." In other words, if one fails to ascertain that the patient has a normal conjunctiva, there is a possibility of the complication. The only case of keratitis sicca found in the author's files which has been followed for some years is that of a middle-aged arthritic woman. While the condition has annoyed her, it is not nearly so troublesome in her case as would be a severe case of chronic tearing. Duke-Elder[3] goes on to say "excision of the lacrimal gland, or what amounts to the same thing, of the palpebral lobe, in the great majority of cases has no serious ill effects, sufficient lubrication being obtained from the mucous secretion of the conjunctival and the accessory glands of Krause."

Among others that state a "dry eye" is a rare complication are Selinger,[12] Hughes[5] and Meller.[10] The latter says that a "dry eye" need not be feared, but states that occasionally the mucous secretion becomes thickened.

If, in spite of the above data, one wishes to be conservative he may sever a few of the ductules and await results before proceeding further.

2. Probably the most definite indication for the operation is an elderly person with a normal conjunctiva who has a severe, chronic tearing (a) due to lacrimation or (b) for which no actual cause other than aging can be found. Keratitis sicca would not likely develop, but should it do so, it would not last over a long period of years. Meller[10] is less conservative. He advises operation on the source of the tears "whenever constant tearing is the main symptom." Assuming the patient knows the limitations of the operation and still desires it, other indications may be: cases where dacryoscystorhinostomy or some other operation has been advised and refused; where operation on the drainage system has little or no chance of succeeding; in any case with a normal conjunctiva where the operator is convinced in his own mind that the operation is safe; where the patient would object to even a small scar when one would be present; where the patient demands an operation that can be done quickly without pain or shock and which promises quick improvement with little aftercare; and lastly, where operations on the drainage system have been unsuccessful. Duke-Elder[3] agrees with these criteria.

3. The operation can be performed under local anaesthesia in the office or hospital. The area of operation is readily accessible. Only a few drops of procaine injection is necessary. This balloons forward the conjunctiva at the depth of the fornix, even further than that attached at the tarsus and on the sclera. The palpebral gland is easily located. One can remember, when everting the upper lid, the innumerable times he has seen it present as what appeared to be a little fold or bulge, covered by unusually pink or reddish conjunctiva, just above the external canthal ligament. However, as previously stated, it is not necessary to see or excise any of the gland although the operation is almost too simple otherwise. Inasmuch as the upper lid is everted and the lateral angle in place, there is a twisting or torsion of the area which requires a few moments' thought as to how to incise in the proper linear line. It is very important to incise far laterally in the area of the external canthal ligament to get the large ductules that drain in that area, the tip of the gland occasionally extending that far down. The incision is 1.5 to 2 cm. long and as it extends medially is just above the tarsal plate. A subconjunctival flap is then elevated from the top of the tarsal plate to the beginning of the ocular conjunctiva. For a complete description the reader is referred to the sources quoted.

4. The following case reports were obtained from the author's files:

Case 1.—J. S., a man, aged forty, was first seen in regard to chronic tearing on April 30, 1951. Examination showed a partial recurring stenosis of the lacrimal sacs, perhaps with moderate hypersecretion, severe left, mild right. Among the procedures discussed with the patient was severance of the ductules left with partial excision of the palpebral lacrimal gland left. That operation was performed on May 11, 1951. The results were still perfectly satisfactory when last heard from November 15, 1954.

Case 2.—Mrs. G. P., a healthy clerical worker with no mental problems, aged forty-four, was first seen on July 14, 1951. She had tearing of the left eye for several years, severe for one year. As in all the cases, she had had a number of examinations and treatments by other oculists. A diagnosis of partial stricture of the lacrimal passage ways had been made. Further studies and various operations were discussed with her. She desired the same operation as done in Case 1. This was performed August 10, 1951. On November 15, 1954, the operation was still successful. The eye was not "dry." It "watered" a little on rare occasions.

Case 3.—C. C., a man aged sixty-eight, was first seen on July 8, 1950, with extremely severe weeping of the left eye and moderately severe watering of the right eye. He had had many examinations and treatments. History and examination indicated both moderate hypersecretion and partial blockage bilateral. The distal end of the right canaliculus was almost completely stenosed. Operation as described was performed bilaterally December 3, 1951. He was last seen August 10, 1954, at which time he was completely cured.

Case 4.—E. J., a mentally and physically healthy butcher, aged fifty-three, had chronic tearing of the right eye. He had had numerous examinations and treatments. A diagnosis of stenosis of the right lacrimal sac was made. He was not interested in further examinations nor in an operation on the sac. Operation on the source of the tears was discussed fully with him and he elected to have it done. Operation as in previous cases April 29, 1952. He was last seen December 1, 1954, at which time he still had a small amount of tearing.

Conclusions

On the basis of anatomy and physiology, sectioning of part or all of the lacrimal ductules with or without excision of a portion of the inferior lacrimal gland should prove, and on the basis of relief obtained has proven, a satisfactory procedure for chronic tearing after three years in three cases and two and a half years in one case. The only definite contraindication appears to be disease of the conjunctiva causing an absence of normal mucous from the numerous goblet cells. Inasmuch as such disease may develop years after the operation, it would seem best to reserve this operation or at least section only a part of the ductules, if another operation holds out a promise of success, and not to perform the operation on a young person with only a moderate tearing. The most definite indication for the operation seems to be that of an elderly person with a normal conjunctiva with a severe, chronic tearing (a) due to resistant lacrimation or (b) for which no cause, other than aging, can be found. About the only possible complication is keratitis sicca, and this would occur very, very rarely. Should a rare keratitis sicca occur in an elderly patient who had had a serious tearing, the new condition would unlikely be as bothersome as the old. Oculists face more numerous and more serious complications from other eye operations. Keratitis sicca need never occur since the cautious operator can carry out the procedure in stages. Patients are likely to continue to have a mild but not annoying tearing. Severing of the lacrimal ductules in part or in toto, with or without excision of a part of the palpebral lacrimal gland, should be performed more often in order to further clarify its place in ophthalmic surgery.

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Methyl Testosterone for Migraine of Women

Report of Sixty Cases

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IN AUGUST, 1949, Gerisch and I[3] reported on the use of methyl testosterone for migraine of women. Thirty-five were treated with relief in thirty-one patients, a percentage of 88.5. In the present article sixty cases are reported. The larger number in this series plus a longer period of observation permits a better evaluation of this form of therapy.

Dosage.—In the previous paper the dosage was 20 mg. of methyl testosterone daily for four weeks followed by daily doses of 10 mg. for an additional two weeks, and sometimes longer. Since this preliminary report we have reduced the dosage to 10 mg. daily for a period of four weeks with a subsequent dosage of 10 mg. every other day for an additional eight weeks. From then on the medication was given every third day for an additional eight weeks.

If no relief was obtained in this time there was no need to continue the treatment and no improvement could be expected, the treatment being considered a failure. It was found by experience that the smaller dose was just as efficacious as the 20 mg. dose and less likely to give the undesirable effects which will be reported. Some patients continued taking the medication every third day for as long as three years.

The treatment was given for a period of approximately three months. As outlined above, some continued taking it every third day for as long as three years but the majority took it for a period of three months. If a relapse occurred retaking it for a period of four to eight weeks usually brought relief.

In the preliminary report it was stated that discontinuance of the drug was advised if relief was obtained after two months of therapy but since using the smaller dosage with lengthening of the interval between doses (i.e., two to three-day intervals) we have continued the treatment for three months and not infrequently for five months.

Relief of Migraine.—Forty-nine (81 per cent) reported relief from the migraine attacks and the treatment was considered most beneficial not alone in freedom from attacks but in the sense of well being with a change in mental attitude.

Relapses.—The number who had relapses after discontinuing the therapy was twenty-seven, or 22 per cent. The relapses came as a rule three months to two years after stopping the therapy. It is to be emphasized that most relapses were mild and not as severe as the original attacks. Restarting the methyl testosterone resulted in stopping the attacks. The vast majority of the twenty-seven who had relapses stated that the attacks were mild and did not compare with the original severe attacks. The use of acetylsalicylic acid or similar products were effective in controlling the headache.

Failures.—Of the sixty patients, there were eleven complete failures, the therapy having no influence on the migraine attacks. Thus the percentage of complete failures was 18.3.

Familial History of Migraine.—Of the sixty patients, forty-eight had a familial history of migraine, a percentage of 80. Twenty (33 per cent) had more than one member of the immediate family who suffered with migraine.

Familial Height.—It is of some interest that forty-three of the sixty patients (71 per cent) gave a familial history of tallness in the immediate family, that is some member (usually on the male side) was 72 inches (158.4 cm.) or more in height. What is of interest are the number of patients who had a high arched palate. There were 40 or 60 per cent. This will be discussed later.

Unilateral Headaches.—There were forty-nine, or 80 per cent, who had unilateral headaches.

Vomiting with Attacks. — Fifty-four (90 per cent) of the sixty patients had vomiting with the attacks and all were nauseated.

Undesirable Effects.—In using this form of therapy it is important to emphasize some of the undesirable effects that may be encountered. These, which will be given, particularly affect the

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beauty of women and therefore care in the dosage and supervision is necessary. However, with due care and supervision these effects may be avoided and the results obtained justify its use. The patients should be told of the undesirable effects so that the medication will be stopped.

Hirsutism.—Twelve of the sixty patients, or 20 per cent, developed hirsutism. The development of hair involved the cheeks, chin, breast, arms, and legs. This called for interruption of treatment for three to four weeks and then resuming with smaller doses and increased spacing of doses such as one tablet (10 mg.) every three to four days. Seldom did any hirsutism appear before five weeks of treatment. This effect was found more frequently in brunettes than in blondes. As stated in the previous article women who are already hirsute are more apt to develop an increase of hirsutism and caution must be exercised and the dosage must be small and spaced at three to four-day intervals. Women would rather have migraine than hirsutism.

Acne.—Twenty-seven of the sixty patients, or 45 per cent, developed acne of the face and sometimes of the chest as well as elsewhere. Women, of course, do not like this effect. It was encountered usually around the end of the second month of therapy. Women's vanity does not permit them to have acne and migraine is preferred. Discontinuing the therapy for at least a month and resuming at lower dosage level avoids this effect.

Voice Change.—Thirteen, or 21 per cent, developed some deepening of the voice. This effect was usually encountered after three to four months of therapy but was never of serious consequence.

Menstruation.—Twenty-nine, or 48 per cent, developed irregularity of menstruation. This consisted of changing the cycle in that the periods were either earlier than usual or were from a few days late to amenorrhea one to three months' duration. At the beginning of therapy the period may appear as often as twice a month. Interruption of treatment with occasional estrogen-progesterone therapy aided in restoring the cycle.

Weight Change.—Forty, or 66 per cent, had an increase in weight. This ranged from two to ten pounds. In women who are already overweight this is undesirable and therefore it is important to advise patients to follow a reduction diet. The drug has anabolic properties and often produces an increase in appetite.

Nervousness.—Eighteen, or 30 per cent, noted nervousness while on the drug. Discontinuance for a few weeks or lowering the dosage plus small doses of barbiturates such as secobarbital sodium 0.03 overcomes this effect. Some irritability may accompany the nervousness.

Libido.—Twenty-eight or 46.6 per cent noted an increase in libido and among these were some who experienced their first orgasm. No complaints were made concerning this effect.

Comment

It is of course important that the diagnosis of migraine be established with some degree of certainty. As stated in the previous article on migraine,[3] "A review of the literature shows that there is some divergence of opinion as to which and how many of the classical symptoms must be present to validate the diagnosis of migraine. By definition, migraine is a symptom complex occurring periodically and characterized by pain in the head, usually unilateral, and by vertigo, nausea and vomiting, photophobia and scintillating scotomata. Other symptoms associated with migraine are: vasomotor phenomena, such as paleness with vasoconstriction of the surface vessels, followed by perspiration and flushing of the face, polyuria, mental confusion and drowsiness, paresis of a temporary nature, involving one or two extremities, and tinnitus fairly frequently. A gastrointestinal type, in which there is a preponderance of gastrointestinal symptoms and a minimal cephalic phase, also occurs. Individuals with migraine are usually above the average in intelligence, and there is a high incidence among professional people. It is well known, of course, that the incidence of familial history of migraine is universally high." Of the sixty patients all had the majority of migraine symptoms and are considered as having true migraine. The symptoms consisted of unilateral headache, scotomata, vertigo, nausea and vomiting, vasomotor upset, polyuria, sensitiveness to noise, and photophobia.

There were eleven of the sixty patients who received no relief or so little improvement that they are considerd failures. The percentage of 18.3 is certainly not a discouraging one.

The forty-nine relieved of their headaches were

most grateful stating that they had a sense of well being, with increased ambition and energy as well as an improvement of memory. They concentrated better, took an optimistic outlook on life and felt better mentally and physically. Because of these improvements one must curb the enthusiasm so that the patients do not increase the dose or take the drug for too long a time without supervision since it may lead to the side effects previously mentioned.

With experience it is not difficult to regulate the dosage avoiding the masculinizing effects and yet obtain a favorable response.

By spacing the dosage the drug may be given for many months but it is well to interrupt treatment after three months.

The youngest patient was an eleven-year-old girl whose mother had severe migraine for many years and had been completely relieved for three years. This eleven-year-old girl had severe unilateral headaches with vomiting, vertigo, vasomotor symptoms of paleness, followed by flushing and polyuria. She began menstruating at ten and had migraine for six months. She was given 10 mg. daily for a week followed by 10 mg. every other day for three weeks and subsequently every third day for two months. No masculinizing effects were noted. She has had no recurrence for ten months. Of course caution must be used in so young a patient. It may be stated that boys have been treated in a similar manner without harmful effects. These, of course, are not included in this series. In addition, its use in men, given, however, in the form of parenteral injection as testosterone proprionate 50 mg. three times a week for two weeks, then twice a week for six weeks, tapering off to one a week for another four weeks has been equally successful. I have used the combination of estrogen and methyl testosterone but find that the estrogen delays the effect of testosterone. I have also found that better results are to be had by swallowing the regular 10 mg. tablet of methyl testosterone than by the sublingual method of therapy.

Of interest is the fact that 80 per cent of the sixty patients gave a familial history of migraine, there being 20 or 33 per cent who had more than one member of the family who suffered with migraine. A familial history is therefore a helpful clue in the diagnosis of migraine.

Forty, or 60 per cent, of the patients had a high arched palate and this is significant. Some time ago attention was called to the fact that the anterior lobe of the pituitary develops from the roof of the mouth. Because of this embryological development it is believed that the high arched palate indicates that there is a pituitary background in conditions or diseases in which this finding is present. This has been found for instance in epilepsy, retinitis, pigmentosa, arachnodactyly, and, as stated, in migraine.[1,2,4]

Forty-three of the 60 patients, or 71 per cent, gave a familial history of tallness (72 inches, 158.4 cm. or more) in the immediate family. That this might indicate a pituitary background is, of course, a theoretical possibility.

Goiter.—Patients with goiter do not tolerate methyl testosterone for any length of time since the drug raises the metabolism. It can produce nervousness and increases perspiration. For this reason the drug must be given with caution to women with menopausal hot flashes.

Diabetes Mellitus.—Patients with diabetes mellitus usually have a lessened sugar tolerance when methyl testosterone is given over a period of many weeks. The gain in weight is not desirable in diabetics who are usually overweight. However, a trial of 10 mg. daily for a period of 5 to 6 weeks would be worthy of trial and if improvement follows grade the dosage downward.

Summary

Sixty cases of migraine in women treated with methyl testosterone are reported with improvement in forty-nine, or 81.6 per cent. Eleven, or 18.3 per cent were not benefited. There was a high percentage of familial migraine (80 per cent). Seventy-one per cent gave a history of tallness (72 inches, 158.4 cm. or more in height) in the immediate family.

Unilateral headaches were frequent (49, or 80 per cent).

Fifty-four, or 90 per cent, had vomiting with attacks, all were nauseated.

It is to be emphasized that supervision of dosage and treatment is required since methyl testosterone in women can produce certain undesirable effects such as hirsutism, obesity, acne, and voice changes.

In patients with goiter prolonged dosage may produce thyrotoxic symptoms and in diabetics a lessening of carbohydrate tolerance.

It is felt from this study that methyl testosterone

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Surgical Significance of Diarrhea

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IT IS THE purpose of this presentation to discuss diarrhea in the surgical patient on the basis of a personal experience with 346 diarrheic patients (8 per cent) out of a total of 4,349 patients seen in a surgical practice that is 80 per cent concerned with gastrointestinal disturbances.

Anorectal disease constituted an important group (40 per cent) in the total of patients seen.

Diarrhea was given a liberal definition in the selection of cases for this study. Abnormally loose and usually although not necessarily increased frequency of bowel evacuations was the simple interpretation adopted.

The subject is a broad one and divides naturally into two main groups for clinical consideration: (1) Diarrhea in the presurgical patient and (2) Diarrhea following surgical operation.

Diarrhea in the Presurgical Patient

This review has demonstrated quite forcibly the discouraging fact that, as a rule, diarrhea has not been granted the critical preoperative scrutiny that it deserves. As a matter of fact it was not rare to encounter instances of total failure to establish the presence of the symptom. How can one otherwise explain hemorrhoidectomy in the presence of an ulcerating seeping rectal carcinoma; or sclerotherapy for hemorrhoids in the presence of active chronic ulcerative colitis; or three unsuccessful anorectal operations on the same patient in the presence of intestinal amebiasis with demonstrable mucosal lesions, cysts and trophozoites?

These random actual examples are intended to drive home the conviction that failure to elicit a history of diarrhea or casual disregard of the symptom may result in serious or catastrophic consequences.

As has been suggested above the diarrheic patient with a suspected surgical lesion, be it as demanding as an ischioanal abscess or as obscure as carcinoma of the tail of the pancreas, is approched with caution by the surgeon of experience. He will resist the forcing of his surgical hand, not rarely by the referring physician, until the preoperative investigation and preparation for surgery have been completed to his satisfaction.

In the presurgical patient diarrhea is a diagnostic problem the elucidation of which, as for example in intestinal amebiasis, will establish the nonsurgical nature of the disease permitting patient and surgeon alike to avoid possible grave complications.

Anorectal disease of the acutely painful variety is very common as a sequel to any prolonged diarrheal situation. Surgical treatment with the exception of abscess drainage must be withheld while the patient is submitted to systematic study.

A detailed chronological history is indispensable. The physical examination must be complete, including proctosigmoidoscopic and vaginal maneuvers. Bacteriological and serological studies have contributed surprisingly little to the study of the diarrheas, for the most part of chronic character, which were observed by me.

However, on-the-spot microscopic study of smears and droplets taken through the sigmoidoscope has been most rewarding.

Cysts and trophozoites of endameba histolytica have been recognized in the office in material taken from patients who had been told following less direct examination methods that amebic infection was not present. Similarly a purulent cellular structure of the aspirated mucosal exudate is an important confirming observation for the diagnosis of chronic ulcerative colitis or bacillary dysentery.

I feel strongly that this most helpful and insufficiently employed technique should be routinely utilized in the study of the diarrheal diseases. Every proctologist and gastroenterologist should familiarize himself with it. Needless to state, the accuracy of his observations will increase with experience.

At this point in the investigation it is desirable and necessary that we look to the skilled consultant roentgenologist for additional help. The adjective "consultant" has been applied advisedly. He should be supplied with a skeleton history of the case including positive physical findings and the diagnostic impressions of the clinician. The roentgenologist will thereby be best prepared to provide the referring physician with the particular information desired.

Additional laboratory studies such as fractional

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gastric analysis, glucose tolerance tests, oral and intravenous, et cetera, are frequently useful.

In conclusion to this first section, one may fairly state that diarrhea demands a qualitative and quantitative explanation before surgical treatment can be applied. In this way only can the patient be prepared for the surgical procedure that meets the needs of his disease. And only in this way can he be spared the effects of unnecessary or misdirected surgery.

As an example of the usefulness of this method of procedure in selecting diarrheic patients for surgical treatment I wish to describe briefly my experience with curative anorectal surgery in patients with chronic ulcerative colitis. I have selected this single category for further discussion out of the thirty-three divisions into which my 346 cases were classified because the diagnosis of the disease is rarely in error and because anorectal disease complicating ulcerative colitis has been generally regarded as an indication for ileostomy.

From a total of fifty-two cases observed during the past 10 years, thirteen patients were selected for curative elective anorectal surgery after prolonged periods of observation and treatment had indicated the stability of the intestinal lesion and the absence of positive contra-indications to the proposed local procedure. Preoperative preparation, needless to state, was comprehensive and included a course of intestinal antisepsis.

There were no postoperative complications of significance and the patients, without exception, have been outspokenly grateful for the operations.

In addition it has been gratifying to observe no relapses and some instances of unmistakable improvement in the supernatant colitis although, and I want this clearly understood, the operations without exception had the sole objective of relieving an intolerable anorectal situation without insisting that the patient accept ileostomy.

Diarrhea Following Surgical Operations

It is fortunately quite uncommon to encounter diarrhea of severe and unremitting character in a patient who has apparently been convalescing in a satisfactory fashion. Unfortunately, diarrhea is a postsurgical complication that is too often regarded casually unless intractability and rapid and alarming deterioration of the patient become manifest.

Grave postoperative complications heralded by the sudden onset of diarrhea are occurring more frequently than in the past. This is attested to by case reports appearing in a literature that heretofore had scarcely acknowledged their existence.

The European literature, conversely, has long been aware of postsurgical diarrhea of such violent character as to result frequently in death of the patient.

Because this subject is much too extensive for comprehensive treatment in the time available I should like to discuss it briefly according to selected categories as follows:

1. False diarrhea in the presence of fecal impaction
2. Diarrhea after anorectal surgery
3. Diarrhea after abdominal surgery. Including discussions of (a) jejuno-ileac insufficiency; (b) acute postoperative pseudomembraneous enterocolitis, and (c) choleriformic syndrome and staphylococcal enteritis.

1. *False Diarrhea in the Presence of Fecal Impaction.*—A classical example is the aged woman who developed progressive diarrhea following cataract extraction. Because she failed to improve and had indeed deteriorated after the use of paregoric and bismuth I was asked to see her. Digital rectal examination encountered a huge fecal impaction the removal of which provided complete and lasting relief.

Fecal impaction is not routinely accessible to digital diagnosis inasmuch as the lodged bolus may be high in the sigmoid colon, particularly in the elderly with extensive redundancies of this segment. Stoppage may also occur at the flexures or in the transverse colon. In thin atonic people it may be possible to palpate and to manipulate the fecal mass. Scout films of the abdomen are of great value and occasionally will reveal barium that had been administered many days before.

2. *Diarrhea following Anorectal Surgery.*—The twenty-three patients in this group all complained of diarrhea which was in effect a false diarrhea consisting of almost continuous oily formless fecal discharges.

This disturbance almost without exception followed a technically poor or inadequate operation which had healed badly and incompletely. Invariably mineral oil and cathartics had been freely used in an effort to relieve a distressing situation.

Almost without exception such management had made the condition worse.

Many of these disgruntled people responded to local treatment and the institution of a good bowel regimen. Some with gross residual anorectal lesions were submitted to adequate anorectal reoperation.

Two men who had elsewhere received injections with phenol-in-oil for hemorrhoids were seen with severe ulcerogangrenous proctitis. The discharges were mucopurulent and bloody and of course were not diarrheal at all.

Two women who complained of posthemorrhoidectomy diarrhea were actually incontinent and one of these had developed rectal prolapse following extensive surgical damage to her sphincteric mechanism.

3. *Diarrhea after Abdominal Surgery.*—It is obviously impossible to discuss this outstandingly important subject in a few short paragraphs.

Therefore a tabulation of conditions which have been complicated by or productive of or associated with postoperative diarrhea is offered.

1. Gastric dilatation and inhibition ileus.
2. Vagotomy. The mechanism of postvagotomy diarrhea is poorly understood. Crile believes that diarrhea and foul gaseous eructations are not side-effects of vagotomy but symptoms of a poorly constructed gastroenterostomy since retained gastric contents will undergo fermentation. The fact that a gastric drainage operation is needed in association with vagotomy tends to refute this statement.
3. Pancreatitis (postoperative).
4. Gastrointestinal anastomoses complicated by stump gastritis, a technically unsatisfactory stoma or the dumping syndrome. Such gastrogenic diarrheas are not uncommon after partial gastrectomy.
5. Accidental gastroileostomy or gastrocolostomy with exclusion of the small intestine.
6. Gastrojejunocolic fistula.
7. Massive resection or massive exclusion of small intestine for organic disease.
8. Intestinal resection with technically poor anastomoses particularly side-to-side technique leaving redundant blind pouches.
9. Chronic adhesive small intestinal obstruction involving large segments.
10. Acute strangulated closed-loop intestinal obstruction. Scout films of the abdomen are indispensable in recognizing this deadly disease. In the presence of diarrhea the mass is likely to be obscured in the pelvis and may be palpable through the rectum or vagina.
11. Peritonitis, occasionally diffuse, but more commonly localized as one or more loculated deeply seated abscesses. In this day of chemotherapeutic agents, antibiotics, ACTH and cortisone, the complexities of diagnosis and management in such problem cases have been multiplied. Symptoms and signs are subject to remarkable alteration or complete suppression under the influence of these potent agents and patients are in grave danger of being denied surgical treatment at an early and favorable time. Intraperitoneal suppurative collections as the cause of postsurgical diarrhea were encountered four times in the present series. One of these cases, seen in consultation, had multiple abscesses revealed at necropsy.

A. *Jejuno-ileac Insufficiency.*—Jejuno-ileac insufficiency is the term proposed by Bennett and Hardwick for the sprue-like syndrome consisting of steatorrhea, anemia, cachexia and tetany which occurs in cases of malignant or cicatrizing disease of the small intestine, in gastrocolic fistula, in massive resection or exclusion of small bowel and in some cases of tabes mesenterica. Occasionally the disorder is understood only at exploratory laparotomy or at necropsy with the disclosure of unsuspected extensive disease of the small bowel. Deficient absorption is held to be the basic cause of the disorder. It has been observed that the megaloblastic anemia not uncommonly associated with jejuno-ileac insufficiency will not respond to liver extract but will promptly disappear after surgical correction of the intestinal abnormality.

B. *Acute Postoperative Pseudomembranous Enterocolitis.*—The cause of this severe and deadly postoperative complication is not known. It is apparently not a bacterial disease and has been observed to follow operations on the brain and breast as well as after intraperitoneal procedures.

Penner and Bernheim in 1939 reported forty cases of ulcerative enteritis found at necropsy. They felt that the vasomotor disturbances peculiar to the shock-state were responsible.

The association of similar intestinal lesions in terminal uremia has been long recognized.

Recent reports have pointed to aureomycin, terramycin and chloramphenicol as possible causative agents.

Prohaska, Govostis and Taubenhaus described three patients with postoperative pseudomembranous enterocolitis in whom the diagnosis was established during re-exploration for suspected grave intra-abdominal complications. All three patients recovered rapidly after corticotropin therapy. Four

others who did not receive corticotropin were found to have the disease at necropsy.

These authors do not agree with Dixon and Weismann who stressed anti-shock treatment in their series of cases.

Prohaska and associates are intrigued with the concept that the tissue necrosis results from antigen-antibody reaction. They are skeptical concerning the importance of preoperative antibiotics in the development of this disease.

Whenever acute postoperative pseudomembranous enterocolitis is suspected bacterial enteritis should be ruled out and corticotropin (ACTH) promptly administered with probable lifesaving effects.

C. *Choleriformic Syndrome and Staphylococcal Enteritis.*—Poth and others have described a choleriformic syndrome following the oral use of certain wide-spectrum bactericidal antiseptics. He has demonstrated this violent diarrheal disorder to be due to the overgrowth of micrococcus pyogenes on about the third or fourth day when the other organisms are diminished and the natural antagonist of the staphylococci has been removed. A potent enterotoxin produced by the resistant micrococcus pyogenes is the agent responsible for the sequential development of nausea, vomiting, bloody diarrhea, hyperpyrexia and death.

A less violent variation also following the administration of drugs for intestinal antisepsis is felt to be due to suppression of the bacterial flora and the overgrowth with proteus organisms.

Aureomycin and terramycin were found by Poth to favor the development of such diarrheal syndromes and he therefore abandoned them in favor of neomycin. Approximately 10 per cent of patients given neomycin were found to develop persistent overgrowth with aerobacter aerogenes. Therefore sulfathalidine was given in conjunction with neomycin to inhibit this organism. Poth believes this combination of neomycin with sulfathalidine approaches the requirements of an ideal intestinal antiseptic.

The patient who develops staphylococcal enteritis with its potent enterotoxin becomes rapidly and severely sick. Vomiting, profuse watery diarrhea, hyperthermia, hypotension, anuria and uremia ensue.

Because of its resemblance to cholera this clinical status has been described as the "choleriformic syndrome." Unless quickly recognized and treated vigorously the prognosis is grave. This syndrome is a true bacteriologic emergency. Stool cultures on blood-agar plates and direct smears for Gram's stains are urgently necessary. When the syndrome is present the slide will show virtually a pure spread of innumerable Gram-positive cocci. Such findings are sufficient to discontinue the use of terramycin or aureomycin and to institute the use of erythromycin by mouth. If still reversible when this management is started the coliform organisms will rapidly return suppressing micrococcus pyogenes. The mortality remains high.

Needless to state, fluid and electrolyte balance, particularly acid-base and potassium disturbances, must receive meticulous attention in this as in all diarrheal situations.

Summary

Known diarrhea, acute or chronic, intermittent or presumably cured, is a potential hazard of major degree and deserving of meticulous investigation before submitting the patient in question to an elective surgical operation. In the acutely ill patient with diarrhea and in whom a surgical emergency may be felt to exist the precipitate exhibition of surgery may end in disaster.

Evaluation of the patient with due and careful consideration to the duration and intensity of the bowel discharges will permit fluid, protein and electrolyte replacement. The failure to insert a finger into the rectum is indefensible. Sigmoidoscopy is of incalculable value and cannot be replaced with fluoroscopic and/or roentgenographic techniques.

An occasional preoperative diagnosis of a latent diarrheal disease such as subclinical amebic colitis or early ulcerative colitis or asymptomatic polyps or cancer will be the inevitable reward of routine preoperative proctosigmoidoscopy.

Bacteriologic, serologic and sensitivity studies when inaugurated at the earliest possible moment may, by the saving of precious hours or even days, determine the final outcome.

In the postoperative patient, diarrhea is regarded anxiously only when it has failed to respond to symptomatic treatment or has progressively worsened.

Under such uncommon circumstances continuing or intractable diarrhea may well be the manifestation of a serious postoperative complication that threatens the patient's life.

It is obligatory for the surgeon to recognize that postoperative diarrhea of any degree may be ominous and deserving of his personal and devoted vigilance.

The surgeon and his medical consultant are expected to be familiar with the causes of postoperative diarrhea in this era wherein the limitations of excisional and physiologically-destructive surgery have as yet not been defined.

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Measurement of urinary calcium secretion in patients with osteolytic metastases from breast carcinoma provides a sensitive, objective index of the rate of tumor growth.

* * *

Eighty per cent of the highly malignant thyroid carcinomas arise without a history of pre-existing goiter.

* * *

There is no demonstrable relationship between nodular goiter and the relatively common papillary cancer of the thyroid.

* * *

Most thyroid cancers do not originate in adenomas but are cancers from the start.

Some carcinomas of the cecum and ascending colon have as their first, and sometimes only, sign a hyperchronic anemia.

* * *

From the standpoint of mortality, more of the physician's time should be devoted to cancer diagnosis. This time should be expended primarily on those sites offering the greatest return in lives saved for the time and labor involved.

* * *

Cancer detection examinations of the entire adult population are not possible for lack of physicians and lack of public interest.

Sarcoidosis

Case Report and Review

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THE opportunity to study a case of sarcoidosis provides the occasion to review this subject.

Case Report

A twenty-five-year-old Negro farmer was admitted to the hospital because of a "tumor" in the chest. Two weeks previously, during an examination for employment, he first learned that he had a chest lesion. Prior to this time, the patient had considered himself well.

One and a half years before entry, he was discharged from the Army because of a "murmur of the heart." He had worked as a farmer in the South until six weeks prior to admission when he moved to Michigan. His record of past health was otherwise non-contributory, and family histories were not of help.

On examination, the patient was normally developed and moderately well nourished. He did not appear dyspneic. The temperature was 98.6 degrees F., the pulse 74, and the blood pressure 116/80 mm. Hg. The eyes were normal. The chest was clear to auscultation and percussion. A systolic murmur of low intensity was audible over the left second and fourth interspaces close to the sternum. The heart was not enlarged. The abdomen was flat, and the spleen and liver were not palpable. The external genitalia were not remarkable, and the extremities were bilaterally symmetrical and normal. Moderately enlarged, firm, movable lymph nodes were palpable in the inguinal regions. There were several smaller and similar nodes palpable in the supra-clavicular region on the right.

Hematologic examination revealed 12 grams of hemoglobin per 100 cc. There were 4,800,000 erythrocytes; the white cell count was 13,100 with 47 per cent neutrophils, 35 per cent lymphocytes, 5 per cent monocytes, and 10 per cent eosinophils. The Kahn serologic test was negative. The urine was yellow, clear, acid, and of specific gravity 1.012. A trace of albumin was present, and microscopic examination revealed 12-14 leukocytes and occasional erythrocytes per high power field. A Mantoux test with 0.0002 mg. of tuberculin P.P.D. was negative in 48 hours.

A roentgenogram of the chest revealed lobulated masses about 4.5 cm. in diameter extending out from the hilar regions (Fig. 1). The lung fields were otherwise normal. Radiographic examination of the bones of the hands and feet revealed no abnormalities. Contrast study



Fig. 1. X-ray showing pronounced enlargement of hilar lymph nodes.



Fig. 2. Microsection showing discrete sarcoid granulomas with giant cells.

of the gastrointestinal tract revealed the esophagus to be slightly displaced by the mediastinal masses. An electrocardiograph was normal. Biopsy of an inguinal lymph node revealed clusters of discrete granulomas characteristic of sarcoidosis (Fig. 2). In the absence of symptoms, the patient was given no treatment and was discharged from the hospital.

The patient returned to the hospital 11 months later. He had been well until two months before readmission when he experienced several transient febrile episodes and lost 15 pounds from his usual weight of 130 pounds. Physical examination was unchanged except for evidence of weight loss. Lymph nodes were still palpable in the right supraclavicular and in both inguinal regions.

The hemoglobin was 12.5 gm. per 100 cc., and the red cell count was 4,360,000. The white cell count was 8,200 with 51 per cent neutrophils, 24 per cent lymphocytes, 12 per cent monocytes, 11 per cent eosinophils, and 2 per cent basophils. The urine was normal. The serum protein was 9.4 gm. per 100 cc., with serum albumin 4 gm. and serum globulin 5.4 gm.

Chest x-ray uow revealed slight regression and in-

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Fig. 3. X-ray showing regression of hilar lymph nodes and patchy densities throughout both lung fields.

creased radiolucense of the hilar masses observed previously. There were, in addition, small patchy densities scattered throughout both lung fields (Fig. 3).

During the second week of hospital care, there was a daily fever of 101 degrees (F.) in the afternoons. This lasted for one week after which the temperature remained normal. The patient was discharged from the hospital after 25 days.

Review

According to Freiman,[1] Boeck, in 1899, a Norwegian dermatologist, published the first description of the histologic changes that characterize the condition bearing his name. To him, the epithelioid cells were sarcomalike, "sarkoid," and in this way the inappropriate term was first used. Before this time, however, Hunter[2] points out that the description of one case in 1875, and two cases in 1898, were recorded by Hutchinson. Also, Besnier, in 1889, and Tenneson in 1892, described the skin manifestations of sarcoidosis under the term lupus pernio.[1] All of these authors believed this condition to be a localized disease of skin. The concept of sarcoidosis as a systemic disease evolved over the subsequent years, and in 1914, Schaumann correlated the clinical and pathologic features.[3] He emphasized the systemic nature of the condition, and believed that sarcoidosis was a disease primarily of the lymphoid and hematopoietic systems. Additional reports established that almost any organ of the body may be affected. Within recent years, the uveo-parotid fever of Heerfordt has been recognized as a manifestation of sarcoidosis, as have several cases of Mikulicz's syndrome with involvement of the lacrimal glands.

According to Freiman,[1] the literature to 1948 included over 1000 reports of sarcoidosis. The distribution is world-wide, with predilection for the cooler regions including particularly Scandinavia, all countries of Europe, Australia, Japan, Latin America, Canada, and the United States, The incidence is difficult to establish because of the occurrence of asymptomatic cases, the tendency for the lesions to heal, the difficulty in distinguishing sarcoidosis from tuberculosis, and the finding of unsuspected cases at autopsy. However, fluoroscopy of one-half million Swiss Army recruits revealed sixty-seven cases in which the diagnosis was considered established. The incidence in this series was 0.13 per thousand.[1] By 1952, Longcope and Freiman,[3] was able to cite ninety cases from the Johns Hopkins Hospital in Baltimore, and fifty-two cases from the Massachusetts General Hospital in Boston.

Sarcoidosis has occurred in infants as young as three weeks, and in adults as old as 80 years.[1] However, most cases occur between the ages of fifteen and fifty, with a broad peak during the third and fourth decades. Occurrence in more than one member of a family is rare although sarcoidosis of five of seven siblings has been reported. In the United States, the incidence is especially high in the Negro. Of the thirty-five cases reported by Reisner,[4] thirty were in Negroes and five were white. Most reports reveal an equal sex incidence although some disclose a two to one predominance of females. In ninety cases at the Johns Hopkins Hospital,[3] there were forty-eight men and forty-two women, and Reisner[4] reported twenty-four women in his series of thirty-five cases of sarcoidosis.

The histologic changes are constant regardless of the organ involved. These consist of clusters of minute granulomas composed of large epithelioid cells that may or may not be surrounded by a small number of lymphocytes (Fig. 2). Multinucleated giant cells of either the Langhans or foreign body type may be present. Three kinds of inclusion bodies occur in the granulomas. These include radially stellate structures termed asteroids, oval, dense, doubly contoured bodies that many contain calcium or iron, and irregular, minute anisotropic particles that stain poorly and resemble minute spicules of glass or silica.[3] Of these, asteroids are the most frequent. Caseation is not seen in the granulomas and delicate reticulum fibers between the epithelioid cells remain intact. However, fibrinoid necrosis may occur and al-

though uncommon, was found in seven of twenty-two cases reported by Gendel associates[5] and in eight of twenty-six cases reported by Rubin and Pinner.[6] The granulomas remain closely spaced without any tendency to coalesce. Stains for acid-fast bacilli are negative.

These lesions may persist for years or may gradually resorb. In the latter case, fibrous tissue infiltrates each granuloma from the periphery after which hyalinization may take place, leaving a small fibrous or hyaline ball. The granulomas at any site tend to be of the same age throughout.

As any organ may be involved, sarcoidosis is manifested by a wide variety of clinical signs. Common indications of systemic sarcoidosis include weakness, anorexia, loss of weight, joint pains, and low fever. It has been emphasized that extensive organ involvement is often associated with slight clinical manifestations and this disparity is said to be characteristic of sarcoidosis.. Symptoms regress during remissions and disappear with healing.

The lungs and lymph nodes are most frequently affected by sarcoidosis and involvement of one or both of these structures takes place at some time in nearly all cases. According to Gendel,[5] radiographic changes within the chest may be separated into four phases. The first includes enlargement of hilar lymph nodes, usually bilateral and symmetrical, without detectable changes in the lungs. The second reveals, in addition, a fine nodular or strand-like infiltration of the lungs extending from the hilar regions. These infiltrations may enlarge, coalesce, and resemble miliary tuberculosis. The third phase consists of widespread discrete and confluent patchy densities that tend to symmetrically involve the middle and lower portions of both lung fields. The changes thus far may regress or disappear with remission or healing. The fourth phase consists of diffuse interstitial fibrosis with pulmonary emphysema, and this change is permanent. Any phase may be reflected clinically by mild cough and dyspnea. Compression of bronchi by enlarged hilar lymph nodes is said to be rare. Freiman[1] states that superimposed pulmonary tuberculosis is reported in approximately 10 per cent of published cases.

Subcutaneous lymph nodes are frequently involved and are clinically firm, movable, discrete and non-tender. Axillary, cervical, inguinal, and epitrochlear nodes are often so affected and enlargement is usually moderate. The spleen is also commonly the seat of sarcoid granulomas. Gendel[5] states that the spleen was palpated in about one-fourth of reported cases. Isolated splenomegaly due to sarcoidosis that clinically may resemble Banti's syndrome is pointed out by Friedman.[7] He also emphasizes that splenomegaly is the most common physical sign of sarcoidosis on examination of the abdomen.

Sarcoid granulomas occur frequently in the liver and the diagnosis has been made by needle biopsy. However, enlargement is uncommon and tests of liver function are usually normal. Renal involvement is said to occur in about one-fifth of cases in the form of scattered granulomas in small numbers. Function is ordinarily not reduced and massive involvement is rare. The heart may be affected directly by sarcoid granulomas within the myocardium or indirectly in the form of cor pulmonale with right heart failure. The latter is common in advanced cases and is associated with diffuse pulmonary fibrosis.

Gendel[5] reports that the literature indicates bone involvement in from one-tenth to one-fourth of cases. Pain is uncommon, and when present may be associated with local heat and slight swelling. There is slight or absent response to salicylate therapy. Involvement of joints is not emphasized in the literature although Myers and associates[8] points out that migratory polyarthritis and muscle tenderness occur. They demonstrated sarcoid granulomas in skeletal muscle and suggest that random muscle biopsy may serve as an adjunct procedure in establishing the diagnosis. The bones most commonly affected include the digits and toes, occasionally the tarsal and carpal bones, and uncommonly the long bones of the extremities. Radiographic examination reveals circumscribed foci of rarefaction without peripheral reactive change or a diffuse reticulated demineralization. The latter is less common, usually occurs in the long bones, and may be accompanied by thickening of the medulla and thinning of the cortex. The medullary portion is regularly involved and the diagnosis has been established by microsections of sternal marrow.[9]

Sarcoid involvement of the eye is estimated to occur in approximately one-tenth of cases.[5] Clinically there is iritis or iridocyclitis that is usually painless and bilateral. Spontaneously regressing serous inflammation and nodular involvement of more prolonged duration are described. The latter represents a serious manifestation as with regression there may be synechiae, corneal opacities,

or glaucoma. Freiman[1] reports that loss of sight in one or both eyes is not uncommon. Involvement of the posterior uvel tract is said to be rare. Associated enlargement of the parotid, submaxillary, or submental salivary glands was formerly known as Heerfordt's syndrome and is now termed uveoparotid fever. Some cases of Mukulicz's syndrome with involvement of the lacrimal glands are due to sarcoidosis.

Skin lesions of sarcoidosis are said to occur in about half of cases.[5] These are usually non-ulcerated papules or nodules that may be few or numerous with common sites the eyelids, nose, chest, abdomen, and extensor surfaces of the extremities. The lesions may persist for years or regress over a period of months. Healing may take place with formation of an atrophic depigmented scar or with return to normal appearance. Subcutaneous nodules, described by Darier and Roussy, may be visible and are often of peri-articular distribution.[4]

Sites of uncommon involvement include the brain with lethargy, the pituitary or hypothalamus with diabetes insipidus, and the cranial nerves, particularly the seventh, with paresthesia. Involvement of testis, epididymis, prostate, thyroid, stomach, pancreas, breast, small intestine, appendix and colon is also recorded. Involvement of adrenals and serous membranes is uncommon and this is useful in the differentiation from tuberculosis. The incidence of organ involvement in thirty-five cases of sarcoidosis as reported by Reisner[4] is shown in Table I.

TABLE 1. DISTRIBUTION OF ORGAN INVOLVEMENT IN THIRTY-FIVE CASES OF SARCOIDOSIS

Organ	*Cases*
Lymph nodes, peripheral	35
Lymph nodes, intrathoracic	30
Lungs	33
Skin	14
Bone	9
Spleen	8
Eyes	7
Liver	6
Mucous membranes	4
Parotid gland	4
Lacrimal gland	2
Heart	2
Nervous system	2
Serous membranes	2
Breast	2

Laboratory examinations reveal normal erythrocyte counts except for polycythemia associated with pulmonary fibrosis. Leukopenia with slight eosinophilia or monocytosis are common. The sedimentation rate is regularly increased in active cases. The total protein often exceeds 8 grams per 100 cc. and this is due to an increase in globulin. Increased globulin with normal total protein may exist when the albumin fraction is reduced. The blood calcium may be increased in active cases and, according to Freiman[1] a correlation has not been shown with bone lesions as demonstrated by x-rays. An associated reduction in blood phosphorus has not been emphasized.

It is estimated that skin tests with tuberculin antigens in high and low dilutions are negative in about three-fourths of cases of sarcoidosis.[1] Reisner[4] reports that 60 per cent of his thirty-five patients gave negative reactions with tuberculin in doses up to 1.0 mg., and confirms the statement that positive tuberculin reactions are less common in patients with sarcoidosis than in the general population of the same age. Skin tests with histoplasmin, brucellergin, and coccidiodin are also characteristically negative.

According to Nelson,[10] Kveim reported in 1941 that heated sarcoid tissue suspended in saline and injected into the skin of a patient with sarcoidosis was followed by a temporary inflammation, and then by the development of a small indurated papule at the injection site, histologically indistinguishable from the granuloma of sarcoidosis. Several weeks were required for the papule to attain maximum size and the papule tended to remain for several months. Kveim noted that this test was negative in the cases of syphilis, lupus erythematosus, and in normal subjects. Also, the reaction was not duplicated by injection of the Frei antigen or Old Tuberculin into patients with sarcoidosis. From this, Kveim concluded that the reaction was specific. It has since been found that the test is negative in cases of leprosy, Hodgkin's disease, granuloma annulare, tuberculosis, and venereal lymphogranuloma. However, it has also subsequently been shown that injection of leukemic lymph node tissue, killed tubercle bacilli, and normal splenic tissue evoke a positive reaction in patients with sarcoidosis. Thus, the reaction appears to be specific, but the antigenic substance is not limited to sarcoid tissue. Nelson[10] noted that negative reactions in patients with sarcoidosis heralded a clinical remission, and emphasized that prognosis could be evaluated in this way. The test has not been widely used as a diagnostic procedure because of prolonged reaction time, difficulty in standardizing the antigen, and persistance or ulceration of the nodules so developed.

Sarcoidosis is a chronic disease that may last several months to many years and may completely heal or end in death. Of twenty-eight cases reported by Reisner[4] who were followed for an average of five years, nine became asymptomatic and were apparently healed, five remained stationary with active disease, five alternately progressed and regressed, two steadily progressed, and seven died. Of the seven fatalities, five were due to pulmonary tuberculosis. Death is usually due to superimposed pulmonary tuberculosis, or to fibrosis of the lungs with cor pulmonale and right heart failure.

The cause of sarcoidosis is unknown. Tuberculosis has been suspected because of resemblance of the granuloma to the hard tubercle, the experimental production of a sarcoid nodule by injection of killed tubercle bacilli into the skin of a patient with sarcoidosis, and the rare demonstration of acid-fast bacilli in the sarcoid granulomas. However, other agents such as beryllium, the lepra bacillus, and the spirochetes of syphilis also may invoke histologic changes that resemble the hard tubercle. Other substances including tissue of normal spleen and leukemic lymph nodes induce positive Kveim reactions. Finally, the occurrence of tuberculosis in approximately one-tenth of cases of sarcoidosis makes difficult the interpretation that a demonstrated acid-fast bacillus is the cause of sarcoidosis. In addition, such a demonstration has been reported in an exceedingly small number of cases. The evidence in support of tubercle bacilli as the cause of sarcoidosis is not conclusive.

Some of the clinical and pathologic manifestations of sarcoidosis are simulated in part by leprosy, brucellosis, syphilis, and such mycotic infections as aspergillosis, moniliasis, histoplasmosis, and coccidiosis. In sarcoidosis, the lepromin skin test is consistently negative or weakly positive, whereas in leprosy, this skin test is strongly positive in about 90 per cent of cases.[1] Positive serologic reactions in sarcoidosis in excess of the expected incidence in the general population do not occur. Bone changes are not characteristic of brucellosis, and guinea pigs injected with sarcoid tissue remain negative to the brucellergin skin test. Symptomatic histoplasmosis occurs most frequently in children and involvement of salivary glands is not common. Except for rare cases, skin tests for mycotic infections are negative. Teilum[11] has postulated an allergic basis for hyalinization of sarcoid granulomas. If sarcoidosis is of allergic nature as suggested also by eosinophilia and anergy to tuberculin preparations, the allergen has not been identified. The absence of demonstrated bacteria in most cases suggests a viral cause. If this is so, the virus has not been identified. Beryllosis affects particularly the lungs, lymph nodes and skin, and the histologic changes may resemble the sarcoid lesion. However, the clinical illness is often severe, in contrast to the nearly asymptomatic typical case of sarcoidosis. In addition, sarcoidosis antedates the industrial use of beryllium, and history of exposure to beryllium is usually negative. Thus, although several possibilities exist, the cause of sarcoidosis remains obscure.

The efficacy of treatment has been difficult to evaluate because of frequent spontaneous remissions. Many agents have been recommended including gold, arsenic as Fowler's solution, arsphenamine, roentgen rays, calciferol, nitrogen mustards, and urethane.[12] None has found wide favor. Kass, Jackson, and Slavin[12] report one case treated with cortisone and ACTH. There was prompt clearing of the pulmonary lesions as viewed by x-rays, and decrease in size of the subcutaneous lymph nodes. Biopsy disclosed pronounced replacement of sarcoid granulomas within lymph nodes with homogeneous collagen. After discontinuing therapy, pulmonary densities became more prominent and biopsy disclosed a decrease of the collagen substance in the lymph node granulomas. Kass and associates[12] conclude that the adrenocortical hormones are beneficial in controlling inflammation of hypersensitive type caused by antigens of low virulence. Longcope and Freiman[3] cite several reports of patients treated favorably with ACTH and cortisone, and point out that the histologic changes that occur during treatment with hormones of the adrenal cortex are the same as those observed with spontaneous healing of the sarcoid lesion. After treatment with cortisone or ACTH, Lovelock and Stone[13] noted a slightly higher rate of pulmonary clearing in the treated group as compared with the untreated cases. However, in three, all of whom were Negroes, pulmonary tuberculosis developed rapidly after beginning treatment. They emphasized this serious hazard and concluded that the indications for treatment of pulmonary sarcoidosis with cortisone or ACTH are not yet established.

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CONFERENCE ON GERONTOLOGY

(Continued from Page 567)

plished more toward this end than anyone else and only by a personal visit can one be impressed with its value in keeping the residents contented and relatively free of psychosomatic complaints. Experience has shown that when recreational activities are being planned in these homes by interested groups, active participation by the residents is imperative for best results.

At this point, a word should be said about the care of the elderly person who suddenly becomes ill and requires hospital attention. When the acuteness of the illness has passed, transfer to a convalescent geriatric wing of the general hospital would seem to be ideal. This type of unit would permit the rapid institution of rehabilitative measures in a more efficient manner at less cost. Later, transfer to a good nursing home having some direct connection with the hospital could be arranged.

Most of the elderly well people are still living in their own home or their children's home and rightly so. Many of these persons, however, are not happy and would do better if they were living in small housing groups or villages which provide facilities for occupation and recreation. However, most of these people prefer to live in surroundings familiar to them rather than in a home. A center designed to give day care with occupation and recreation would seem to be ideal.

These six recommendations, culled from the many papers given in the conference, form a basis for a concerted effort on the part of the physician to meet the problems of gerontology and medicine's responsibility to older people.

Giving with a Purpose

As my thoughts are recorded at this season, they keep revolving about the concept of charity. The two leading faiths in American society, Christianity and Judaism, stress charity as a basic requisite in our way of life. At this rebirth of spring, we renew our vows for better living.

Some of us may feel that the contribution to organized charities, given in a one-package pledge, has made too remote the personal satisfaction of giving for a worthy cause.

To any so minded, I suggest gifts to a cause that is peculiarly appealing to the medical profession, with no suspicion of mismanagement or unwarranted overhead. Doctors may direct their charity to an educational effort, at once of benefit to society and to members of our own profession.

I refer to the American Medical Educational Fund, and to the Michigan Foundation for Medical and Health Education, Inc. By giving to the first of these, you may direct your contribution to the school of your choice, in or out of Michigan. Your gift, in this case, serves to promote research and teaching facilities in the medical school of your interest. It seems most logical that physicians, who have been the recipients of the great opportunities for their medical education, take an active part in promoting and expanding these facilities to oncoming students of medicine.

To bring this appeal closer at hand, the Michigan Foundation provides, among its other efforts in spreading education and better medical care to the people of Michigan, the establishment of a fund to assist worthy medical students to complete their education.

Here we have a very tangible opportunity to make the path easier for our current and future embryo doctors. The funds now available are not adequate to meet the demands. One of our councillors has offered a timely suggestion—namely, make a gift on your birthday each year to the Michigan Foundation, 300 W. Ottawa, Lansing, Michigan. Even though the individual donation be not large, the sum total from Michigan physicians would create a substantial fund.

In estimating your charity budget for 1955 and future years, I invite your attention to these two fine opportunities for doctors to contribute to the future of medicine.

Robert H. Baker

President, Michigan State Medical Society

President's Message



Editorial

MEDICINE'S RESPONSIBILITY TO OLDER PEOPLE

THE UNIVERSITY of Michigan, Institute of Industrial Health, has been particularly interested in the problem of the older industrial worker. The measurement of ability, from a medical point of view, to carry on an accustomed livelihood or the necessity for a change of job for health reasons has posed the question to which no ready-made answers are available. The increasing trend to force retirement at a chronological age has brought into sharp focus the need for medical criteria to serve as guides to the individual worker. In the hands of a physician, these guides may be used for counseling and to provide earlier voluntary retirement for health reasons or for the proper placement after forced retirement, for age reasons alone into new and gainful occupation.

The Institute of Industrial Health turned to other University resources and to the State Medical Society and found much interest in the broad field of gerontology. From this beginning, a Gerontology Conference for Physicians sponsored jointly by the Michigan State Medical Society and the University of Michigan set itself three objectives: To outline medicine's responsibility to older people; to acquaint the practitioner with community projects in gerontology in order to show his role in these efforts; and to review medical and other current knowledge in gerontology.

The conference emphasized to the participants, most of whom were physicians representing their local County Medical Society Geriatric Committee, that medicine had a responsibility to the community to give medical leadership and guidance to citizen group projects in gerontology. More and more people survive each year to be classed as oldsters. Medicine is challenged to prevent and treat the many illnesses which make life so miserable for our older people. In addition to the physical infirmities of oldsters are added the social, spiritual and psychological problems.

The over-all care of the individual patient rests, as always, in the hands of the practitioner. When the patient is an oldster, treatment for the specific patient may well require in addition to medical treatment, home care and proper housing, rehabilitation and special health services, recreation, companionship and spiritual comfort in order to achieve the therapeutic goal desired.

Included in this issue of THE JOURNAL are a few papers selected from the conference to represent the several phases of the physician's role in gerontology. Dr. Sellers, in "Geriatrics and the General Practitioner," points clearly to medicine's responsibility to both the fit and to the disabled person in the later years of life. The clinical problems associated with aging are many and the paper dealing with "The Circulation" by Dr. Barker represents one clinical area of special interest. An approach to preventive geriatrics is represented by Dr. Reveno in his manuscript "Periodic Health Appraisal." Where and how the physician can contribute to community gerontology projects is brought out by Dr. Getting. Similarly, Dr. Price summarizes the salient recommendations for the medical profession as gathered from several conference speakers. The attested success of the conference was achieved through the co-operative efforts of the planning committee, the State Medical Society and the University divisions concerned.

The conference program from which these papers were chosen follows in full. Publication of the other conference manuscripts is in preparation as a complete unit.

GERONTOLOGY—MEDICINE'S RESPONSIBILITY TO OLDER PEOPLE

January 13, 14, 15, 1955
University of Michigan—Ann Arbor

Sponsors: Michigan State Medical Society and University of Michigan (Institute of Industrial Health, Division of Gerontology, Medical School; School of Public Health, Postgraduate Medicine).

Planning Committee: Michigan State Medical Society—S. C. Wiersma, M.D. (Co-Chairman), A. Hazen Price, M.D., and F. C. Swartz, M.D.; University of Michigan—O. T. Mallery, Jr., M.D. (Co-Chairman), L. Fred Bissell, M.D., Wilma T. Donahue, Ph.D., and Vlado A. Getting, M.D.

Conference Management: University of Michigan, Institute of Industrial Health. For information about publications write: Marian N. Mallery, Supervisor, Health Information, Institute of Industrial Health, 1630 University Hospital, Ann Arbor, Michigan.

Medicine's Responsibility to Older People

Presiding: O. T. Mallery, Jr., M.D., Ann Arbor
Conference Purposes—Greetings—Robert H. Baker, M.D., Pontiac
Geriatrics and the General Practitioner—Charles W. Sellers, M.D., Detroit
Longevity: Facts and Causes—Louis Dublin, Ph.D., New York, N. Y.
Medicine's Responsibility to Older People—F. C. Swartz, M.D., Lansing

What Is Aging?

Presiding: S. C. Wiersma, M.D., Muskegon
Physiological Aspects—Nathan W. Shock, Ph.D., Baltimore, Md.
Psychological Problems—Wilma T. Donahue, Ph.D., Ann Arbor
Social Aspects—Ernest W. Burgess, Ph.D., Chicago, Ill.
Spiritual Aspects—Duncan E. Littlefair, D.D., Grand Rapids
Joint Meeting with Washtenaw County Medical Society —Gerontology Program

Clinical Problems Associated with Aging

Presiding: L. Fred Bissell, M.D., Ann Arbor
The Circulation—Paul S. Barker, M.D., Ann Arbor
Surgery—Frederick A. Coller, M.D., Ann Arbor
Psychiatric—Jack Weinberg, M.D., Chicago, Ill.

Preventive Geriatrics

Presiding: F. C. Swartz, M.D., Lansing
Industrial Medicine—Retirement—Charles E. Dutchess, M.D., New York, N. Y.
Periodic Health Appraisal—William S. Reveno, M.D., Detroit
Geriatric Nutrition—J. M. Orten, Ph.D., Detroit
Health Education and Accident Prevention—Robert J. Anderson, M.D., Washington, D. C.
Rehabilitation Services—Murray B. Ferderber, M.D., Pittsburgh, Pa.
Dinner—Remarks by A. C. Furstenberg, M.D.

The Physician's Role in the Community: A Panel

Presiding: A. Hazen Price, M.D., Detroit
Panel Participants:
Health Programs—Vlado A. Getting, M.D., Ann Arbor
Hospital and Nursing Homes and Other Units—F. C. Swartz, M.D., Lansing
Counseling and Social Services—Eleanor G. Cranefield, Ann Arbor
Community Programs for Retired Workers—Willard E. Solenberger, Detroit
Recreation and Work Opportunities—Ira I. Sonnenblick, Detroit
Living Arrangements—Wilma T. Donahue, Ph.D., Ann Arbor
Summary of Conference—A. Hazen Price, Detroit

OTTO TODD MALLERY, JR., M.D.

CRIME AND PUNISHMENT

IN OUR editorials for March, 1955, we cited the decision of the Supreme Court of the State of Michigan (Albert vs. Grand View Hospital) which opined that only the State Board of Registration in Medicine has any right legally given to curtail or limit the practice of medicine in the state of Michigan and certain of its hospitals. There is now an action before Allegan County Circuit Court seeking to extend that ruling to cover other hospitals and by implication removing all voluntary supervision and limitations of medical practice. If this case is lost, as was the one in Iron County, we must look to the State Board of Registration in Medicine, and experience has not been too encouraging.

Recently, two doctors of medicine in the city of Detroit were found red handed, and convicted of conspiracy to abet an abortion. To the minds of some of us, that is a reprehensible offense. What was the action of our public authorities? These men were given the absolute minimum of punishment by the Court. Their licenses to practice were not revoked or even suspended. There have been several convictions of income tax evasion, with prison sentences, and little or no suspension of the license to practice medicine. There have also been several convictions of supplying narcotics, and the licenses suspended for a time.

Are our doctors and our lawyer friends satisfied with this dispensation of justice, or the carrying out of legal and moral responsibilities? For the last half century of medical practice, there has been built a very certain and profound regard for the ideals of the profession. Are these ideals to be case into limbo because our established "authorities" are not completely in accord? Are abortionists to be accepted as "OK"? The Detroit men were promptly suspended from membership in Wayne County Medical Society, but if allowed to practice there or elsewhere how long before they will make new applications and rejoin our medical society?

According to the Michigan Supreme Court (Albert vs. Grand View Hospital), these criminals, still holding licenses from the Michigan State Board of Registration in Medicine, may practice in a certain group of hospitals, and may be restrained only by the licensing Board. There is no way to prevent repetition of their practice—abortion or narcotic offenses. If the Court should be of the same mind in the case of Kopprasch vs. Allegan Community Hospital et al (including the Michigan State Medical Society), we would be dependent entirely upon a Board which has not in the past given much protection.

If such an outcome should arise, and God forbid, we shall be faced with a study of the whole medical practice law in Michigan, and the other states too. We have ideals to which to aspire. We are facing a time of trial, but we, the profession,

have met the test before and will again. Some teeth might be drawn, for the better good of the whole people. We said in March that the medical situation in Michigan might become intolerable to the mass of our people. WE are fighting now, but the general public may become involved if certain trends are not changed.

NATIONAL LEGISLATION

FOR a great many years, the American Medical Association has had the reputation of being against medical legislation. We fear that same appellation may be ours again as we scan the many bills that are now under consideration in the National Congress in Washington. We have read many of them, and we see proposals we do not want and many which need some little change to make them acceptable or even actively sponsorable.

There are many bills which we can endorse and freely support, some of which we in THE JOURNAL have talked about for many years: H.R. 9 (Jenkins) and H.R. 10 (Keogh) are very satisfactory bills providing tax deferment or postponement for self-employed professional persons in order to provide retirement funds while earning power is greatest. There are nine other such bills in the House. H.R. 3112 (Fogarty) authorizes the federal government, upon request, to withhold payments of premiums for health insurance. At present, the federal government does not allow withholding for any purpose except its own, else Michigan Medical Service years ago would have insured many groups of post office workers. This provision was presented at our personal suggestion in S. 2143, a bill introduced by Senator Taft in the Senate, May 3, 1946, at the suggestion and with the active support of the Conference of Presidents and other Officers of the State Medical Societies, and had the blessing of our own Senator Vandenberg.

S. J. Res. 1 (Bricker) and nine House joint resolutions propose a Constitutional Amendment limiting the domestic effect of treaties and international agreements such as Yalta, just released. The Yalta secret agreement has proved the viciousness of such acts. It undoubtedly was responsible for the Korean War. We have no fear about President Eisenhower, but he has some high ranking advisors, and in years to come will have a successor. We must be prepared. Treaties and international agreements must not affect our domestic rights or economy except by specific action of the elected Congress.

S. 886 (Smith, N. J., et al), H.R. 3458 (Priest) and H.R. 3720 (Wolverton) are the administration's omnibus health bills. Title VI grants aid to states for mental health programs and is completely satisfactory. Title V replaces the present public health service categorical grants with three new broad type grants. Some amendments are necessary. Title IV could be made good. It provides a training program for professional nurses and other professional health personnel, including physicians. This should be limited to nurses.

H.R. 1620 (Teague) liberalizes the furnishing of medical and hospital care to retired veterans. It is a good bill because it will benefit veterans with service-connected disabilities. There are several bills permitting deductions for premiums paid for annuity, life insurance, medical expenses with three-year carry-over if over the maximum allowable, and one by Wolverton permitting deductions on health insurance premiums without regard to the present 3 per cent limit. (H.R. 402)

S. 1323 (Hill et al), with some amending to make it safe, would provide federal aid to medical education, a five-year plan of construction, expansion and maintenance of medical schools. Half of the Council should be selected from the field of medicine. There are five other bills providing aids in medical education, military, medical, and dental scholarships. Some of these bills, with slight modification, would be acceptable.

There are two joint resolutions, S. 46 (Hill) and H.R. 230 (Priest), providing mental health studies for 1955. There are four Senate bills and one in the House on this same mental health subject which could tie in with the President's Title VI mentioned above. There are several bills on the subject of air pollution which deserve our support: S. 928 (Kuchel et al), H.R. 833 (Ray) and H.R. 2129 (Frelinghuysen).

The medical profession is opposed to Title I of the Administration omnibus bills by Smith, Priest and Wolverton, because we think it is not needed and would not give the relief promised. Title II is also opposed, because we see an extension of a type of medical practice which we do not like, contract practice by salaried physicians, and a chance to build throughout the country, at government expense, medical clinics of the Kaiser variety.

Michigan's Congressman Dingell of historic Wagner-Murray-Dingell compulsory health bills (H.R. 95), would give us a national health bill providing seven types of federal aid in the health field. Take a bite here and a bite there, and after a while you have eaten the whole apple. We oppose.

There are two bills, H.R. 481 (Scott) and S. 434 (Ives et al), providing federal aid for voluntary health plans, medical education, and health facilities. The voluntary health plans are doing too well for the bureaucratic do-gooders' peace of mind. They want to get in. A subsidy is just what we do not want. Neither do we want a subsidy to medical education or health facilities unless the Congress will pass an act such as suggested previously renouncing the implication of subsidy in the decision of the Supreme Court.

There are nine bills which provide medical care and aid to dependents of members of the armed forces, all of which merely increase the number of persons coming under federal medical care. Two bills would commission osteopaths, and one would extend the doctor's draft. We do not need either. Many bills establish presumption of service connection for certain periods of time following discharge from active duty; one would establish emergency care for veterans of the Spanish War. This would cover every veteran of that war. One bill proposes a building program to provide 16,000 additional veterans' hospital beds. Are they necessary?

AGING—APPLYING TODAY'S KNOWLEDGE TODAY

The University of Michigan Eighth Annual Conference on Aging

Ann Arbor, Michigan, June 27-30

AGING—APPLYING TODAY'S KNOWLEDGE TODAY is being offered under the joint *sponsorship* of the U. S. Departments of Labor, and of Health, Education, and Welfare; U. S. Civil Service Commission; Housing and Home Finance Agency; Council of State Governments; United Auto Workers-Congress of Industrial Organizations; Michigan State Departments of Health, Mental Health, Employment Security, Social Welfare, Agriculture, and Public Instruction; and the Michigan State Medical Society.

The *Conference Program* will consist of General Sessions and Workshops which will offer leaders, experienced workers, and newcomers to the field an opportunity to study the application of present-day knowledge to the solutions of problems of older people in the fields of employment, housing, community organization, health, religion, education, use of leisure time, legislative action, and advanced planning.

The following *workshops* will be offered:

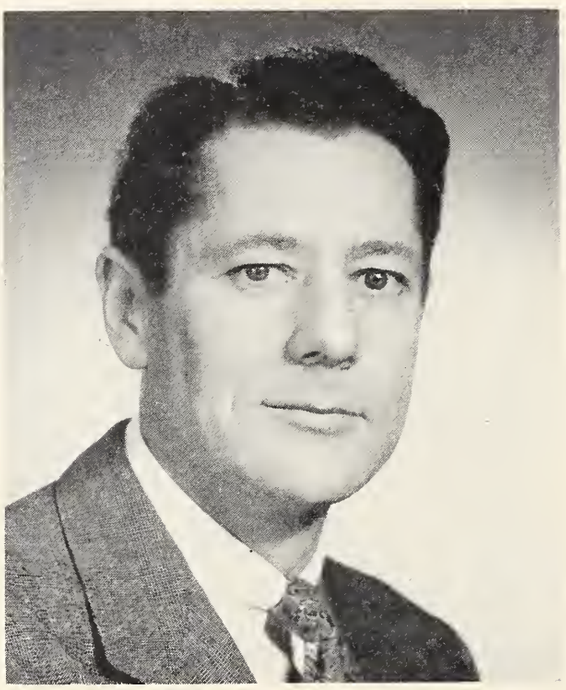
1. Techniques for Counseling and Placing Older Workers
2. Developing Employment Opportunities for Older People
3. Selection, Utilization, and Retirement of Older Workers
4. PREPARATION FOR RETIREMENT
5. Planning and Financing Sheltered Workshops for Older People
6. Vocational Education and Retraining for Older People
7. GETTING MEDICAL CARE SERVICES AND FACILITIES FOR OLDER PEOPLE
8. APPLICATIONS OF REHABILITATION TO THE NEEDS OF THE AGING
9. HEALTH MAINTENANCE IN LATER MATURITY
10. Designing and Financing Housing for Older People
11. Planning and Operating an Old People's Home
12. WHAT A COMMUNITY COMMITTEE ON AGING CAN AND SHOULD DO
13. Budget Building for Older People
14. Exploring the Needs of Older People in Small Towns and on the Farm
15. How to Make a Community Survey on the Needs of Older People
16. Activity Center and Recreation Programs for Older People
17. Education and Library Programs for Older People
18. What Volunteers, Clubs, and Organizations Can Do for the Aging
19. Planning Church Programs for Older People
20. What State and Legislative Committees on Aging Can Do
21. PLANNING FOR THE MENTAL HEALTH OF THE AGING
22. How to Be an Older Person

For further information write: Division of Gerontology, 1510 Rackham Building, Ann Arbor, Michigan.

Theodore G. Klumpp, M.D.

Able Spokesman of a Great Industry

When it came to selecting a spokesman at the 1955 Michigan Clinical Institute to symbolize the teamwork among the pharmaceutical profession, the drug manufacturing industry, and the medical profession in promoting medical progress, the search did not have to go very far. Theodore G. Klumpp, M.D., of New York, was quickly nominated by the leaders of both the American Drug Manufacturers Association and of the American Pharmaceutical Manufacturers Association.



As President of Winthrop-Stearns, Inc., Dr. Klumpp heads one of the larger pharmaceutical houses, but his activities beyond his business position made him a marked man. In his introduction of Dr. Klumpp at the MCI Testimonial Banquet, Lawrence Reynolds M.D., of Detroit, toastmaster, epitomized the guest in these words:

"He is a rare combination of businessman and scientist, but nevertheless looks well in tennis shorts.

"Like Winston Churchill, he is incapable of approaching any enterprise at half-throttle. He moves directly to the core of a problem but does so without apparent exertion. He wears his honors with the modesty of a scientist, conducts himself with the dignity of a diplomat, works with the precision and efficiency of a top executive, and lives with the grace of the gentleman he truly is."

Since September, 1954, Dr. Klumpp has ably served as Chairman of the Medical Services Task Force for the Hoover Commission, which is continuing its study of federal government operations. This task force recently submitted a report to Congress which went right to the heart of the many problems connected with federal government operations in the fields of health and medicine.

Dr. Klumpp is also Vice President of the United States Pharmacopoeia and a former President of the American Pharmaceutical Manufacturers Association. In earlier days, he served as Secretary of The Council on Pharmacy and Chemistry of the AMA, and as Assistant Clinical Professor at Yale University Medical School. He performed great service as a member of the Task Force on the Handicapped of the Office of Defense Mobilization.

Climax of Dr. Klumpp's activities as official representative of the pharmaceutical profession and the drug manufacturing industry of the nation at the Michigan Clinical Institute came when he was presented with a scroll from the Michigan State Medical Society. This token, tendered by Robert H. Baker, M.D., of Pontiac, MSMS President, summarized the feeling of the Michigan medical profession towards pharmacies and pharmaceutical manufacturers in these words:

"In deep appreciation and grateful recognition of distinguished service rendered to the peoples of the world through scientific research, modern production and distribution of livesaving drugs and education of the public in the great advances of medicine."

And to those who know and have worked with him, Dr. Klumpp characterizes to the greatest degree these ideals and achievements of the pharmaceutical profession and manufacturing industry.

Dr. Klumpp's paper on "The Pharmaceutical Manufacturers' Interest in the Practice of Medicine" will appear in a later issue of THE JOURNAL.

1955 MCI Teems With New Ideas

Dramatic presentation of the newest developments in medicine and surgery available to the doctor of medicine in his daily practice—based on the theme "What's New, Doctor, That You Can Use?"—attracted a record-breaking number of registrants to the Ninth Annual Michigan Clinical Institute in Detroit, March 9, 10, and 11. Attendance totaled 2,980.

Teamwork among the pharmaceutical profession, the pharmaceutical manufacturing industry, and the medical profession in the rapid progress of Medicine during the past twenty years was given special emphasis.

A total of forty-four guest lecturers, half of them from medical centers in other states, appeared on the crowded MCI schedule, presenting the latest information in almost every area of medicine and surgery. For the second year, the program included a daily color telecast which brought actual surgery and clinical demonstrations to a huge screen in the assembly hall.

This year the color telecasts, sponsored by Smith, Kline & French Laboratories, originated in Receiving Hospital. The series was climaxed on the final day by a closeup view of delicate heart surgery which held a capacity audience forty minutes beyond the scheduled adjournment time. The operation was a part of the Sixth Annual "Heart Day" program presented by the Michigan Heart Association.

The Sheraton-Cadillac Hotel once again was the scene for the MCI, its excellent technical exhibit, and all related meetings and special events. Louis J. Hirschman, M.D., of Traverse City, was General Chairman.

Many New Highlights

There were more outstanding sidelights and non-medical highlights at the 1955 MCI than in any previous year. Special tribute was paid at various events to a number of distinguished M.D.s and friends of medicine.

Ducan J. McColl, M.D., of Port Huron, eighty-six-year-old general practitioner who started his medical career in 1893, was presented with the annual award as "Michigan's Foremost Family Physician" in ceremonies on the opening day.

At a special testimonial banquet March 10, held in conjunction with the MCI, some 500 Michigan M.D.s and their guests thronged the Grand Ballroom to honor seven of their colleagues who currently head up national medical organizations, and to pay tribute to four other men who have contributed to medical education, research, and progress.

The seven presidents of national organizations receiving honors were: Arthur C. Curtis, M.D., Ann Arbor, American Academy of Dermatology and Syphilology; Lynn A. Ferguson, M.D., Grand Rapids, American College of Gastroenterology; William A. Hudson, M.D., Detroit, American College of Chest Physicians; A. C. Kerlikowske, M.D., Ann Arbor, American College of Hospital Administrators; H. Marvin Pollard, M.D., Ann Arbor, American Gastroscopic Society; Albert D. Ruedemann, M.D., Detroit, American Society of Ophthalmologic Allergy, and Cyrus C. Sturgis, M.D., American College of Physicians.

TV Program Honored

Douglas Donald, M.D., Detroit, was chairman of the testimonial banquet committee. Lawrence Reynolds, M.D., of Detroit, was toastmaster.

The principal address was presented by Leland I. Doan, of Midland, President of Dow Chemical Company. He received a special award from MSMS honoring his company for leadership in

(Continued on Page 601)

UPWARD SURGE CONTINUES

Another attendance record was set at the Ninth Annual Michigan Clinical Institute in Detroit, March 9-10-11. New registration marks were set in every category, to increase total attendance at the 1955 MCI by 477 over the record set last year. Attendance has shown an upward trend in eight out of the nine years, and registrations this year were 131 per cent greater than in 1947, when the MCI was inaugurated.

Here are the final figures for 1955:

Doctors of Medicine	1,786
Guests	414
Exhibitors	373
Nurses	407
Grand Total	2,980



"ELDER STATESMEN," in terms of wisdom and service but not in age, gathered during the MCI to form a new organization of former MSMS presidents, which will serve in an advisory capacity. Twelve of twenty-one living past presidents were present. *Seated (left to right):* Grover C. Penberthy, M.D., Detroit, 1935; Robert L. Novy, M.D., President-for-a-Day, 1952; Otto O. Beck, M.D., Birmingham, 1951; W. E. Barstow, M.D., St. Louis, 1949; Louis J. Hirschman, M.D., Traverse City, 1928; Henry A. Luce, M.D., Detroit, 1938; R. J. Hubbell, M.D., Kalamazoo, 1952; J. D. Brook, M.D., Grandville, 1929. *Standing:* L. Fernald Foster, M.D., Bay City, President-for-a-Day, 1954; L. W. Hull, M.D., Detroit, 1953; E. F. Sladek, Traverse City, 1948; Henry Cook, M.D., Flint, 1937.





FROM BELGIUM directly to Detroit came Joseph P. Hoet, M.D. *(left),* University of Louvain professor, for a special luncheon sponsored by three specialty groups. He was greeted by Louis J. Hirschman, M.D., MCI General Chairman, and Richard M. McKean, M.D., Detroit *(right),* luncheon committee chairman.

AWARD FOR EXCELLENCE in Medical Reporting, periodic MSMS honor, was presented to *The Detroit News* at a dinner on the eve of the MCI. Warren S. Booth *(left),* publisher of *The News,* accepted the traditional scroll from W. S. Jones, M.D., Menominee, MSMS President-elect.



PRINCIPAL SPEAKER at the testimonial banquet was Leland I. Doan, of Midland *(left)*, President of Dow Chemical Company, who was honored for his company's contribution to scientific research and public understanding of Medicine. Douglas Donald, M.D., Detroit *(center)*, banquet committee chairman, and Robert H. Baker, M.D., MSMS President, acted as hosts.



SEVEN PRESIDENTS of national medical organizations who are members of MSMS were paid special tribute at a testimonial banquet held concurrently with the MCI. Chatting in an anteroom before the dinner started are *(left to right):* William A. Hudson, M.D., Detroit; H. Marvin Pollard, M.D., Ann Arbor; Albert D. Ruedemann, M.D., Detroit; Arthur C. Curtis, M.D., Ann Arbor; Lynn A. Ferguson, M.D., Grand Rapids, and Cyrus C. Sturgis, M.D., Ann Arbor. Unable to attend was A. C. Kerlikowske, M.D., Ann Arbor. (See text of story for organization names.)

SERVICE AWARD for twenty-seven years as Member and Secretary of the State Board of Registration in Medicine was presented to J. Earl McIntyre, M.D., Lansing *(right)*, by MSMS. Albert C. Furstenberg, M.D., Ann Arbor, was appointed to do the honors.





RECENT GAINS in the long fight against cancer were outlined to volunteer workers at the luncheon by Frederick A. Coller, M.D., Ann Arbor *(right)*, before he presented a scientific lecture to the MCI assembly. Dr. Coller and Dr. Brunschwig both received scrolls from C. Allen Payne, M.D., Grand Rapids *(left)*, Chairman of the Michigan Cancer Co-ordinating Committee.



CANCER SOCIETY volunteers heard of the important role they have played in public education when Alexander Brunschwig, M.D., of New York, spoke to a luncheon gathering.





THREE ORGANIZATIONS teamed up to surprise George J. Curry, M.D., of Flint, with a special award honoring him for his voluntary postgraduate training in trauma and orthopedic surgery over many years to residents and interns at Flint hospitals. Parties to the surprise were *(left to right):* L. R. Martin, M.D., Detroit, Michigan Industrial Medical Association; Dr. Curry; MSMS President Robert H. Baker, M.D., and V. C. Abbott, M.D., Michigan Regional Committee on Trauma, American College of Surgeons.

THREE HEADS are better than one when it comes to aiding news coverage of the MCI. This candid press room shot shows Claude L. Weston, M.D., Owosso, Press Relations Committee Chairman; MSMS Secretary L. Fernald Foster, M.D., and Louis J. Hirschman, M.D., MCI General Chairman, in deep discussion.

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scientific research and for promoting understanding of today's doctor of medicine through sponsorship of the prize-winning television show, "Medic."

Theodore G. Klumpp, M.D., of New York, President of Winthrop-Stearns, Inc., was presented with a scroll symbolizing the partnership of the pharmacist, drug manufacturer and M.D. in hastening medical progress. Dr. Klumpp was selected by the pharmaceutical industry as spokesman for the occasion. (See related stories elsewhere in this issue.)

Others receiving special recognition were Roland S. Sykes, D.D.S., of Muir, who endowed a series of seven annual cancer lectures at previous MCIs, and J. Earl McIntyre, M.D., of Lansing, who is completing twenty-seven years of service on the State Board of Registration in Medicine, the last twenty-two as Secretary.

A testimonial luncheon on the first day of the MCI gave Michigan volunteers in the fight to conquer cancer an opportunity to hear two nationally-recognized authorities, Frederick A. Coller, M.D., of Ann Arbor, and Alexander Brunschwig, M.D., of New York, report on recent developments in the battle. Later the two presented scientific lectures to an all-M.D. audience. The highly successful luncheon was co-sponsored by the two Michigan divisions of the American Cancer Society and the Michigan Cancer Co-ordinating Committee. Edward T. Tuescher, of Detroit, was chairman of arrangements.

Lecturer from Belgium

Another luncheon meeting of outstanding importance was held March 11 under the three-way sponsorship of the Michigan Diabetes Association, Michigan Society of Obstetricians and Gynecologists, and the Detroit Pediatric Society. Joseph P. Hoet, M.D., Professor of Internal Medicine at the University of Louvain, Belgium, internationally known for his research in diabetes, chose this meeting for his first appearance in a current visit to the United States.

One of the most important events related to the MCI was the Annual Conference for Residents, Interns, and Senior Medical Students on March 9, which was attended by 138 registrants. Featured was a series of skits by interns and residents, based on socio-economic problems faced by young M.D.s, which served as a foundation for discussion.

A two-day conference for Operating Room Nurses, held concurrently with the MCI, drew 407 participants.

Of unusual interest was a luncheon meeting on March 10 at which twelve of the twenty-one living ex-presidents of MSMS gathered to form a new organization of "elder statesmen" which is expected to play an important advisory role in future affairs of MSMS.

The superior program presented at the 1955 MCI attracted news interest unsurpassed in previous years. On-the-spot coverage by Detroit daily newspapers and press service representatives writing for newspapers and radio and television stations throughout the state reached a peak this year. A five-man Press Relations Committee, aided by the Public Relations staff, helped newsmen cover the events and speakers during the busy three-day session. Serving on the committee were C. L. Weston, M.D., Owosso, Chairman; H. F. Dibble, M.D., Detroit; A. B. Gwinn, M.D., Hastings; R. A. Johnson, M.D., Detroit, and R. W. Shook, M.D., Kalamazoo.

METHYL TESTOSTERONE

(Continued from Page 579)

is worthy of trial in migraine of women, albeit one that requires proper supervision in order to avoid undesirable cosmetic effects.

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Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

TB AND VD CASE FINDING AMONG MIGRANT LABORERS

Plans for the special summer project in TB and VD casefinding among migrant laborers in the Saginaw Valley area are going forward. It is estimated that mobile trailers moving from farm to farm will give chest x-rays and blood tests for syphilis to some 6,000 workers above age fourteen in the six weeks that the program is to be in operation. Males will be examined for gonorrhea also.

Seven counties, Bay, Huron, Isabella, Midland, Saginaw, Sanilac and Tuscola are included in the program. Following approval by the Venereal Disease Control Committee of MSMS, the program was submitted for discussion to the County Medical societies involved.

Previous work in tuberculosis control among seasonal workers in the Saginaw Valley area has shown the incidence rate of both tuberculosis and syphilis to be many times higher among them than among the residents of Saginaw County.

HOME CARE OF CHRONIC DISEASE PATIENTS

A pilot study is under way in Sanilac County to determine whether specialized home nursing services for persons with chronic diseases are needed in Michigan's rural areas.

For a three months' period, a public health nurse will visit the homes of chronic disease patients referred by physicians of the county. She will not only teach members of the family to give the nursing care required, but also help both patient and family to adjust to the many physical, emotional and economic problems involved in chronic illness.

CARDIAC PROGRAM IN MENOMINEE COUNTY

Cardiac cases from two sources are being studied in a special clinic program now being carried on in Menominee County. In two centers in the county, Menominee City and Daggett, two cardiologists selected by the Michigan Heart Association are holding clinics for patients referred by physicians and for persons found to have a chest abnormality by the community chest x-ray survey.

One of the cardiologists works with children and the other with adults. An honorarium and travel expenses are paid by the Michigan Department of Health.

VALUE OF SPECIAL FOLLOW-UP OF CHEST X-RAY SCREENING

An addition to the usual follow-up of mobile chest x-ray screening is being tried out in Shiawassee County, in an attempt to evaluate the potential diagnostic value of certain data furnished by the x-rays.

Related records of all persons showing suspect heart abnormalities or indications of lung cancer are first studied in the physician's office. When indicated, a detailed study including home calls is made by a public health nurse assigned for this purpose from the staff of the Shiawassee County Health Department.

PHYSICIANS SCREENING FOR CERVICAL CANCER IN SAGINAW COUNTY

An interesting type of cancer detection program is being carried on by the physicians in Saginaw County. Physicians throughout the county are being encouraged to use the Papanicolaou test for cervical cancer on every patient for whom there is any possible indication of need. One doctor is screening on the basis of age susceptibility alone. Cost of the laboratory fee for the examination is being underwritten by the Michigan Department of Health.

MICHIGAN OTOLOGISTS AID IN PROGRAM

In the fourteen years that the Michigan Department of Health has worked with local health departments, physicians and schools throughout the state in the development of casefinding and medical correction programs for children with hearing defects, a good deal of information has been collected about the extent, nature and significance of hearing defects in Michigan children.

Over seventy-five practicing otologists have participated in the Michigan program.

Casefinding surveys conducted in eighty-two counties since 1942 show that an average of about 3 per cent of all Michigan school children have a hearing loss. On the basis of the number of children 5 to 19 years of age in the 1952 school census, this means that 47,698 boys and girls in regular classrooms throughout Michigan have a significant hearing loss.

Experience in the medical correction programs carried on through the co-operation of practicing otologists has shown that about 75 per cent of the children with hearing losses can have their hearing restored to normal, or have it greatly improved, through treatment.

It is anticipated that some 200,000 school children will be screened for hearing defects in co-operative hearing conservation programs in about thirty Michigan counties during this school year. Children with a significant hearing loss will be examined by a local practicing otologist through the co-operation of the state and local medical societies.

DRAMAMINE® IN VERTIGO



1. Bárány Pointing Test. *The patient points at a stationary object, first with his eyes open and then closed. A constant error in pointing (past pointing) with his eyes closed in the presence of vertigo indicates peripheral labyrinthine disease or an intracranial lesion.*



2. The Caloric (Bárány) Test. *The patient sits with his eyes fixed on a stationary object and the external ear canal is irrigated with hot (110 to 120 F.) or cold (68 F.) water. If the vestibular nerve or labyrinth is destroyed, nystagmus is not produced on testing the diseased side.*



3. The Rotation (swivel chair) Test. *The patient sits in a swivel chair with his eyes closed and his head on a level plane. The chair is turned through ten complete revolutions in twenty seconds. Stimulation of a normal labyrinth will cause nystagmus, past pointing of the arms and subjective vertigo.*

Notes on the Diagnosis and Management of "Dizziness"

I. Vertigo

The term "dizziness" (vertigo) should be restricted to the sensation of whirling or a sense of motion.[1] This sensation is usually of organic origin and is the tangible symptom of a specific pathology.

Moderate vertigo, with a sense of motion and a whirling sensation, may be produced by infection, trauma or allergy of the external or middle ear. Examination of the ear will usually disclose the abnormality.

Severe vertigo, which will not permit the patient to stand and causes nausea and vomiting, indicates an irritation or destruction of the labyrinth. The specific condition may be labyrinthine hydrops, an acute toxic infection, hemorrhage or venospasm of the labyrinth or a fracture of the labyrinth. Multiple sclerosis and pathology of the brain stem should be considered also.

It is important to learn if the patient's sensation is continuous or paroxysmal.[2] Paroxysmal vertigo suggests specific conditions: Ménière's syndrome, cardiac disease and epilepsy. Continuous vertigo without a pattern may be due to severe anemia, posterior fossa tumor or eye muscle imbalance.

Dramamine® has been found invaluable in many of these conditions. In mild or moderate vertigo it often allows the patient to remain ambulatory. A most satisfactory treatment regimen for severe "dizziness" is bedrest, mild sedation and the regular administration of Dramamine.

Dramamine is also a standard for the management of motion sickness, is useful for relief of nausea and vomiting of radiation sickness, eye surgery and fenestration procedures.

Dramamine (brand of dimenhydrinate) is supplied in tablets (50 mg.) and liquid (12.5 mg. in each 4 cc.). G. D. Searle & Co., Research in the Service of Medicine.

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SEARLE

In Memoriam

Thomas H. Blair, M.D., died unexpectedly February 21, 1955. Dr. Blair, who was fifty-one years old, had practiced in Adrian for about thirteen years.

Born in Lyons, Ohio, the son of a physician, Dr. Blair was graduated from Morenci High School (Michigan) and from Park Military Academy in Chicago. He was graduated from the University of Michigan Medical School in 1931. Following his internship and residency, he practiced in Ann Arbor before joining the Army Medical Corps in 1940. Released from active duty in 1942, Dr. Blair set up practice in Adrian. He served as physician to the Girls' Training School in Adrian from August, 1953, to the time of his death.

Surviving Dr. Blair are his widow, Virginia, and three children. A sister also survives.

Simon S. Farbman, M.D., a lifelong resident of Detroit, died at the age of forty-seven on August 20, 1954.

A graduate of Central High School and the former Detroit City College, Dr. Farbman was graduated from Wayne University College of Medicine in 1932. He served his internship at Detroit Memorial Hospital. He was on the staff of Mt. Carmel Mercy Hospital and Brent General Hospital, and was a past president of the staff at Brent. His memberships included the International College of Surgeons, American Academy of General Practice, the Michigan Obstetrical and Gynecological Society, and the Maimonides Medical Society.

Dr. Farbman is survived by his mother; his wife, Edith J., and three children. A brother, Aaron Farbman, M.D., and a sister also survive.

Linus J. Foster, M.D., of Detroit, neuropsychiatrist and former clinical professor of neurology and psychiatry at Wayne University College of Medicine, died at the age of fifty-nine.

Death came to Dr. Foster on August 10, 1954, following a long illness.

Born in Attica, Indiana, Dr. Foster attended the University of Michigan and graduated from its College of Medicine in 1920. After internship at University Hospital, Ann Arbor, he taught neurology there from 1923 to 1925, then went to Detroit and entered private practice. During this time he also taught at Wayne University College of Medicine for twenty-five years, until his retirement in 1951.

Dr. Foster was attending neurologist at Harper and Receiving Hospitals and was on the staff of four other Detroit hospitals.

He was a past president of the Detroit Medical Club

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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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Linus J. Foster

(Continued from Page 604)

and the Michigan Society of Neurology and Psychiatry.

Surviving are his wife, Frances, a son, a daughter, a sister, and a brother, Bernard B. Foster, M.D.

Allen C. Fullenwider, M.D., died September 10, 1954, at his home in Detroit. He was sixty-eight years old.

Born at Taylorville, Illinois, Dr. Fullenwider attended public schools there and then went to the University of Michigan, graduating from the School of Medicine in 1909. He served his internship at Brideswell Hospital, Chicago, and his residency at Receiving Hospital, Detroit.

Dr. Fullenwider was in private practice for forty-two years.

He is survived by his wife, Ethel; a son, Allen C., Jr., and a daughter, Mrs. Janet Foster.



Mrs. Edith Cowles Haughey, Battle Creek, an organizer of the Woman's Auxiliary to the Michigan State Medical Society, past president of the Woman's Auxiliary to the Calhoun County Medical Society and prominent in many civic activities, died March 11, 1955, at the age of seventy-four. She was the wife of Wilfrid Haughey, M.D., Editor of THE JOURNAL of the Michigan State Medical Society.

Although widely recognized for her community service, Mrs. Haughey was proudest of her honors as an outstanding mother and homemaker. An alumna of the University of Michigan, where she met her husband, Mrs. Haughey was the mother of eight children, all living and all, like their parents, University of Michigan graduates.

Mrs. Haughey was an early president of the Calhoun County Medical Society Woman's Auxiliary. The Daughters of the American Revolution and the American Association of University Women were two of the several other organizations in which she actively participated. The mother of six sons, several of whom served in the armed forces during World War II, Mrs. Haughey in 1941 helped organize one of the first women's groups in the nation dedicated to entertaining soldiers.

During the centennial celebration of the University in 1937, Mrs. Haughey was given a citation as an outstanding alumna, acknowledging her contribution as a mother.

Alluding to the University of Michigan award, the *Battle Creek Enquirer and News*, in an editorial at the time of Mrs. Haughey's death, stated:

"In the university of the household there are many courses, rewarding or exciting if taken in stride; endurable with strength. Mrs. Haughey, above most mothers, had the opportunity to learn.

"It was the impression of all those who knew her, as

(Continued on Page 608)

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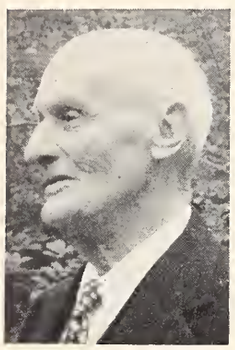
Mrs. Edith Cowles Haughey

(Continued from Page 606)

much as of those who knew about her, that she graduated Summa Cum Laude."

Mrs. Haughey was born in Nelson Township, Kent County, and was graduated from Greenville High School.

Surviving are Dr. Haughey and the eight children: Mrs. Edith Ellen James of DePere, Wisconsin; Clifton, of Toronto, Ontario; David, of Grand Rapids; Charles and Louis, of Toledo, Ohio, and Mrs. Esther Dolan, Phillip, and Wilfrid, Jr., of Battle Creek. There are twenty-five grandchildren.



Arthur M. Hume, M.D., ninety-five-year-old Past President of MSMS, died February 14, 1955, in Owosso, where he had practiced and lived for seventy-two of the seventy-four years since his graduation from the former Detroit College of Medicine.

Until he suffered a hip fracture in 1953, Dr. Hume was at his office daily, carrying on a limited practice.

Dr. Hume was MSMS President in 1918-1919, and was the oldest living Past President. At the time of his death, he also was the oldest living Past Grand Master of the Grand Lodge of Michigan, F. & A. M. He was a former Mayor of Owosso, former member and President of the Owosso Board of Education, and a former member of the Michigan Board of Registration in Medicine. He was made a Fellow of the American College of Surgeons in 1910.

Dr. Hume served as a medical officer in the Michigan National Guard from 1892 to 1901, and at one time was acting Surgeon General of the Michigan National Guard. He was also surgeon for the Ann Arbor Railroad for many years.

Dr. Hume's term as physician to some Owosso, families stretched over three generations.

Dr. Hume was born near Adrian in 1859, attended country schools, and at the age of seventeen became a school teacher to earn money for college. Following his graduation from medical school in 1881, Dr. Hume practiced in Bennington for two years before moving to Owosso to set up practice. A brother, W. C. Hume, M.D., at the time was practicing in Corona.

A son, Harold A. Hume, M.D., who died in 1949, was in practice with his father for many years.

Dr. Hume is survived by one daughter, Miss Ethel Hume of Owosso, also surviving are two grandchildren.

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Meat...

Dietary Cholesterol and Vascular Sclerosis

Recent studies reaffirm the "hypothesis that atherosclerosis is fundamentally a metabolic disease subject to important dietary influences"[1] and do much to refute contentions that foods containing cholesterol should be avoided in general diets.

Arterial disease resembling that in human subjects was produced in Cebus monkeys fed diets high in cholesterol and low in sulfur amino acids. Within 2 to 8 weeks after initiation of the regimen serum concentration of cholesterol rose to levels of 300 to 800 mg. per 100 ml. "The hypercholesterolemia could be largely prevented by feeding 1 gram per day of dl-methionine or l-cystine as supplements to the diet." Also, the elevated cholesterol levels "could be restored to normal by feeding 1 gram of dl-methionine but only partially restored by 0.5 gram of l-cystine daily."

According to the investigators, the "vascular lesions were in the ascending aorta but extended from the valves of the left ventricle to the proximal portions of the carotid and femoral arteries . . . The aortic lesions were chiefly characterized by the presence of lipid-laden phagocytes and increase in collagen and elastic fibers. The lipids were in part cholesterol derivatives."

Cholesterol, an essential metabolite produced in intermediary metabolism,[2] is biosynthesized from dietary protein, fat, and carbohydrate.[3] Normally, its synthesis is exquisitely controlled to insure adequacy as well as to protect against an oversupply.[4] Furthermore, considerable evidence indicates that an increased cholesterol intake is not an etiologic factor in alleged aberrations of cholesterol metabolism such as atherosclerosis.

In widely variable amounts, cholesterol occurs in foods of animal origin—meat, poultry, fish and marine foods, eggs, milk products—all foods of great nutritive value.[3] Present knowledge in no way warrants alteration in the customary consumption of these foods because of their contained cholesterol.

Skeletal muscle of beef, lamb, pork, and veal provides but small amounts of cholesterol, approximately 0.06 Gm. per 100 Gm. moist weight of meat.[5] Since atherosclerosis may interfere sharply with normal nutrition, the patient should consume diets rich in protein foods (such as meat), vitamins, and fruit.[6] In addition to high quality protein, meat supplies valuable amounts of needed B vitamins and essential minerals.

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The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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(Continued from Page 608)

Morris B. Landers, M.D., who had practiced medicine in Detroit for fifty years, died November 3, 1954, at the age of seventy-four.

Dr. Landers was born in Bonneville, Massachusetts, where he was graduated from high school. He received an engineering degree in 1900 from Amherst College, Amherst, Mass., and then came to Detroit. He received his M.D. degree in 1904 from Detroit Medical School, now Wayne University College of Medicine, subsequently entering into general practice.

Dr. Landers founded Lincoln Hospital in 1920 and operated it until the time of his last illness.

He is survived by his wife, and a son, Maurice Landers, M.D.

Williams Roys Olmsted, Sr., M.D., seventy-three years old, died October 9, 1954, following a long illness. Born in London, Ontario, Dr. Olmsted went to public schools and attended the University of Western Ontario in that city, graduating in 1903.

Dr. Olmsted resided in Detroit for a brief period in 1903 before joining the medical faculty at Loyola University School of Medicine in Chicago, where he remained until 1915. He had practiced in Detroit since that time, and had been a member of the Grace Hospital staff since 1917.

Dr. Olmsted was a life member of MSMS, and a Fellow of the American College of Surgeons.

He is survived by his wife, Meta E., and two sons, William R., Jr., and George S. Olmsted, M.D., all of Detroit.



James J. O'Meara, M.D., of Jackson, a member of the MSMS House of Delegates for sixteen years, and its Sergeant at Arms during much of this period, died March 7, 1955, following a long illness. He was sixty-eight years old.

A native of Jackson, Dr. O'Meara was graduated from St. John's High School, then took his premedical work at Assumption College in Sandwich, Ontario. He entered University of Michigan Medical School in 1907, and subsequently transferred to Northwestern University, from which he received his M.D. degree in 1911. After internship at Oak Park Hospital, (Illinois) he returned to Jackson to practice.

He was President of the Jackson County Medical Society in 1928. During World War I, Dr. O'Meara was in the Army Medical Corps.

Surviving Dr. O'Meara are his widow, Mary; two sons, three daughters, and three sisters.



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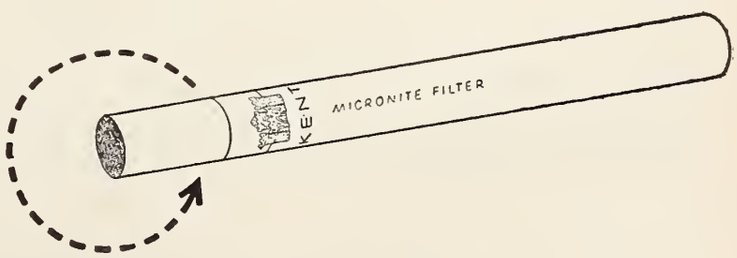
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NEWS MEDICAL

MICHIGAN AUTHORS

Lynn A. Ferguson, M.D., F.I.C.S., Grand Rapids, is the author of an article entitled "Total Management of the Patient with Cancer of the Colon and Rectum," published in *The Journal of the International College of Surgeons,* February, 1955.

Laurence F. Segar, M.D., Harry A. Kashtan, M.D., and **Captain Perry B. Miller, M.C., USAF,** Detroit, are the authors of an article entitled "Trichinosis with Myocarditis," published in *The New England Journal of Medicine,* March 10, 1955.

L'Zaro Benavides V., M.D., Mexico City, Mexico, **Birger H. Olson, Ph.D.,** Lansing, **Gerardo Varela, M.C., C.P.H.,** Mexico City, Mexico, and **Stephen H. Holt, M.D.,** Lansing, are the authors of an article entitled "Treatment of Typhoid with Synnematin B," published in *The Journal of the American Medical Association,* March 19, 1955.

Paul H. DeVries, M.D., Lloyd L. Kempe, Ph.D., Ann Arbor, and **Wade O. Brinker, D.V.S.,** Lansing, are the authors of an article entitled "Sterilization of Bone Transplants by Cobalt-60 Radiation," published in the *University of Michigan Medical Bulletin,* February, 1955.

L. H. Bartemeier, M.D., Detroit, is the author of an article entitled "Progress of Psychiatry and the Utilization of Its Principle in the Daily Practice of Medicine," published in *Clinical Medicine,* February, 1955.

A. C. Furstenberg, M.D., Ann Arbor, is the author of an article entitled "A Curriculum of Otolaryngological Undergraduate and Postgraduate Instruction in Prospect," published in *Transactions of the American Academy of Ophthalmology and Otolaryngology,* January-February, 1955, presented at the Fifty-ninth Annual Session of the American Academy of Ophthalmology and Otolaryngology, September, 1954, New York, N. Y.

Gerald Seltezer, M.D., Samuel Baron, M.D., and **Milton Toporek, Ph.D.,** Ann Arbor, are the authors of an article entitled "Idiopathic Hypogammaglobulinemia and Agammaglobulinemia, Review of the Literature and Report of a Case," published in *The New England Journal of Medicine,* February 17, 1955.

Martha R. Westerberg, M.D., and **Kenneth R. Magee, M.D.,** Ann Arbor, are the authors of an article entitled "Mestinon in the Treatment of Myasthenia Gravis," published in the *American Practitioner and Digest of Treatment,* March, 1955.

Frank L. Rector, M.D., Evanston, Illinois, formerly of Lansing, is the author of an article entitled "Lay Cancer Education," published in *GP,* February, 1955.

Philip Rubin, M.D., and **Irving Blatt, M.D.,** Ann Arbor, are the authors of an article entitled "A Modification of Sialography (Preliminary Report)," published in the *University of Michigan Medical Bulletin,* March, 1955.

Norman Rosenzweig, M.D., Ann Arbor, is the author of an article entitled "Some Psychiatric Implications of the Centrencephalic System," published in the *University of Michigan Medical Bulletin,* March, 1955.

A. W. Bohne, M.D., R. W. Osborn, M.D., and **P. J. Hettle, M.D.,** Detroit, are the authors of an article entitled "Regeneration of the Urinary Bladder in the Dog, following Total Cystectomy," published in *Surgery, Gynecology and Obstetrics,* March, 1955.

Nichols P. D. Smyth, M.B., Thomas Geoghegan, M.D., and **Conrad R. Lam, M.D., F.A.C.S.,** Detroit, are the authors of an article entitled "Experimental Ventricular Septal Defect," published in *Surgery, Gynecology and Obstetrics,* March, 1955.

Claire L. Straith, M.D., F.A.C.S., F.I.C.S., Detroit, and **Howard Rasi, M.D.,** New York (former Fellow of the Straith Clinic, Detroit), are the authors of an article entitled "Genital Elephantiasis Corrected by a Plastic Procedure," published in *The Journal of the International College of Surgeons,* January, 1955.

J. Reimer Wolter, M.D., Ann Arbor, is the author of an article entitled "Morphology of the Sensory Nerve Apparatus in Striated Muscle of the Human Eye," published in *AMA Archives of Ophthalmology,* February, 1955.

J. Reimer Wolter, M.D., Ann Arbor, is the author of an article entitled "Histologic Character of Connection between Bruch's Membrane and Choriocapillaris of the Human Eye," published in *AMA Archives of Ophthalmology,* February, 1955. Dr. Wolter is the author also of an article entitled "Melanoblasts of the Normal Human Choroid," published in the same number of the *Archives.*

William H. Havener, M.D., Harold F. Falls, M.D., and **William U. McReynolds, M.D.,** Ann Arbor, are the authors of an article entitled "Burdock Bur Ophthalmia," published in the *AMA Archives of Ophthalmology,* February, 1955.

E. C. Baumgarten, M.D., Detroit, is the author of an article entitled "Federal Health Insurance," published in the *Detroit Medical News,* February 21, 1955.

J. Martin Miller, M.D., Detroit, is the author of an article entitled "Carcinoma and Thyroid Nodules, The Problem in an Endemic Goiter Area," published in *The New England Journal of Medicine,* February 17, 1955.

Edward F. Purcell, M.D., and **David Schane, M.D.,** Detroit, are the authors of an article entitled "Diamox

(Continued on Page 614)



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(Continued from Page 612)

in the Management of Glaucoma," published in the *Kresge Eye Institute Bulletin,* February, 1954, and digested in the *Digest of Ophthalmology and Otolaryngology,* January, 1955.

John M. Lesesne, M.D., C. William Castor, M.D., and **Sibley W. Hoobler, M.D.,** Ann Arbor, are the authors of an article entitled "Prolonged Reduction in Human Blood Cholesterol Levels Induced by Plant Sterols," published in the *University of Michigan Medical Bulletin,* January, 1955.

Jerome W. Conn, M.D., Ann Arbor, is the author of an article entitled "Man's Response to Stress," given before the 98th Annual Meeting of the Hawaii Medical Association in Honolulu, May 14, 1954, and published in the *Hawaii Medical Journal,* September-October, 1954, a condensation of which appears in the *Current Medical Digest,* February, 1955.

Harold Fulton, M.D., and **William A. Evans, Jr., M.D.,** Detroit, are the authors of an article entitled "Roentgen Examination in Retroperitoneal Tumors of Children," read in the Symposium on Retroperitoneal Tumors before the Joint Meeting of the Section on Radiology and the Section on Urology at the 103rd Annual Meeting of the American Medical Association, June 23, 1954, and published in *AMA Archives of Surgery,* February, 1955.

E. T. Thieme, M.D., Ann Arbor, is the author of an article entitled "Appendicitis," published in *AMA Archives of Surgery,* February, 1954.

* * *

Clifford D. Benson, M.D., Detroit, is author of an original article, "Problems in the Surgical Care of Infants and Children" which was published in *Postgraduate Medicine,* February, 1955.

* * *

The Alice Crocker Lloyd Radiation Therapy Center of the University Hospital, Ann Arbor, Michigan, was dedicated March 26, 1955. The acceptance for the medical faculty was made by Isadore Lampe, M.D., of Ann Arbor.

* * *

"Corrective Neurosurgery," a book primarily written for the young neurosurugeon, is authored by a Michigan scientist, Dr. Elizabeth Crosby, of Ann Arbor. Of the fifteen contributors, thirteen are or were members of the University of Michigan Department of Surgery, Electroencephalography, Anatomy, Radiology, and Internal Medicine.

* * *

The Joint Commission on Accreditation of Hospitals released, on March 21, the list of accredited hospitals—a total of 3,513 (as of December 31, 1954). This includes 2,928 fully accredited and 585 provisionally accredited. Of these 102 fully accredited hospitals are located in fifty Michigan cities, and twenty-two provisionally accredited hospitals in sixteen Michigan communities.

The American Medical Education Foundation, on March 8, released a listing of the names of doctors of medicine who contributed to the AMEF during 1954, including those M.D.'s who gave directly to the eighty approved medical schools during that period. A total of 57,578 men contributed $3,006,197.78 to medical education during 1954.

A total of 1,204 Michigan contributors accounted for donations of $64,456.04. Direct contributions to the University of Michigan Medical School, by 263 doctors, amounted to $21,040.50; Wayne University College of Medicine had 594 contributors in the amount of $28,660.00.

* * *

The American College of Chest Physicians will hold its 21st Annual Meeting at the Ambassador Hotel, Atlantic City, June 1-5, 1955. For program and detailed information, write the College at 112 E. Chestnut Street, Chicago 11, Illinois.

* * *

Research fellowships in the field of multiple sclerosis and allied diseases have been established by the National Multiple Sclerosis Society. Grants of up to $500 and a travel allowance of $150 are offered. For full information and application blank write the society at 270 Park Avenue, New York 17, N. Y.

The 1956 Congress on Industrial Health, sponsored by the American Medical Association, will be held in Detroit (Sheraton-Cadillac Hotel), January 22-25, 1956. For program and full information, write Carl M. Petersen, M.D., 535 N. Dearborn Street, Chicago 10, Illinois.

* * *

The World Medical Association's Ninth General Assembly will be held in Vienna, Austria, September 20-26, 1955. For program and travel details, write Louis H. Bauer, M.D., Secretary-Treasurer, 345 E. 46th Street, New York 17, N. Y.

* * *

A national society of flying physicians is being formed, with the first meeting to be held in Atlantic City, June 6-10, 1955, coincident with the AMA meeting. M.D.-pilots interested in this organization may write H. D. Vickers, M.D., 25 Jackson St., Little Falls, New York, temporary chairman, or Mark E. DeGroff, M.D., P.O. Box 3275, Tulsa 12, Oklahoma. Full information and invitation to the June meeting will result.

* * *

The Wayne County Medical Society, in the *Detroit Medical News* of March 21, reported on considerations regarding location of the new David Whitney House. The WCMS Trustees, Council, and Building Committee propose the construction of a new WCMS headquarters

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within the Medical Science Center adjacent to the Medical Science Building of Wayne University. The property would be facing a new medical library, to be constructed in the near future. A plaza would join both structures. Plans include the construction, later, of a large auditorium also adjoining this plaza area available for WCMS meetings.

Congratulations, Wayne County Medical Society, on this magnificent and forward step!

* * *

The third annual Medical Civil Defense Conference will be held Saturday, June 4, 1955, in Atlantic City, according to announcement of the Council on National Defense of the AMA, Harold S. Diehl, M.D., Minneapolis, Chairman.

Doctors of medicine interested in attending this conference are invited to write to Frank W. Barton, Secretary, 535 North Dearborn Street, Chicago 10, Illinois, for program and details.

* * *

Clarence E. Richard, fifty-five, founder and managing director of the National Antivivisection Society, was arrested and charged with embezzlement of $8,000 from the Society, according to AMA Secretary's Letter of March 17, 1955. Illinois State's Attorney John Gutknecht said, according to Chicago newspapers, that Richard used the embezzled funds for his personal use.

* * *

The University of Michigan's eighth annual conference on Aging will be held at Ann Arbor June 27-30, 1955. Topic of this year's Conference is *"Aging—Applying Today's Knowledge Today."* The program will be focused on gaining greater skill in the use of principles, practices, methods and techniques needed for more effective service to older people.

Workshops, as well as general sessions, will be offered at the 1955 Conference. For additional information, program, pre-registration, write Dr. Wilma Donahue, 1510 Rackham Bldg., Ann Arbor.

* * *

Dr. Charles L. Anspach, President of Central Michigan College, Mount Pleasant, has been selected by MSMS President Robert H. Baker, M.D., Pontiac, as Biddle Lecturer for 1955. Dr. Anspach will deliver his address at the general assembly, Wednesday, September 28, 1955, Black and Silver Ballroom, Civic Auditorium, Grand Rapids.

* * *

John S. DeTar, M.D., of Milan, is the new President-Elect of the American Academy of General Practice, selected at the annual meeting of the Academy in Los Angeles in March.

Dr. DeTar has been Speaker of the AAGP Congress of Delegates for the past four years.

Long active in MSMS, Dr. DeTar was voted "Michigan's Foremost Family Physician of 1948," served as Speaker and Vice Speaker of the MSMS House of Delegates, and in many committee capacities. He is currently Delegate to the AMA. He has also served as President of the Michigan Health Council and President of the Washtenaw County Medical Society.

Congratulations, Dr. DeTar, on your latest achievement.

Say you saw it in the Journal of the Michigan State Medical Society

Dr. Joseph G. Molner, Commissioner of Health, has been appointed by Harold Stassen, Director, Foreign Operations Administration, to the Public Health Committee of the FOA, according to an announcement made by William R. Bernard, President of the Detroit Board of Health.

The Health Committee, a group of outstanding public health experts, advises on the Foreign Operations Administration's broad health program policy, receives and considers summary progress reports on health programs and advises on the most effective participation in health programs of voluntary agencies and professional educational institutions.

This appointment comes in recognition of Dr. Molner's outstanding record as a public health administrator. *(Wayne University College of Medicine and Detroit Receiving Hospital Bulletin,* Vol. 2, No. 1).

* * *

Radiation Effects on Humans.—Recently before a Senate subcommittee, Dr. John C. Bugher, head of Atomic Energy Commission's biological and medical section, said, "A . . . possible delayed effect of radiation exposure which has been demonstrated in animals is a statistical shortening of life expectancy. This phenomenon does not result from any specific cause of death but apparently from a general acceleration of the aging. Whether this factor can be recognized in a human population is as yet unknown."

The TV program "March of Medicine," on March 29, was devoted to a report on the long-range effects of the atom bomb dropped on Hiroshima in 1945. The report disclosed that there have been a few cases of latent damage to survivors but no significant indications of unfavorable hereditary effects on their offspring. Hiroshima's A-bomb children are generally healthy and happy.

In the hottest Hiroshima Zone, there were 185 pregnant women who survived to bear children. Only eight of these children were born with heads slightly smaller than average and they had "some degree of mental retardation." There was some temporary infertility among adult survivors. A high proportion of those in the hot area, 40 per cent, developed cataract-like spots on the eye lenses as compared with only 8 per cent in a non-exposed group. Adult survivors also developed sixteen times as much leukemia as did the general population, but this meant only forty-four cases.

* * *

Civil Defense Conference.—On Saturday, June 4, preceding the opening of the Annual Meeting of the American Medical Association, the Council on National Defense is sponsoring its Conference on Civil Defense. This is an all-day conference devoted to the medical aspects of civil defense preparedness. It will be held in the Rose Room of the Traymore Hotel. Additional information will be publicized as soon as the agenda is completed. Individuals planning to attend this conference should arrange for hotel accommodations directly and preferably at an early date.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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New Technique Dramatizes County Society Problems—The problems were old ones . . . the skits were new . . . the actors were borrowed and not a word was blue. This sums up the short dramatic skits used at the Michigan State Medical Society County Secretaries-Public Relations Conference in January to point up controversies affecting physicians working together at the county society level.

The Michigan society modified an effective communications technique created by J. Donald Phillips, president of Hillsdale College, to dramatize some frequently asked questions about financial arrangements with patients, insurance needed by physicians, patient relations, the use of Blue Cross benefits and the value of periodic health appraisal programs.

Each dramatization was followed by a "buzz session," moderated by Phillips, during which an attempt was made to resolve the problem. This procedure was received with great success at the society's 1954 Conference, and a repeat performance was requested this year. Five skits are in the Exchange.—*AMA PR Bulletin.*

* * *

Maternal Health Issue of JMSMS.—Doctor Albert E. Heustis complimented the Editor of THE JOURNAL and the Maternal Health Committee of the Society for the wonderful job in postgraduate medical education accomplished in the February issue. He stated that the Michigan Department of Health was pleased, indeed, to be able to participate in this worthwhile endeavor.

Soviet Medical Propaganda—Information reaching the American Medical Association indicates that numerous physicians throughout the country recently have received a mimeographed publication called "American Soviet Facts," containing twenty-one half-pages of "up-to-date information" on "Health and Medical Care in the U.S.S.R." This material is published by the National Council of American-Soviet Friendship, 114 East 32nd Street, New York 16, New York, one of the leading communist propaganda agencies in the United States.

As a safeguard against any suspicions of communist sympathies, physicians who wish to keep the record straight should write to the National Council of American-Soviet Friendship, requesting that their names be taken off that organization's mailing list. A carbon copy of the letter should be sent to the nearest office of the Federal Bureau of Investigation or to the FBI in Washington, along with the propaganda material received. This precaution is advised because records are kept of persons receiving communist literature for any considerable length of time.—*AMA Secretary's Letter.*

* * *

New Booklet on Federal Income Tax Liability.—The AMA Law Department has compiled a booklet on the federal income tax liability of physicians, consisting of a reprinting of four articles which appeared in THE JOURNAL. This booklet is available to state and county medical societies and individual physicians, without

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charge, by writing the Law Department, American Medical Association, 535 North Dearborn, Chicago 10, Illinois.

* * *

Albert E. Heustis, M.D., State Commissioner of Health, speaking at the Industrial Health Committee meeting on January 13, 1955, pointed out that statutes on industrial health required the reporting of certain occupational diseases. He emphasized that the industrial program of the State Health Department is being placed in jeopardy because of lack of reporting and that this condition may mean the difference between the industrial health program remaining in the State Health Department or it being turned over to the Labor Department. Discussion revealed a lack of information on the part of industrial physicians as to this condition and the presently expressed desire of the State Health Department to have such reports in order to get a line on what the present problems are: The Council directed that publicity be given in the JMSMS and the *Secretary's Letter* to the need of improved reporting of occupational diseases.

* * *

Raymond W. Waggoner, M.D., Professor and Chairman of the Department of Psychiatry, University of Michigan, presented the seventh lecture in the series on "Treatment in Psychiatry—II," at a meeting held at the North Shore Health Resort, Winnetka, Illinois, on April 6, 1955. The title was "The Value of Emotional Support and Environmental Manipulation."

The Hebrew Medical Journal, under the editorship of Moses Einhorn, M.D., of New York, has marked its twenty-seventh year of existence by the issue of two volumes in 1954. Written in Hebrew, with English summaries, the journal has played an important part in the creation of a medical literature and terminology in the language of the Bible.

* * *

A Symposium on Reproduction and Infertility, sponsored jointly by the Michigan State College School of Veterinary Medicine and the Michigan Agricultural Experiment Station, will be held at the Kellogg Center for Continuing Education June 27-29, 1955, on the MSC campus. Major objectives of the symposium will be the review and evaluation of recent progress in the field of reproduction together with thorough discussion of problems requiring further study. National authorities in their respective areas will present the formal papers on the program.

Arrangements have been made for lodging and meals for out-of-town guests at the Kellogg Center for Continuing Education. Printed programs will be available about May 15, and can be obtained by writing to E. P. Reineke, Symposium Chairman, Department of Physiology and Pharmacology, Michigan State College.

* * *

The tenth annual Schering Award competition for medical students has opened, it was announced by Robert W. Burlew, M.D., chairman of the award com-

mittee. Its aim is to encourage medical writing and exploration of current research literature.

Titles of three subjects on which American and Canadian students are invited to submit papers this year are: Current Concepts in the Management of Osteoporosis; Prevention and Treatment of Blood Transfusion Reactions; and Recent Trends in the Clinical Use of Adrenocortical Steroids.

Both a $500 first prize and a second one of $250 will be awarded for each of the three subjects. Outstanding authorities in each field will select the winners. Special recognition in the form of a professional gift will be given each student submitting a meritorious paper.

Information and instructions for the award competition are available from the Schering Award Committee, 60 Orange Street, Bloomfield, N. J.

AMERICAN ACADEMY OF GENERAL PRACTICE

The American Academy of General Practice, at its recent meeting, broke all previous records for attendance: 3,337 physicians, 935 technical exhibitors, 121 scientific exhibitors, and 1,648 guests, a total of 6,081.

The congress of delegates, the policy-making body which is made up of representatives of the academy's fifty-two chapters, considered thirty-five resolutions. One of the major resolutions called for increased standards of membership. Hereafter, a candidate for membership must have fulfilled one of the following three requirements: (1) two years of graduate training acceptable to and approved by the academy's commission on education; or (2) one year of graduate training acceptable to and approved by the commission, followed by two years of general practice, or (3) three years of general practice.

The delegates commended the commission on education for its work in the field of general practice residencies, especially for establishing a joint residency review committee to work with specialty groups in developing standards for and methods of evaluating general practice residencies.

The next scientific assembly will be held in Washington, D. C., March 19-22, 1956.

MEDICAL TELEVISION SHOWS, OVER WJBK-TV

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Feb. 6	Heart Month	Leslie T. Colvin, M.D., Detroit Ernest T. Guy, Detroit
Feb. 13	Teen-Age Traffic Safety	Miss Carol Hopkins, Detroit Richard Wagener, Detroit
Feb. 20	Second Citizens Public Health Conference	C. E. Reddick, M.D., Bay City Vlado Getting, M.D., Ann Arbor
Feb. 27	Narcotics	Herbert A. Rankin, M.D., Detroit Samuel Karp, Detroit

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60th Annual Convention

Gateway Hotel and Inn, Land O'Lakes, Wisconsin

June 17 and 18, 1955

Friday—June 17, 1955

A.M.

8:00 Registration at Gateway Hotel
Exhibits open at Gateway Inn

9:00 Convention opens at Gateway Inn
PANEL ON CANCER arranged by Michigan Cancer Co-ordinating Committee
Moderator—H. M. Nelson, M.D.
Early Diagnosis—Dr. Nelson
Cancer of Colon—J. A. Ferguson, M.D.
Cancer of Breast—E. T. Thieme, M.D.

10:00 View Exhibits

10:30 *Moderator*—
Pitfalls in Abdominal Surgery
Frederick A. Coller, M.D.

11:00 Present-day Trends in Use of Hormones in Allergic Disease
John M. Sheldon, M.D.

11:30 Infantile Eczema
Harry A. Towsley, M.D.

M.

12:00 Luncheon—Gateway Inn

P.M.

1:30 *Moderator*—L. Fernald Foster, M.D., Bay City, Secretary, MSMS
Difficulties Arising in the Surgical Treatment of the Biliary Tract
Frederick A. Coller, M.D.

2:00 Pre-Menopausal and Post-Menopausal Bleeding
Roland S. Cron, M.D.

2:30 Errors in Treatment of Commoner Skin Diseases
Harry R. Foerster, M.D.

3:00 View Exhibits

3:30 Urticaria-morphological Characteristics and Treatment
John M. Sheldon, M.D.

4:00 Prolonged Labor
Thomas N. Evans, M.D.

Saturday—June 18, 1955

Moderator—Frank J. Hirschboeck, M.D., Duluth Clinic, Duluth, Minn.

A.M.

9:00 Periodic Health Appraisal
J. R. Rodger, M.D.

9:30 Modern Developments in Convulsive Disease Therapy
Z. Stephen Bohn, M.D.

10:00 Low Back Pain
W. L. Bickel, M.D.

10:30 View Exhibits

11:00 Injection Versus Surgical Treatment of Hemorrhoids
Walter A. Fansler, M.D.

11:30 Medical Treatment of Hypertension
Richard M. Shick, M.D.

Guest Speakers

From University of Michigan:

F. A. Coller, M.D.—Professor and Head, Department of Surgery
J. M. Sheldon, M.D.—Professor of Medicine
Harry A. Towsley, M.D.—Professor of Pediatrics
Thos. N. Evans, M.D.—Assistant Professor, Obstetrics and Gynecology
E. T. Thieme, M.D.—Surgeon, St. Joseph's Hospital
J. R. Rodger, M.D.—Bellaire
J. A. Ferguson, M.D.—Grand Rapids

From Wayne University (Detroit):
Z. Stephen Bohn, M.D.—Assistant Professor, Neurology
H. M. Nelson, M.D.—Assistant Professor, Obstetrics and Gynecology
From Marquette University:
Roland S. Cron, M.D.—Professor and Head, Department of Obstetrics and Gynecology
Harry R. Foerster, M.D.—Professor and Head Department of Dermatology
From University of Minnesota:
Walter A. Fansler, M.D.—Professor of Surgery
From Mayo Clinic (Rochester):
W. L. Bickel, M.D.—Head of Section on Orthopedic Surgery
R. M. Shick, M.D.—Section on Vascular Diseases

AMERICAN COLLEGE OF SURGEONS

The following members of the American College of Surgeons, members of the Michigan State Medical Society, have been honored by appointment to various committees for the year 1955 by the College.

Members, Board of Regents

Dr. Reid Nesbit, Ann Arbor; Dr. Grover Penberthy, Detroit.

Committee Memberships

Cancer.—Dr. William A. Hyland, Grand Rapids; Dr. Harry Nelson, Detroit.

Graduate Training in Surgery.—Dr. Fredrick A. Coller, Ann Arbor; Dr. James Maxwell, Ann Arbor.

Nutrition.—Dr. Robert E. L. Berry, Ann Arbor.

Medical Motion Picture.—Dr. Albert D. Ruedemann, Detroit.

Trauma.—Dr. Duncan Cameron, Detroit; Dr. George Curry, Flint; Dr. John Prendergast, Detroit.

Members of Advisory Councils

Neurological Surgery.—Dr. E. S. Gurdjian, Detroit.
Thoracic Surgery.—Dr. Cameron Haight, Ann Arbor.

College Delegates to Other Organization

Medical Education.—Dr. Albert C. Furstenberg, Ann Arbor.

Members, Board of Governors

Dr. Carl Badgley, Ann Arbor; Dr. Charles Kennedy, Detroit; Dr. Russell L. Mustard, Battle Creek; Dr. George J. Curry, Flint.

Members of Michigan Counseling Committee

Dr. Clifford D. Benson, Detroit; Dr. Charles Johnston, Detroit; Dr. Albert Furstenberg, Ann Arbor; Dr. J. Duane Miller, Grand Rapids; Dr. John Wellman, Lansing.

Sherwood Winslow, M.D., Battle Creek, has been elected President-Elect of the Michigan Chapter of the American College of Surgeons.

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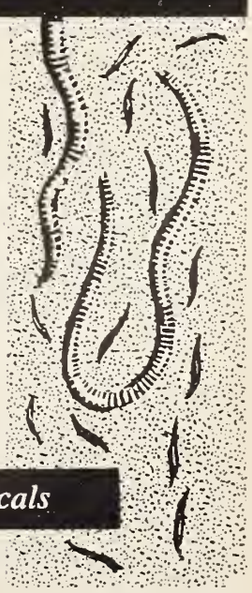
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Robert E. Landick, M.D.	Charlotte	December 1	Saginaw
Richard Meinke, M.D.	Morley	February 1	Eaton Rapids & Military Service
Duane Smith, M.D.	Brown City	February 1	Military Service
Robert E. Power, M.D.	Cheboygan	February 1	Mackinac Island

ASSISTED BY MICHIGAN HEALTH COUNCIL

Vernon L. Weeks, M.D.	Dundee	January 1	Monroe
Jack Grommons, M.D.	Durand	February 1	Mt. Pleasant

OTHER LOCATIONS (From Newspaper Clippings)

A. N. Morris, M.D.	Port Huron	February 1	Boston, Mass.
Henry T. Johnson, M.D.	Lansing	February 1	Military Service
William J. Dinnen, M.D.	Port Huron	February 1	Detroit

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Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

THE ROLE OF THE PITUITARY IN CANCER, The Clinical Value of Pituitary Lipid Treatment. By Henry K. Wachtel, M.D. New York: The William-Frederick Press, 1954. Price $2.00.

ANNUAL REPORT OAKLAND COUNTY DEPARTMENT OF HEALTH, 1953. Published in 1954.

THE CITY OF HOPE. By Samuel H. Golter. New York: G. P. Putnam's Sons, 1954. Price $3.50.

CLINICAL ORTHOPAEDICS. By Anthony F. DePalma, Editor-in-Chief, with the assistance of the Associate Editors and the Board of Advisory Editors. Number Four. Philadelphia, London, Montreal: J. B. Lippincott Company, 1954. Price $7.50, sustaining $5.00.

FRACTURES IN CHILDREN. By Walter Putman Blount, A.B., M.D., F.A.C.S. Chairman of the Orthopaedic Section, Milwaukee Children's Hospital. Attending Staff Surgeon, Columbia Hospital, Johnson Emergency Hospital, Milwaukee; Consulting Staff, Milwaukee County Hospital; Member of the American Orthopaedic Association, American Academy of Orthopaedic Surgeons, Société Internationale de Chirurgie Orthopedique et de Traumatologie; Honorary Member, Deutsche Orthopädische Gesellschaft. Baltimore: The Williams and Wilkins Company, 1954. Price $9.50.

Fractures in children many times present very special problems not covered in the usual texts on fractures. These fractures present an entirely different aspect. Dr. Blount, from our neighboring state, Wisconsin, has consolidated experiences of some twenty years at the Milwaukee Children's Hospital. He has given unusually clear and exact discussions, and embellishes his work with many very good pictures, roentgenograms, x-ray positions, and live drawings and sketches. The illustrations are tops, the type clear, large and easily readable. We like the book.

THE MICROPHYSICAL WORLD. By William Wilson, Ph.D. (Leipzig), D.Sc. (London), F.R.S. Fellow of King's College, London, and Professor Emeritus of Physics in the University of London. New York: Philosophical Library, 1955. Price $3.75.

This pocket-size book is a very interesting exposition of the small things of the world, atoms, energy, light, electrons. It contains many formulae. The last chapter "inside the nucleus" is a postgraduate course in nuclear physics.

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General Surgery, one week, May 23, October 17
Gallbladder Surgery, ten hours, June 27
Thoracic Surgery, one week, June 6
Esophageal Surgery, one week, June 13
Fractures and Traumatic Surgery, two weeks, June 20

GYNECOLOGY—Office and Operative Gynecology, two weeks, June 13
Vaginal Approach to Pelvic Surgery, one week, June 6

MEDICINE—Two-week Course, September 26
Electrocardiography and Heart Disease, two weeks, July 11
Hematology, one week, June 13

RADIOLOGY—Clinical Diagnostic Course, two weeks, by appointment
Radium Therapy, one week, May 23
X-Ray Therapy, two weeks, by appointment

PEDIATRICS—Clinical Course, two weeks, by appointment
Neuromuscular Diseases, two weeks, June 20
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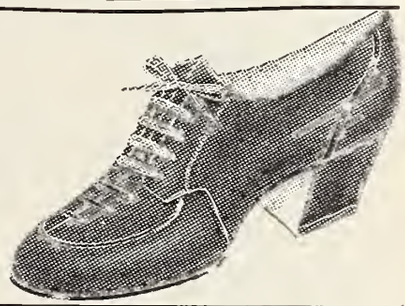
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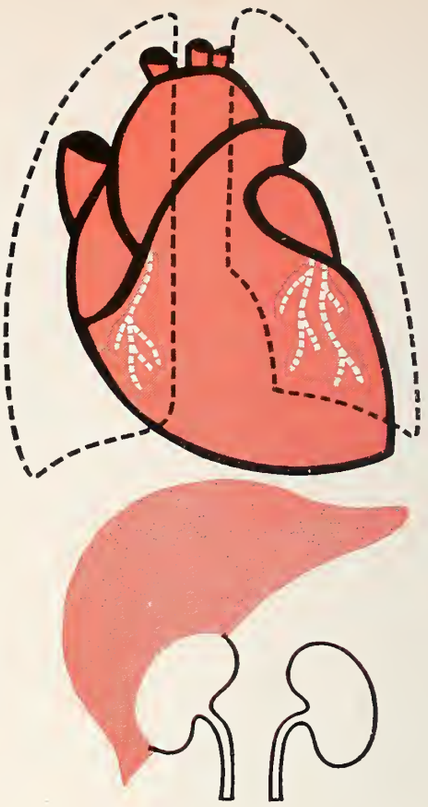
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THE JOURNAL
of the Michigan State Medical Society

VOLUME 54 JUNE, 1955 NUMBER 6

Contributors to This Issue



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L. W. Shaffer, M.D.

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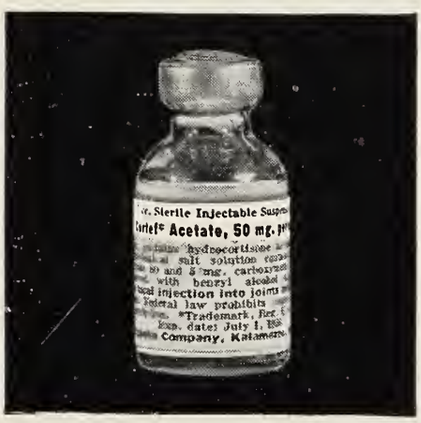
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MSMS is among the twenty-three co-sponsoring agencies planning a statewide conference on the topic "Alcoholism in Our Society" which will be held at Western Michigan College of Education, Kalamazoo, beginning at 4 p.m., Wednesday, July 27, and ending at noon, July 29.

Several agencies are co-operating with the Michigan State Board of Alcoholism in staging the conference, which will deal with alcoholism as it relates to health, law, social welfare, and education.

The meeting Thursday afternoon, July 28, will be devoted to alcoholism and health with three doctors of medicine featured as speakers: R. M. Athay, M.D., Detroit, "Clinical Approach"; C. M. Schrier, M.D., Kalamazoo, "Psychiatric Aspects of Alcoholism"; and C. K. Stroup, M.D., Flint, "Hospitalization of Alcoholism."

Three other M.D.'s appointed by MSMS will serve as moderators to panel discussions following the presentations by these speakers: C. M. Schrier, M.D.; R. A. Morter, M.D., and D. G. May, M.D., all of Kalamazoo.

The Conference will concern itself also with how the professions, legal, teaching, ministry, social welfare, and industry, can jointly co-operate in dealing with alcoholism as a major public health problem.

It is requested that a check in the amount of $15.00 accompany reservation requests to be sent to the Division of Field Services Western Michigan College, Kalamazoo, Michigan, before July 18. Reservation includes meals, room, linen and maid service in one of the modern dormitories at the College. Free parking in the dormitory lot is available. Refund requests for necessary cancellations due to change in plans should be received by July 22.

MENTAL HEALTH IN PERIODIC HEALTH APPRAISAL

The following statement of responsibility of the doctor of medicine to the patient in mental ill health was adopted recently by the Committee on Mental Health of the Michigan State Medical Society:

"It is an inescapable fact that Mental Health is the Number One health problem in America. Conservative estimates indicate that one out of every twelve persons will be afflicted by some form of mental or emotional disorder. Latest reports reveal that 700,000 mental patients now occupy more than 50 per cent of all the hospital beds in the United States and that 30 per cent of all patients who enter general hospitals suffer from illnesses that are fundamentally emotional in character. In addition, it is well known that at least one-half of the patients who consult their family physicians do so because of symptoms which have an emotional origin. Finally, the sum of $1,100,000,000 is paid out each year for the care of mentally ill patients, an amount which represents one-third of the entire national budget for medical care.

"The foregoing facts impose a responsibility on every physician to enlarge his therapeutic armamentarium to the point where he can be of service to the patient in mental ill health. The foregoing facts impose no less an obligation on the Medical Society to encourage its members to assume this responsibility. It is obvious, therefore, that any periodic health appraisal must include an awareness of the emotional status of the persons examined."

This statement was approved by the Executive Committee of The Council, Michigan State Medical Society, at its meeting of April 20.

HIGHLIGHTS OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of April 20, 1955

Ninety-three items were presented to the Executive Committee of The Council at its April 20 meeting in Kalamazoo. Chief in importance were:

- **Salk Polio Vaccine.**—Background of events emerging statewide and in the Legislature since the April 12 evaluation report on Salk polio vaccine was presented by Secretary Foster, including April 9 letter to MSMS membership. Background for a statement re a uniform fee that could be recommended for use throughout the state was thoroughly discussed and motion was made "that the Executive Committee of The Council recommend a minimum of $2.00 per injection for office administration of Salk polio vaccine, plus the cost of the vaccine—as a fee only during this public health emergency." A night letter to the 55 component county medical societies with explanatory information on this action was authorized, together with a news release to the public.

  Jonas E. Salk, M.D., and Michigan's own

(Continued on Page 644)

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HIGHLIGHTS OF THE COUNCIL

(Continued from Page 642)

Thomas Francis, Jr., M.D., were complimented by the Executive Committee of The Council for the development and the evaluation of the Salk polio vaccine; the Michigan delegation to the AMA House of Delegates was authorized to develop a suitable resolution complimenting Doctors Salk and Francis, for presentation to the AMA House of Delegates at June Atlantic City session.

A vote of thanks was extended to R. R. Dew, M.D., of Kalamazoo, for his presence and excellent information on the subject of Salk polio vaccine distribution.

- **Beaumont Memorial.**—Senate Concurrent Resolution No. 34 (adopted by the 1955 Michigan Legislature) re gift of the Beaumont Memorial to the State of Michigan, was read and ordered published in JMSMS and framed for hanging in the Beaumont Memorial and in the MSMS headquarters at Lansing. A vote of thanks to the Michigan Legislature was spread upon the minutes of the Executive Committee.
- **Committee Reports.**—The following committee reports were presented and given consideration: (a) Geriatrics Committee, meeting of March 15; (b) Mental Health Committee, March 16; (c) Tuberculosis Control Committee, March 18; (d) Child Welfare Committee, March 31 (including four subcommittee reports); (e) Legislative Committee, March 30; (f) Advisory Committee to Michigan United Fund, Inc., March 30; (g) National Defense Committee, April 6; (h) Rheumatic Fever Control Committee, April 13; (i) Rural Medical Service Committee, April 14; (j) Maternal Health Committee, April 14 (including four subcommittee reports; (k) Special Committee with Veterans Organizations, April 19; (l) M.D. Placement Program, April 20; (m) Basic Science Study Committee, April 12.
- **Report from E. F. Sladek, M.D.,** Traverse City, on migratory labor situation in Michigan was accepted, with thanks.
- **Joint meeting** of this Executive Committee with the Executive Committee of the Board of Commissioners of the State Bar of Michigan was set for October 19, and with the Executive Committee of the Board of Michigan Hospital Service for December 14.
- **President Robert H. Baker, M.D.,** Pontiac, announced that Dr. Charles L. Anspach, Ph.D., President of Central Michigan College, Mt. Pleasant, had been selected as 1955 Biddle Lecturer.
- **R. D. Mudd, M.D.,** Saginaw, and T. I. Boileau, M.D., Birmingham, were appointed to the Industrial Health Committee; C. H. Adams, M.D., Flint, was appointed to the Geriatrics Committee.
- **1955 Annual Session.**—Grand Rapids: (a) Felix Alfenito, M.D., Grand Rapids, was appointed General Chairman of Arrangements for the 1955 MSMS Annual Session in Grand Rapids. (b) **R. A. Johnson, M.D.,** Detroit, H. A. Towsley, M.D., Ann Arbor, and John M. Wellman, M.D., Lansing, were selected as Discussion Conference Leaders.

  (c) **Urological Section** request for a noonday section meeting, Wednesday, September 28, to avoid conflict with American Urological Society meeting in Chicago that evening, was approved.
- **Report of Goldie B. Corneliuson, M.D.,** Lansing, on Conference of Maternal and Child Care, held in Chicago March 19, was received with thanks; report of B. L. Masters, M.D., on National Rural Health Conference in Mil-

(Continued on Page 716)

MEDICAL MEETINGS AND CLINIC DAYS

A list of known medical meetings and clinic days, sponsored by county medical societies and other physician groups in Michigan, follows:

1955		
June 27-30	Eighth Annual Conference on Aging	Ann Arbor
August	Fifth Annual Clinic, Central Michigan Committee, ACS Michigan Committee on Trauma, plus Michigan National Guard Medical Personnel, and Medical Society of North Central Counties	Grayling
August 25-26	Coller-Penberthy Clinic	Traverse City
September 26-27	Annual Session of the House of Delegates (MSMS)	Grand Rapids
September 28-30	MSMS Annual Session	Grand Rapids
October	Clara Elizabeth Fund for Maternal Health and Genesee County Medical Society	Flint
October 14	Michigan Cancer Conference	East Lansing
October 17-19	Eighth Annual Scientific Meeting—Detroit Institute of Cancer Research.	Detroit
Autumn	MSMS Postgraduate Extramural Courses	State-wide
November 1-3	International Symposium: Units of Biological Structure and Function. Henry Ford Hospital.	Detroit
November 9-10	Mich. Academy of General Practice Ninth Annual Fall Post-Graduate Clinic.	Detroit
April 11, 1956	Tenth Annual Cancer Day	Flint



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AND so it is with accessories of other kinds. Those for example you need to run your electrocardiograph. The accuracy and usefulness of such a precision instrument is in direct ratio to the effectiveness of its parts *and accessories.* Of what value is the high deflection speed and top performance of an ECG if the recording paper cannot successfully show it in clear, sharp and distinct registrations? Of what value is an electrode paste which does not reduce patient resistance at electrode connections to a level suitable for modern cardiography?

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specific against coccic infections . . .

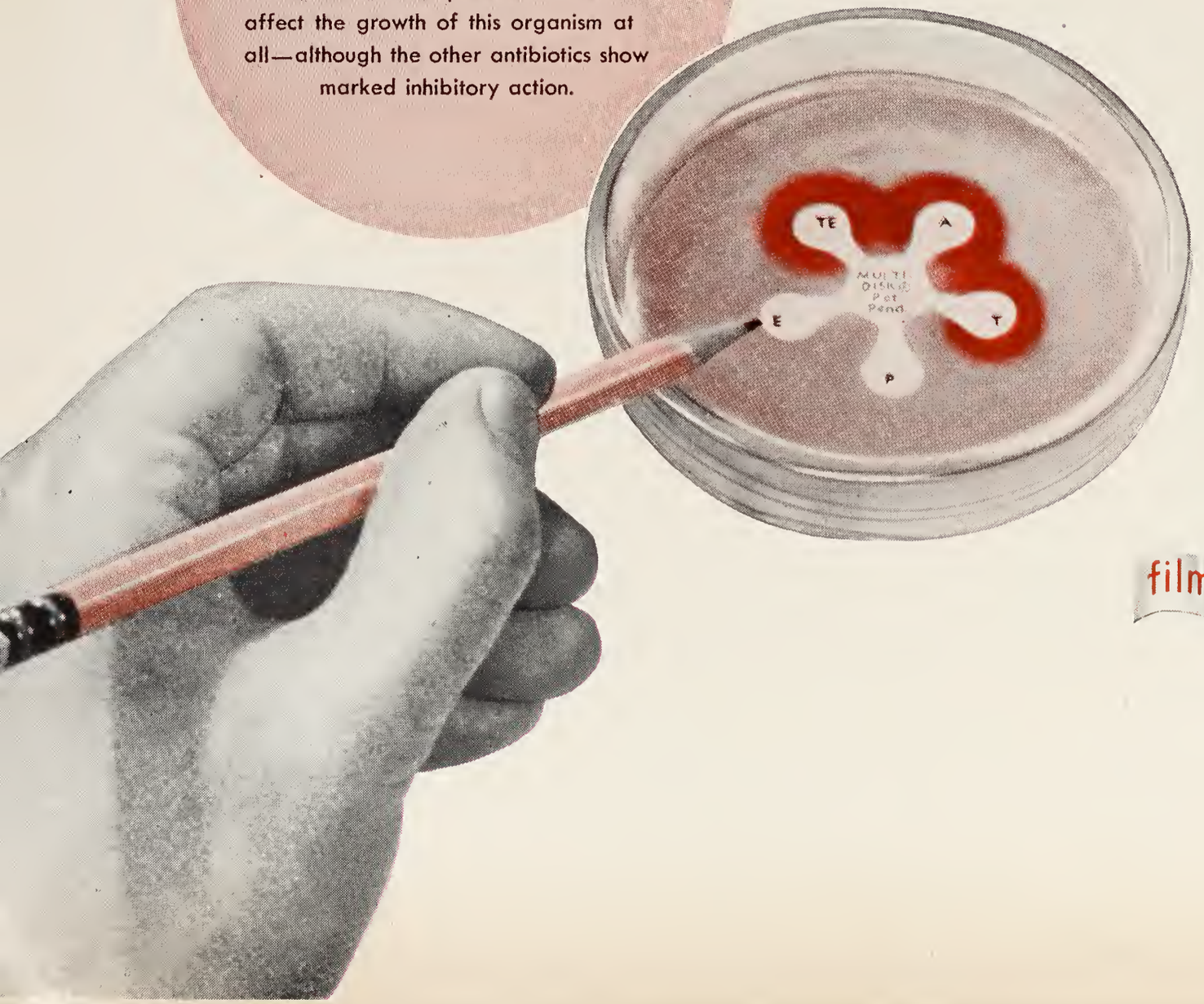
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PR REPORT

POLIO VACCINE CONFUSION AND FACT

KEEPING ABREAST OF THE SITUATION in itself was a difficult problem in medical-public relations, once the announcement was made that the Salk polio vaccine had been proven effective and potent. Keeping *ahead* of the situation became a major project; and those who govern PR policy for MSMS were convinced early in the proceedings—even before the 1954 field trials—that only by anticipatory measures could the situation adequately be met.

As this is written there are still many questions to be resolved, but it's not too early for a preliminary, factual review. The final result, PR-wise, must be written sometime months from today. To date, however, some of the near-hysteria has subsided to some degree and a strong movement to write into Michigan law the professional fee for administering the vaccine has abated. But confusion still exists!

INTENSE PUBLIC INTEREST in the evaluation report for the 1954 field experiment rose to a peak during the days immediately preceding release of the report. Advance "leaks" and the carefully-planned and publicized announcement event primed the public for a favorable report on April 12. Sensing the "immediate and compelling demand" for the limited commercial supply which would follow any favorable report, MSMS leaders directed a letter on April 9 to all members strongly emphasizing to Michigan M.D.'s that "the public welfare would best be served" by inauguration of a voluntary system of control reserving the available vaccine for three specified priority groups most susceptible to polio.

It was further pointed out that (1) there must be public education effort, with the co-operation of M.D.'s, to explain the need for these temporary voluntary controls, and (2) local plans for inoculating persons in priority groups who were unable to pay for the vaccine must be given primary consideration.

All Michigan newspapers and radio and television stations were presented with the MSMS recommendations in a follow-up news release on April 11.

GOVERNMENT CONTROLS appeared to be the obvious alternative if a voluntary system was not established at the outset.

When blazing headlines on April 12 declared the vaccine to be "safe, potent, and effective," the wisdom of this advance preparation by MSMS was proven. Public demand in a few days grew even beyond the proportions foreseen. Rumors and considerable misinformation raced through the halls of the Michigan State Capitol, in particular.

The availability of vaccine to indigents was a persistent question. To meet this, MSMS issued a statement on April 19 re-emphasizing the long-standing policy of no professional fee for immunization of indigents certified by the County Department of Social Welfare. It was pointed out that state purchase of the vaccine for indigents was already possible under the Social Welfare Act. As in other programs, inoculations would be administered in the office of the M.D. of the patient's choice, with the same priority system used for non-indigents.

The statement on indigents was made only after conferences with legislative leaders, State Health Department representatives, and the State Social Welfare Department.

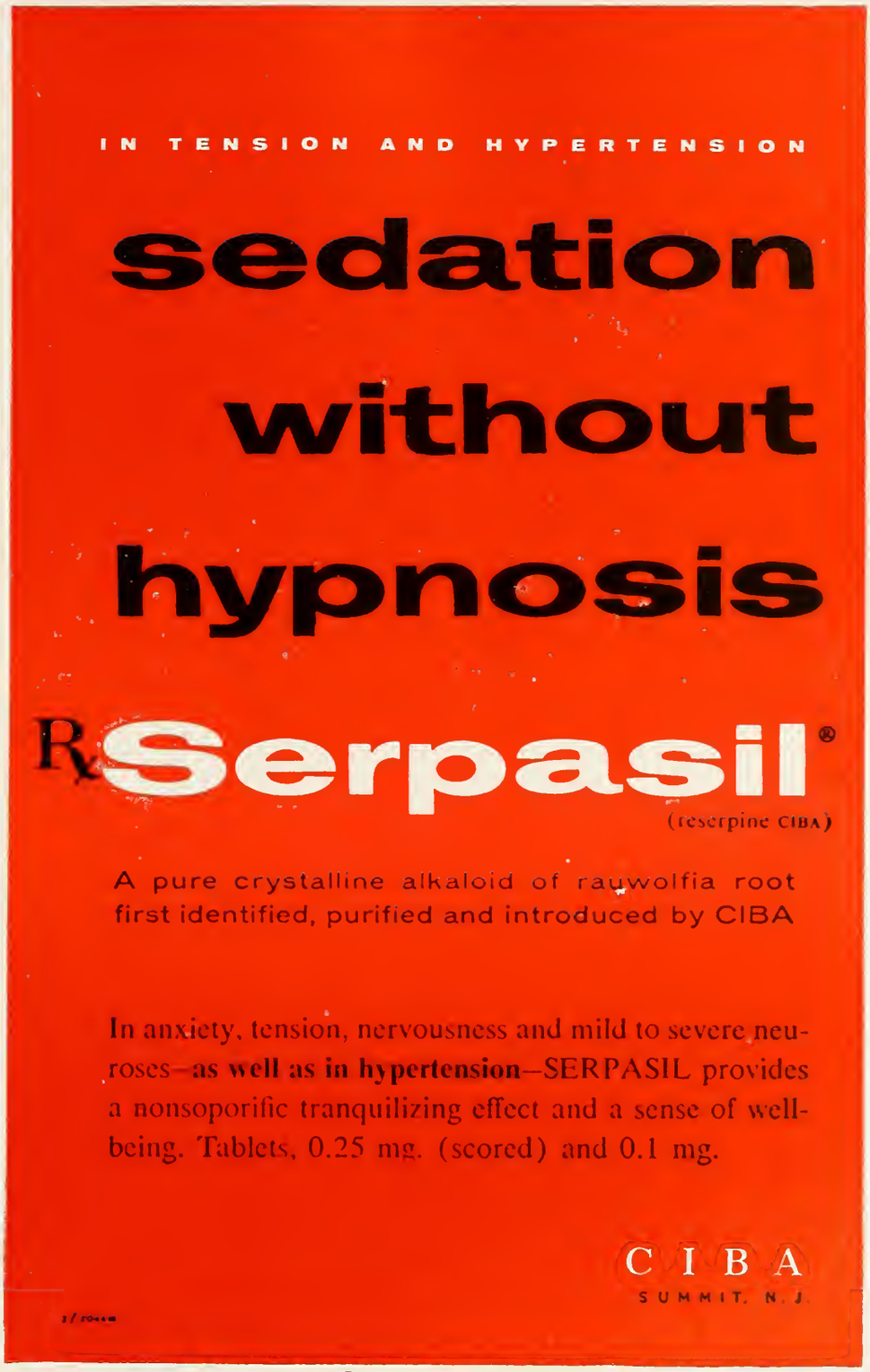
THE LEGISLATIVE PROPOSAL to appropriate funds for state purchase of Salk vaccine for all school-age children, prompted by a message from Lt. Governor Philip A. Hart, in view of Governor Williams' absence from Michigan and a bi-partisan groundswell of sentiment favoring the plan, stirred up several objectionable side issues. Most important of these was a strong indication that one element in the Legislature was determined to set an objectionable precedent by writing into the bill itself the professional fee of the M.D. administering the vaccine.

Before this new threat could gain a secure foothold, the Executive Committee of The Council made an unprecedented recommendation to all county medical societies that a special fee of $2 per injection be adopted during the temporary public health emergency while the new vaccine was in short supply. This fee was not to include the cost of the vaccine and was, in fact, well in line with the voluntary schedule already worked out by many county societies.

THIS PROMPT ACTION confirmed the faith the majority of legislators have in the Michigan medical profession. In a brief floor flurry in the House of Representatives, a series of fee-setting amendments to the vaccine appropriation bill failed to pass and the cynics were defeated.

ANOTHER INTERESTING SIDELIGHT to the polio vaccine situation is yet to be fully developed at the time this report is written, but

(Continued on Page 656)



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Tenth Annual National Rural Health Conference

Following is a summary of the tenth annual National Rural Health Conference to which Drs. Spaulding, Fyvie and Brooker L. Masters were delegates. It seemed to me that this tenth conference was even more beneficial than the previous ninth one held in Dallas in 1954. It appears that some of the issues which keep cropping up at each conference are becoming more clear and also the possibilities of solutions are more apparent to those who attend. Of course, as in all conferences of this nature, the only true results are those which the conferees take back and put into practice in their home communities. It seems that the topics discussed are becoming increasingly more apparent in the home communities. Therefore, it is my opinion that this National Conference has definitely produced results in its ten years of activity and probably warrants continued support for the indefinite future.

The Conference opened on Thursday morning, February 24, with a meeting of all the doctors present. It was interesting that the general theme of this Thursday morning's session was the obtaining of more general practitioners, both in the city and in the rural areas. It was also the conclusion of this particular part of the meeting that the major ways of increasing the supply of general practitioners involved the following methods: Preceptorship, Senior Day Activities, Selection of Proper Men to be Doctors (not such concentration on scholastic averages), and Selection of students from the small communities to enter medical school training. These subjects are very common matters of thought for the Michigan Committee on Rural Medical Service.

The meeting on Farm and Home Safety was very conclusive in its opinion that many accidents —in fact, most accidents—are the result of emotional instability. And that the prevention of farm and home accidents rests in increasing the amount of emotional security in the young people of the country. The State of Kansas has package lectures developed where local communities such as Farm Bureau groups or other units interested in safety can receive talks by doctors or health and safety experts on this problem. It seems that this might be a good subject for exploration by the Michigan State Medical Society Committee on Safety.

A lively discussion developed on the Family Responsibility for Health Program. It can be summarized by saying that most of the delegates there at the meeting were interested in improving medical services. As usual, this meant the obtaining of more physicians for the areas which are in dire shortage of medical coverage. Also it seems that more emphasis should be placed on educating the family unit in some of its own particular responsibilities regarding medical care and utilization of doctors. It seems to me that this would definitely be a field for the college extension services to work with the Michigan Medical Society in improving medical-laity relations.

The remainder of the meeting was devoted to general subjects of local situations and how the local groups solved those problems. In fact, it was re-emphasized that this Rural Health idea is simply devoted to the idea that it can only accomplish its goals by the combined efforts and initiative of local citizens working on local levels facing their local problems. It is not a dictatorial theme in any sense of the word.

Once again, I would like to thank the Council of the Michigan State Medical Society for allowing me the privilege of attending this meeting and also to participate in it at Milwaukee. I am convinced that in this type of endeavor is the real hope for improving medical services and medical care for the citizens as a whole. If we could only get all segments of the medical profession to have the enthusiasm that is manifested at these meetings where the lay people interested in health and the doctors interested in giving them that health come together for a meeting of the minds, I'm sure that most of the criticism that falls on Medicine's ears would disappear within a very short time.

Brooker L. Masters, M.D.

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According to calculated values, the food supply of the nation during 1942-1948 provided 25 per cent more thiamine, 10 per cent more riboflavin, 15 per cent more niacin, and 14 per cent more iron than it would have without the nationwide enrichment of bread and flour.[3,4]

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Enriched bread also supplies important amounts of high-grade protein, calcium, and nutrient energy. Its protein, comprising flour protein and milk protein, contributes significantly to sound growth and tissue maintenance.

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More than a year of widespread use has established ACHROMYCIN as a true broad-spectrum antibiotic, well tolerated by both young and old. It has proved effective against a wide variety of infections caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa. Compared to certain other antibiotics, ACHROMYCIN provides more rapid diffusion; it is also more soluble, and, once in solution, more stable.

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AMA Washington Letter

THE MONTH IN WASHINGTON

For the first time in many years, there is a strong possibility that Congress will enact legislation providing federal grants to medical schools. Unlike most bills of the past, which would have given the schools money for salaries and other operating costs, the bill getting most attention now would give money only for construction and equipment.

Action first came in the Health Subcommittee of the Senate Labor and Welfare Committee. Senator Lister Hill (D., Ala.), chairman of the subcommittee as well as the committee, is the principal sponsor of the bill. Senator Hill, long interested in health legislation, was a co-sponsor of the hospital construction act that has been in operation for eight years.

Under the education bill the federal government would grant a total of $250 million to medical schools at the rate of $50 million a year for five years. No school could receive more than $3 million. New schools would receive 50 per cent of construction and equipment costs (up to $3 million limit), but existing schools would receive only one-third, unless they agreed to increase freshman enrollment by at least 5 per cent. If they wished, schools could set aside 20 per cent of the federal grant into a permanent endowment fund, with earnings to be used for maintaining the building and equipment.

Nearly a score of medical school deans appeared before the Hill subcommittee to urge approval of the bill. Also supporting it were the American Medical Association and the American Dental Association, the latter on condition that dental schools also be included. There were no opposition witnesses before the Hill subcommittee.

The AMA's witnesses were Drs. F. J. L. Blasingame, a Trustee, and Walter S. Wiggins, associate secretary of the Council on Medical Education and Hospitals. Dr. Blasingame reviewed efforts of the Association since its founding to improve medical education. He cited evidence to show that medical training in this country now is the best in the world, and that the supply of physicians is increasing at a faster pace than the population.

Dr. Wiggins urged the subcommittee to make two changes. He asked that the financial inducement offered for increased enrollment be dropped, as it might cause some schools to take in more students than they could train properly, a fear that was reflected also in the testimony of some of the medical school deans. He also said the AMA recommended that the law require that six members of the Council on Medical Education be "leading medical authorities."

In the House, the Interstate and Foreign Commerce Committee, facing a heavy schedule of hearings on other bills, was slow to take up the medical education bill. But there, too, its prospects are good, particularly as the bill is sponsored by Chairman Percy Priest (D., Tenn.), whose role in medical bills compares with that of Hill in the Senate.

It appears now that Congress also is willing to go along with the Defense Department once again and extend the doctor draft act for another two years. It is scheduled to expire next June 30. The AMA opposes an extension, maintaining that a more attractive military medical career and better use of uniformed physicians would take care of the services' need for experienced specialists and administrators. The department's main argument for an extension was the need for these older men. Before reporting out the bill, however, the House Armed Services Committee made one significant change. It rewrote the bill to exempt any physicians 35 years or older who had applied for a commission at any time in the past and had been turned down solely because of physical condition.

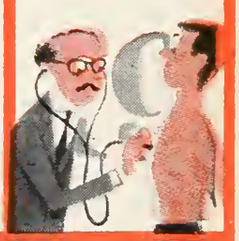
Also moving ahead on the legislative course is a bill to continue the $100 per month equalization pay for physicians and dentists in uniform. At hearings before the House Interstate and Foreign Commerce Committee the AMA supported the special pay extension, but objected to one provision. The bill originally would have withheld the $100 from men with an obligation under the regular draft unless they agreed to serve for more than the two-year draft obligation. The House Committee eliminated this section. As the bill went to the House, it provided that all commissioned medical and dental officers receive the special pay.

Still undecided was the fate of a Defense Department's bill for medical and dental scholarships. Scholarships would cover subsistence as well as all school expenses. A student receiving aid for a year or less would have to serve on active duty for an extra year; if the scholarship were for more than a year, he would have to spend three extra years on active duty.

At this writing Congress continues to show no particular interest in reinsurance of medical insurance plans, a bill that the administration considers important. Nor have hearings been scheduled yet on the No. 2 administrative bill, that providing federal guarantee for mortgages on such health facilities as hospitals and clinic.

STRESS FORTIFY

THE ACUTELY ILL PATIENT

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						5
	7	8		10	11	12
	14	15	16	17	18	
20	21	22		24		26
27	28	29	30	31		

Prompt institution of therapy with such well-tolerated and effective agents as Terramycin,®* Tetracyn®† or penicillin rapidly controls infections due to susceptible organisms. Other measures contributing to shorter illness and faster recovery include stress fortification of the patient with therapeutic amounts of the B-complex, C and K vitamins, recommended by the National Research Council for routine use during the stress of severe infection or injury.

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Editorial Opinion

FRONT LINE VOLUNTEERS OF THE ANTI-POLIO PROGRAM

By Monday, all of Detroit's first and second graders will have received their first Salk polio vaccine shots. This is a remarkable achievement. Some cities have not even begun the immunization process.

Credit for the smooth functioning of Detroit's "Operation Ouch" goes to Dr. Joseph G. Molner, city health commissioner, and his department.

What should not be overlooked, however, is the gratitude which not only Detroit but other communities owe to the thousands of doctors giving generously of their time and services without charge. The program would be slow and selective except for their voluntary participation in the public endeavor to stamp out polio. We know we speak for parents everywhere when we say thanks. —*The Detroit Free Press,* April 23, 1955.

BILLY ROSE SAYS

"For my dough, the most important people in the world are doctors . . .

"If you cut yourself, if something starts biting at your insides, if your kid breaks out in spots, whom to you holler for?

"Your Congressman? The President of your bank? The Secretary of War? Not on your tintype. You send for the man with the little black satchel . . .

"When I was a kid, I had scarlet fever, and they tacked up a sign on my house and nobody could come near me. But a small gent with a black bag walked right in . . .

"I remember asking my mother, 'Can't doctors catch scarlet fever?' She said they couldn't—but she was fibbing. The list of doctors who were killed by the bugs they were chasing would stretch from here to Valhalla . . .

"Of course, the great standouts of medical science don't need any ballyhoo from me. But the doctor who rides around in that 1947 Chevvy could use a little applause. In a civilization that rates a guy by how big a check he can write, the doctor knocks his brains out for less than we pay a bricklayer or a plumber. Sun or slush, he's on tap if you're in trouble. Twenty-four hours a day he stands ready to stop what's hurting you.

"To me that's as important as anybody can get."

(Editor's Note: In these times when it seems that so many writers are eager to pounce on any facet of medical practice, and in most cases write only the side of the particular question that is derogatory to the doctor and only rarely present the matter fairly, your Editor felt that this month he would put in the Guest Editor's Page some notes picked up at random that eulogize the doctor. C. C. N.—*Summit County Medical Bulletin,* January, 1955.

POLIO VACCINE CONFUSION AND FACT

(Continued from Page 648)

it illustrates the "anticipatory PR" which was the keystone of the MSMS position from the beginning. The basic elements are these: On April 19, 1954, MSMS scheduled a statewide telecast as one positive way of presenting its viewpoint on polio vaccine to the people of Michigan at a time when sound counsel seemed a necessity. In this telecast the Chairman of The Council outlined certain reservations MSMS held with regard to the polio vaccine field trial. He emphasized at that time that a product with no official certification of safety and potency was to be used; he declared (1) that the field trial was "mass inoculation of selected children as part of a scientific experiment"; (2) that the prerogative of the family physician to determine the immunization procedures for children under his care should not be by-passed, (3) that family physicians should have access to vaccination records of children involved in the experiment, and (4) that timing of the trials collided with the onset of the polio season.

In 1955, thirteen months later, distribution of the licensed vaccine had been halted twice, and the Federal Department of Health, Education, and Welfare made recommendations including (1) that the Public Health Service must be given "every facility . . . necessary additional funds and personnel, to insure maximum precautions in continued testing of the vaccine for safety and potency"; (2) that physicians should keep detailed records of each child vaccinated and the lot number of the vaccine, and (3) that manufacturers keep complete records of the distribution of every lot. Meanwhile the Surgeon General confirmed that it will not be possible to immunize "most children before the peak polio season" this summer.

THE REMARKABLE RESEMBLANCE between these two statements—made a year apart—is immediately apparent, further confirming the wisdom of the MSMS Executive Committee and

(Continued on Page 696)

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Say you saw it in the Journal of the Michigan State Medical Society

What They Thought of the 1955 Michigan Clinical Institute, Detroit

Theodore G. Klumpp, M.D., New York City (guest speaker): "It was a great privilege to participate in the 1955 Michigan Clinical Institute. If I succeeded in making a small contribution to the success of the occasion I shall feel well rewarded.

"I think you have every reason to feel proud of the Michigan Clinical Institute. I have attended many medical meetings but I can say in all frankness that I never had the privilege of participating in a meeting that was better organized. The program itself was outstanding, the expressions of hospitality to speakers and guests were most gratifying. It was a pleasure to be with you and the event was one that neither Mrs. Klumpp nor I shall soon forget."

Alexander Brunschwig, M.D., New York City (guest speaker): "I want again to express my profound thanks for the invitation and for the high honor bestowed upon me by the Michigan Clinical Institute."

Leo H. Bartemeier, M.D., Baltimore, Maryland (guest speaker): "It was an honor to be invited, a pleasure to return home, if but briefly, and last, but not least, to have enjoyed another little visit with you."

M. Edward Davis, M.D., Chicago (guest speaker): "Please convey my thanks to the officers of the Michigan State Medical Society for my invitation to participate in this year's Clinical Institute. I enjoyed my visit to Detroit."

T. B. Quigley, M.D., Boston, Massachusetts (guest speaker): "I enjoyed myself thoroughly in Detroit; in particular, Harold Fenech went far beyond the call of duty in taking care of me. I have never encountered a more pleasant host."

Grayson Carroll, M.D., St. Louis, Missouri (guest speaker): "I wish to thank the Michigan State Medical Society for the fruit in my room and fine hospitality, especially Dr. Schroeder's wonderful care of me."

G. M. Wheatley, M.D., New York City (guest speaker): "Please let me express my great appreciation for the many courtesies extended to me by the Society and especially Dr. Wishropp's fine hospitality."

William Dock, M.D., New York City (guest speaker): "The trip and the meeting were most agreeable. Thanks to the kind attention of my host, Dr. Segar."

Cyrus C. Sturgis, M.D., Ann Arbor (honored guest): "I am writing to thank you for the part you played in arranging the dinner last night, which included me as one of the honored guests. For many long years you have served the Michigan State Medical Society faithfully and effectively, and your efforts have contributed largely to the growth of that organization.

It was a great honor to me to receive the plaque and I am most appreciative of the entire affair."

Eugene B. Ferris, M.D., Atlanta, Georgia (guest essayist): "It was a real pleasure to have been with you in your meeting, and I regretted I could not be there for a longer time."

John R. Fowler, M.D., Barre, Massachusetts (guest essayist): "Thank you for the many courtesies shown me on my recent trip to Detroit. Everything at the Michigan Clinical Institute was perfect, including the fine fellowship I enjoyed with my friends and new acquaintances. Your Program was wonderful and the meeting a great success. I shall long remember it. I am looking forward to our next get-together."

H. M. Pollard, M.D., Ann Arbor (honored guest): "I just want to take this occasion to tell you that as one of the participants in the banquet sponsored by the Michigan State Medical Society last month in Detroit, that I was personally most appreciative.

"Frankly, I felt that my justification for being a part of this occasion was rather minimal, but, nevertheless, I enjoyed being included and want to thank you personally for everything you did in connection with this marvelous occasion."

Leland I. Doan, Midland (honored guest): "Just a brief note on my return to the office to try to thank you for the cordial hospitality extended to Mrs. Doan and to me.

"I felt greatly honored to be included in your program and must say the reception to my efforts on the part of the people attending the dinner was very gratifying to me. I just remarked to some of our folks that I think doctors and their wives are the finest group I could meet with."

G. J. Curry, M.D., Flint (honored guest): "This communication is for the purpose of establishing a permanent record of my gratitude to you for having considerable to do with the scroll, and its contents, given to me last Wednesday afternoon.

"I have always valued our friendship together deeply and I hope that we have many more years to see each other.

"Please convey, officially, to The Council and Officers of the Michigan State Medical Society my gratitude for the honor that they gave me on March 9."

S. W. Leslie, M.D., Toronto, Canada (guest): "May I at this time extend through you to the Michigan Clinical Institute my sincerest thanks for affording me the opportunity of attending the 1954 clinics.

"I would like to state that after attending numerous conventions and clinics, in my opinion I have yet to attend one which was so well organized in both presentation and clinic material which could equal the one I recently attended in Detroit. From a G.P. standpoint, I found the subjects to be most interesting and definitely of great future benefit and profit to myself and my patients.

"Looking forward to returning to Detroit next March for the 1956 Michigan Clinical Institute. Thanking you again."

E. T. Sager, M.D., Marion, Ohio (guest): "I am writing concerning the recent Michigan Clinical Institute which I was privileged to attend. It was a very fine Institute and I am happy indeed to give you a few lines regarding its value to me.

WHAT THEY THOUGHT OF THE 1955 MCI

"I attended the Michigan Clinical Institute this past March because I had attended the previous one in 1954 and received so much valuable, practical help in my practice as a general practitioner in the medical field. The Institute was so all-inclusive because it took in the general medical and surgical field showing the recent developments in all branches of medicine. It was not too highly specialized, as many conferences are, to be of real help to the doctor who still is known for his general practice and as a good family physician.

"The exhibits were wonderful and quite self-explanatory. The Winthrop Progress Report of Medicine dating back to 1900 was excellent and one of the best histories of the development of medicine I have heard."

R. F. Staudacher, Chicago (guest): Thanks for your wonderful hospitality and the chance it gave to meet and greet old friends. 'Your' meetings are always something to be marveled at."

M. Lucille Myers, R.N., Detroit (guest): "We would like to express our thanks to your society for the privilege of holding our 1955 Operating Room Nurse Conference in connection with the Michigan Clinical Institute. Many courtesies were extended to us by your association, the Michigan Clinical Institute, and William J. Burns. In short, we were made to feel most welcome.

"Many thanks also for sponsoring two of our speakers. This assistance was of great help to us.

"We shall anticipate other such good relationships with your organization in the future. If we can be of any service or assistance to you in any way, please call upon us."

Vernon C. Mossman, Port Huron (guest): "As a member of the Michigan Pharmaceutical Association. I accepted your invitation to attend your Clinical Institute, March 10.

"The day was spent visiting the exhibits and listening to your program of fine lectures.

"I wish to thank you for your thoughtfulness and kindness to offer such courtesy."

Morton Hack, Detroit (exhibitor): "Just a note of appreciation for the best Michigan Clinical Institute ever! The attendance was not only large, it was interested. The exhibitor can tell if a meeting is stimulating to the doctors, there is that ineffable something which is exuded, shines from their countenances. This meeting had it!

"Incidentally, I was never so worn out from a three-day meeting—never so many interviews."

STUDENTS VISIT RESEARCH LABORATORIES



Members of the junior class of the University of Michigan Medical School visited Eli Lilly and Company, April 6-9, 1955. While guests of Lilly's, they inspected the Lilly Research Laboratories and toured pharmaceutical, biological, and antibiotic production facilities.

John L. Kihm, class representative, is sixth from the left in the first row.

Olga C. Budds (first row, fifth from left) and Jean D. Golden (first row, seventh from left) are members of the class. Other women in the picture are students' wives.

Walter H. Stein, Lilly representative in Ann Arbor, accompanied the group to Indianapolis. A 1954 graduate of the University of Michigan, he is fourth from the left in the first row.

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Say you saw it in the Journal of the Michigan State Medical Society

The JOURNAL
of the Michigan State Medical Society
Issued Monthly Under the Direction of The Council
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The Doctor in Civil Defense

By Lawrence A. Drolett, M.D.
Lansing, Michigan

CIVIL defense in this country becomes a very serious problem and responsibility of the doctor of medicine. While I realize that the public at the present time is very apathetic about civil defense, which comes about either by an unwillingness to recognize the impending dangers at hand or the fact that this great nation of ours has never been subjected to the severe catastrophes that have visited European countries, nevertheless, it is our duty as physicians to be prepared to render a heroic service to the people of our nation in the event of a disaster, either of local or national significance.

At a recent meeting in Chicago, of national civil defense co-ordinators from Indiana, Illinois, Michigan, Wisconsin and Minnesota, two days were consumed in discussing the problem on how the medical forces were going to function in the event of an H-bomb disaster. Some time was spent discussing what would happen in the event of a local disaster, such as a fire, flood, et cetera. After listening to various government officials and various medical co-ordinators from local communities, states, and national civil defense organizations, it becomes apparent that we, at the present time, have a super-human task to do, in face of great odds, to bring the medical profession up to date to cope with such a possibility. I am proud to say that Michigan was the best represented of all the areas, and my impression was that we in Michigan, at the present, are temporarily better organized than other areas with the exception of the city of Milwaukee. Still, there is much heavy work to be done, much co-ordination to be accomplished.

The Milwaukee plan is very well conceived and very well organized, in the event that Milwaukee should become a target area, to evacuate the population of that area and set up emergency medical centers in the regions adjacent to and removed from any bomb area site. They have made arrangements with surrounding counties for temporary hospitalization and organization for treatment of patients for definitive medical care, and their keen interest in their problems involving the population of that city is highly commendable.

I can write locally for our setup in Lansing, Michigan, and can state that the medical profession is tentatively organized to cope with a local disaster and needs only more co-ordination on a state level to be able to assist and be of service not only to the local community but in a well-organized well-thought-out plan for state co-operation, in the event that such a target area might be Detroit or the surrounding metropolitan area. The Ingham County Medical Society has offered the service of its former Disaster Relief Committee which has been accepted by the local civil defense organization.

Briefly, the plan consists of, first, a Medical Co-ordinator who will be in charge of co-ordinating all medical services in the county in the event of a disaster; second, a well organized Field Group of Doctors who will proceed to the immediate scene of the disaster and render such emergency first aid medical care as will be necessary, and third, well-organized hospital groups and teams, consisting of surgeons, internists and anesthetists who will immediately proceed to pre-assigned hospital destinations. There they will proceed with

the task of, first removing from the hospital all convalescent patients who can be safely discharged either home or to other medical facilities, and second, getting ready to receive new casualties who will be admitted by the Field Group. To this Group are assigned physicians and surgeons who live in the area closest to their assigned hospital. At present, we have four available hospitals to which these men will proceed, where definitive medical care can be given to the victims of the disaster by trained medical specialists working in teams.

The Field Group, besides responding to the scene of the disaster, have four immediate surrounding township fire stations to set up as emergency field collecting stations. We have stockpiled OCD supplies in these various localities to give temporary care for casualties, and, in addition, the county medical society has furnished three disaster relief trunks, two of which are in the emergency room of both large hospitals and the third one at the headquarters of the fire department. These latter are fully equipped with surgical dressings, gowns, rubber gloves, sterilized emergency field supplies equipment, 7 units of plasma, and enough narcotics to last for a period of several hours. All this equipment is inspected annually and replaced and re-sterilized and can be brought to the field of the disaster within a few minutes. These temporary supplies should aid in an emergency for a period of from one to six hours, giving time then to organize new lines of supplies and also for the Office of Civil Defense to move in and aid in our program.

We have been aided in our emergency field work by co-ordination with the local county Civil Defense Office in having set aside a system of two-way radios, which will be for the exclusive use of the doctors, manned by the amateur radio operators in the county. A powerful portable field unit can be installed and set up anywhere in the county and, by way of portable two-way transmitters in the automobiles of the amateur radio operators, will afford communication from the center of the disaster to any hospital or any field unit that the medical co-ordinator so designates. It has been my happy experience that the local county Civil Defense Director has been more than willing to co-operate and assure himself of adequate medical care by furnishing us all the material that he possibly can, and it becomes our duty to get deeply interested and reassure him by action that we are more than willing to co-operate with him.

From my vantage point, the big necessity that is seen now is the organization of the medical force of the entire state and particularly of the heavy industrial area of Michigan, under the co-ordination of a full time civil defense medical director to train and instruct, so that should a disaster strike an area such as Detroit, then Ingham County, Jackson County, Calhoun County and other neighboring counties could move into the surrounding area with field units and trained medical experts and set up temporary hospitalization and medical care for the striken area, assuming that this area, in the event of an H-bomb, will be completely wiped out and of no value whatsoever. This was the feeling that I gained from the meeting in Chicago, that we, the doctors of medicine of Michigan, are ready and willing, and what we need is organizational co-ordination. I am sure that, as in the past, we will come to the front and do a justifiable job in the event that such an unpredictable disaster should occur. There seems to be much hue and cry in other areas that nothing can be done for lack of interest and funds on the part of the Federal government. While that may be true, it is my belief that in the event of such a disaster, this is going to be the job and the task of the local citizens in the local area first, to render first-aid and medical care to stricken people, and the kind of job we are organized to do is either going to reflect credit or devastating criticism upon our profession. I believe that a well-organized meeting between the State Civil Defense Director and the Committee on National Defense of the Michigan State Medical Society, with some constructive thinking and well-thought-out projection is in order. I also believe that our new State Civil Defense Director, C. F. Van Blankensteyn, will welcome such a meeting to find out just where the doctors of medicine stand and also to stimulate our interest in this endeavor in which we should be leaders. Let's move before it is too late.

Psychiatry and the General Practitioner

By Arthur P. Noyes, M.D.
Norristown, Pennsylvania

THE subject of this talk may suggest that I propose to discuss the fact, now well recognized, that many physical complaints and symptoms reflect the emotional stresses incident to everyday problems of living, particularly from feelings that arise under difficulties in living either with ourselves or with certain people with whom life throws us closely. The general practitioner now recognizes however that many physical complaints formerly characterized as "functional" really arise from the fact that chronic emotional states may stimulate the vegetative nervous system with resulting disturbance of physiological functions which, if persistent, tend eventually to produce pathological changes. Frequently 30 per cent of his practice will consist of patients who present symptoms that have no organic basis but arise from life situations that provide no emotional satisfactions or ones that give rise to anxious tensions, feelings of hostility or guilt, to bottled-up resentment, smoldering disconent and other disturbing emotions.

Instead, therefore, of discussing psychosomatic medicine I will present some of the basic principles of psychiatry. I realize that the recent graduate will find this boring because it is "old stuff" that was better presented in medical school, and the older practitioner may find it equally uninteresting because it is theoretical and lacks objectivity, measurability and other demonstrable evidence exacted by science.

First, what is psychiatry? Perhaps it can be defined as that branch of medicine which deals not only with the clinical manifestations and treatment of disturbed thinking, feeling and behavior but also with the influences that gave rise to these disturbances, and how these influences operated to produce symptoms that although apparently meaningless have nevertheless a real meaning and serve some purpose in the mental and emotional life of the patient. It will be noted that in this definition there was no mention of the word "mind." There need not be any objection to the use of that word if it is used as a collective designation for certain functional activities of the organism, as one aspect—the psychological aspect—of its functioning, and not a metaphysical entity having an existence parallel with the body. The dichotomy which is implied by mind and body does not exist in the organism. They are inseparable expressions of life itself, two different aspects of one fundamental unity of biologic functioning which we separate only for convenience of discussion.

Sometimes psychiatry is spoken of as the branch of medicine which deals with such disordered and undesirable functionings of the personality as disturb either the subjective life of the individual or his relations with other persons or with society. But, what, you will ask, do we mean by personality? Perhaps I can best define this by an analogy. It is obvious that processes of maturation and development of the body go on from the time the organism is formed by the fusion of male and female germ cells until adult maturity has been reached. At any time during this biological development noxious factors may limit the growth of the organism, produce malformations or impair the functioning of an organ or of the entire living being. Each person, therefore, has an anatomical structure conforming in general to the species pattern, yet unique in certain details. Likewise the human being gradually develops enduring patterns of temperament, intelligence, beliefs, desires, motives, character and adjustmental methods that give him an individual uniqueness. The distinctive whole formed by the integration of these relatively permanent patterns may be spoken of as personality and its maturity attained only through successive stages of maturation.

Attention was called to the fact that during biological development of the organism noxious factors may limit or distort its growth or impair its functioning. Likewise arrests or deviations may occur during development of the personality. Issues at one developmental level must be dealt with fairly conclusively before those of a higher level can be managed successfully. Each stage of development, too, should be characterized by patterns of feeling and thinking appropriate to it. To return to the definition of psychiatry from the standpoint of personality. Psychiatry may be briefly defined as the study of the pathogenesis and

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pathology of the personality and the application of therapeutic techniques to its disorders.

Of all experiences and factors those that have the most determinative influence upon the growing, plastic personality of the child are those that spring from the emotional, personal, interacting relationships between it and members of his family. The external shaping of the personality starts with parent-child relationship, particularly with that of the mother and child. Many consider a wholesome mother-child relationship as vital for emotional growth and healthy personality development as are vitamins for physical growth. Essential as a foundation for future healthy personality development the child must have a feeling that he is wanted, loved and enjoyed by his parents. He should not, however, remain dependent on a mother for maintaining emotional security.

Quite early in the growth of the child's personality some psychological processes come to function on a conscious level while others operate on an unconscious level and exert their influence on the individual's life without his knowing of their existence. While further development of the personality continues to be directed from both of these levels, its pattern, whether rigid or neurotic, or flexibly adaptive to changing external realities, will depend largely on the extent to which psychological and emotional needs from these two levels pursue incompatible goals and to what extent unconscious motives and objectives dominate the personality. The type of personality pattern the individual works out for himself in his effort to meet the stresses of life will be influenced by many things. Among them will be the nature and number of the psychological defenses which he constructs against tendencies which he cannot consciously acknowledge or against feeling-attitudes toward persons who have occupied key positions in his life, particularly during childhood. If one develops a multiplicity of such mental defenses designed to reduce tension and anxiety, a constricted type of personality results. If these defenses become pathologically exaggerated or disorganizing, they eventuate in the neurotic or psychotic personality.

Since psychiatry is a branch of medicine that deals with the mind, its pathology cannot be explained in terms of disturbed biochemistry, degenerative processes or the usual ones seen daily in many other branches of medicine. Prior to the time of Adolf Meyer, professor of psychiatry, Johns Hopkins University, from 1910 to 1941, psychiatry had not advanced much beyond the descriptive stage. There seemed to be certain groups of symptoms that were found in association. It was thought that since these symptoms were associated together they must arise from a definite disease entity. Meyer took a broader view than that. Since man is a biological organism, he said, one should approach the study of man from a biological standpoint and consider his mental life as but one aspect of his biological functioning, yet one that is influenced by all the factors that act on man as a biological organism. Meyer stressed the concept that mental expressions of life are no less biological than are physical ones and that the psychiatrist should study man's mental expressions as an interaction of an individual organism with its life situations. He insisted that since the patient is both a biological and social organism one should study not only the organic aspects of the individual but also the sociological, cultural, experiential and psychological aspects of the patient. Mental illness, to Meyer, was a response to the special, complex life situation in which the individual is placed. He taught that one must consider the whole setting and uniqueness of circumstances in which the mental disorder occurred and that the mental disorder should be looked upon as a reaction or mode of behavior, a faulty adaptation understandable in terms of the individual's life history.

Meyer's contribution was one of the utmost importance. Its naturalistic, biological approach to a study of the personality, including its psychological aspects, was more comprehensive and meaningful than any previous one. In the opinion of most psychiatrists, however, it should be supplemented. It is generally felt that Meyer did not realize the extent to which psychological activities take place without conscious recognition. It is now pretty generally accepted that one has many impulses, desires and emotional responses which are inaccessible to his introspective observation and are therefore termed "unconscious." Let me illustrate how some mental processes operate without conscious awareness and yet as if with designed purpose. During the course of its evolution every species has developed various means and mechanisms whereby it may obtain an adjustment to the life conditions it must meet. Many butterflies, for example, develop a protective coloring whereby they so stimulate the appearance of

the surface on which they rest that they escape detection by their enemies. Since adaptation is the very essence of life, it is not strange that man as the most highly developed species has developed not only anatomical adjustments which protect him structurally or physiologically in respect to his environment but has also evolved psychological devices that give him emotional support and protection. These devices or mental mechanisms, as they are called, afford the individual a sense of security, preserve his self-esteem, gain a desired recognition of himself, provide defense against perturbing anxiety or meet other emotional needs. The self-conscious personality with its intense need for a sense of security and self-esteem evokes mechanisms of a protective nature as instinctively as self-preservation prompts the avoidance of approaching physical danger. Just as the body through its physical and biochemical processes strives to maintain a physiological equilibrium or homeostasis, so the personality through automatic and unconscious psychological processes seeks to maintain an emotional or psychological stability.

When we come to examine the various adjustive techniques by which individuals strive to protect the personality, to satisfy its emotional needs, to establish and maintain harmony among its conflicting tendencies, to reduce tension and anxiety arising from unacceptable impulses that must be counteracted or restrained, or to modify reality in order to make it more tolerable, we find these techniques fall into rather definite types unconsciously selected to meet the personality needs. We see the individual use the same techniques, the same defenses automatically employed over and over in the various situations to which he must adjust. Please understand that a moderate employment of many of these techniques does not by any means indicate that the one employing them is suffering from mental disease. In many of them are to be found processes that govern all of us and give outstanding characteristics of many well adjusted and useful personalities. These intrapsychic operations acting without conscious recognition on the part of the individual become inextricably woven into his behavior pattern and will be found to be operative in a variety of mental manifestations ranging from character traits through slight deviation from the norm to profound psychic disturbances.

Many of our concepts concerning these mental mechanisms by means of which people deal with their problems are too technical for presentation here. I will, however, mention a few of the simpler forms and illustrate how they act. One of the common techniques is that known as compensation. Physiological and physical compensations are phenomena which the internist and the surgeon see daily. If a valve of the heart cannot perform its function properly, the heart muscle hypertrophies in order that additional force may be available to compensate for the insufficient delivery of blood to the tissues that would otherwise follow. Such a compensation represents an attempt of an organ to adjust to a physiological defect and inadequacy. Similarly the organism as a whole, in distinction from its component organs, by compensating for its inadequacies and imperfections often attempts to secure the recognition which it craves. Such compensations may easily become exaggerated and unwittingly betrayed by one's behavior. The person of small stature but with aggressive self-confidence is an example of overcompensation familiar to all. The need for prestige seems to be one of the fundamental ones of the personality. Measures of enhancing our self-feeling and of covering up our deficiencies are widespread and vary from the simple "showing off" seen daily on the playground or the pretentious display observed in "Peacock Alley" to the formation of delusions of grandeur. A boy who was so tall, awkward and ungainly that he had always been extremely self-conscious of his figure and manner enlisted in the army. (Probably without consciously realizing it he had been prompted to enlist because the military uniform and a certain glamour connected with military service seemed to offer hope of relief from the unpleasant sense of being different from others.) Here he soon became an object of raillery because of his clumsiness in attempting to execute drills. After having struggled in vain for adeptness, the boy was placed in the "awkward squad' where he naturally felt even more self-conscious and more painfully aware of his deficiencies. The indignity suffered by his self-esteem was too great; the need of his personality for a more satisfying recognition and for a sense of security exceeded its limited resources, and he therefore constructed a fictitious substitute by developing the belief that he was a major general. He was no longer the awkward soldier unable to compete with his peers but was

their commander and directed affairs of great military importance.

Another defensive psychological device that operates without awareness is that known as projection. One may see this acting daily to a limited degree among his associates and to a psychotic degree in paranoia and the paranoid psychoses. By this mechanism one directs outward and attributes to others his disclaimed and objectionable character traits, attitudes, motives and desires. One constantly meets people who discover in other persons the very same faults which are the weak points of their own character, utterly failing to recognize the fact that they themselves are really the ones who possess the despised traits and motives. Feelings of guilt may be alleviated if one is able to cast the blame for his shameful tendencies or wishes onto the outer world, leaving himself guiltless. As a further defense against the feelings which would naturally be aroused and against which he must protect himself, he may respond with hostile and aggressive behavior toward the person who is the focus of his projection.

During World War I an American soldier in order to escape from a highly dangerous situation shot himself in the foot. He was at first treated in an army hospital in France and later transferred to the States where the self-inflicted wound healed slowly. The retrospective sense of guilt created by his cowardice and dereliction was alleviated psychologically by projection. The delay in the healing of the foot was due, he began to believe, to neglect by his physician. The soldier felt no self-reproach since it was not he but the physician who was culpable. Soon he secured a gun and shot but fortunately did not seriously wound the physician. He, of course, was quite unaware that the attempt he made on the life of the physician was an effort to destroy qualities of which he was the actual possessor.

There are various other mental mechanisms that may be operative in the production of personality disorders, in the neuroses and in the psychoses, but many of them are more complicated in their operation and less transparent in the purpose they serve. All of them, however, represent automatic protective devices by which the human personality attempts to repair its defects, meet the demands of life without and of instinctual drives within, attain a sense of security, reduce tension and anxiety, preserve its self-esteem and satisfy its emotional needs. Many blind spots, many self-defensive attributes of character, personality façades, many attitudes and beliefs, much behavior seen in every day life, as well as many symptoms of the neuroses and psychoses, may be explained and formulated in terms of these mental mechanisms which should be regarded as reaction patterns occurring in the setting of the person's life experience. Pragmatically they should be regarded as pathological but are nevertheless quite understandable. Although varying with each individual, many of them contribute to the personality features and characteristics of the so-called normal as well as those of the mentally disordered person. The pathological defense mechanisms may merely produce rigid, constricted personalities, too impoverished emotionally to enjoy the positive aspects of living, or they may so disorganize the personality that it cannot tolerate reality.

Please do not think that I have overlooked the fact that some mental diseases are caused by or associated with impairment of brain tissue functions. These disturbed mental states are spoken of as organic reactions, and the symptoms are caused by some agent or process which has impaired the functions of brain tissue with resulting weakening in capacity for intellectual functioning, manifested principally by confusion, impairment of orientation, of memory, difficulty in grasping the meaning of questions and of facts and a disturbance in judgment. Some of these organic syndromes are acute and reversible, as in toxic states, others are irreversible and progressive, as in senile dementia.

Most mental disorder, however, is not a disturbance in the function of a single organ, like the brain, but the maladapted and disordered behavior of a particular individual. Physiological disturbances of the brain cannot alone explain disturbances in belief, mood and behavior. As indicated, there is no functional imperfection in the nerve tissue of the brain; rather does the mental disturbance represent the reaction of an individual personality to its special life situation, including its social and emotional experiences. Such disturbances are described as psychogenic, i.e., the sources from which they sprang are "mental" and are related to emotional needs, guilt-producing situations, irreconcilable desires, disturbing interpersonal relations and other emotional stresses and tensions.

Earlier I commented that one often notes certain adjustive techniques, certain psychological de-

fenses, as it were, so consistently employed that they are woven into the individual's personality characteristics and particular traits. If later he becomes psychotic, the form of his psychosis suggests that it is but an exaggeration or caricature of his previous personality and that in general the same defenses and psychological techniques are being employed as during his prepsychotic life. The same psychological theme, as it were, runs through personality, character traits and psychosis. This is true of many psychoses but is perhaps particularly noticeable in involutional melancholia in which a certain general type of personality make-up and habits will be found in the prepsychotic life. A review of the patient's previous personality and temperament often shows that she has been an inhibited type of individual with a tendency to be quiet, unobtrusive, serious, chronically worrisome, intolerant, sensitive, scrupulously honest, frugal, even penurious stubborn, of stern, unbending moral code, lacking in humor and overconscientious. Usually she has been perfectionistic, exacting in her own standards of behavior, prudish and prone to feelings of guilt. Often the patient's interests have been narrow, her habits stereotyped, she has cared little for recreation and has had but few close friends. Frequently the patient has been a loyal subordinate, meticulous as to detail rather than an aggressive, confident leader. (Many have been fidgety, fretful, apprehensive persons. Others have been characterized by caution or indecision.)

The age at which the psychosis develops is one when adjustments to new situations and circumstances are no longer easily made. Perhaps life has not brought either the success or satisfaction that hope had cherished. At this period there is a more or less conscious recognition that early dreams and desires cannot now be fulfilled, that the zenith of life has been passed and that ambition and life's forces are waning. The fact that opportunity no longer exists for repairing old errors or achieving new success creates a sense of frustration and increases the feeling of insecurity. In women loneliness or fear of a loss of physical attractiveness may be a contributing factor. Perhaps old friends are beginning to die, or children to whom the patient has devoted her life are leaving home and are becoming preoccupied with their own lives and families. She may feel that she is no longer needed.

The manifest symptoms of the psychosis are often preceded by a period during which the patient exhibits hypochondriacal trends, becomes irritable, peevish, pessimistic, is perhaps suspicious and shows a disinclination for effort. She is unable to concentrate and shows doubt and indecision. The patient complains of distressing sensations in the head, eats poorly, loses weight, worries about health or finance and become apprehensive and restless. The depression increases and the patient becomes agitated, anxious, expresses delusions of sin, unworthiness, disease and of impending death. The patient's appearance becomes one of extreme emotional pain and misery. The fear, apprehension and agitation increase. Not infrequently ideas of suicide are entertained and perhaps attempts at ending her life are made. It will thus be seen that we must not think of the involutional depressive reaction as a circumscribed disease entity resulting from clearly defined bodily changes but rather that we have to do with an individual whose mental disorder is the logical but unfortunate culmination of lifelong personality tendencies.

I am somewhat troubled by the fact that this presentation has had very little or no material that has been of clinical value. I trust at another meeting someone else will present that important aspect of psychiatry. It occurred to me, however, that perhaps on one occasion a few of you might be interested in some of the ways in which the mind operates in all human beings, both in those who are subjectively and socially well adjusted and are therefore called healthy in mind, and in those who are not so adjusted and are therefore called mentally ill.

Dysphagia is the most significant symptom of esophageal cancer. Approximately 80 per cent occurs in males.

* * *

Early diagnosis of esophageal cancer is possible only when a cervical, retrosternal or epigastric abnormal sensation is not regarded as a neurosis.

Esophagoscopy is indicated in every patient complaining of difficulty in swallowing, in patients over forty years of age when the cause of difficulty is in doubt.

* * *

Gastric polyposis is rare but is considered precancerous.

Intestinal Obstruction after Gastric Surgery

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INTESTINAL obstruction is not an uncommon occurrence following gastric surgery. There are many operative procedures which may be performed upon the stomach. Each may present some particular hazard toward small bowel obstruction because of the anatomical changes that were made in the stomach or duodenum. We shall concern ourselves in this paper with only three of the most common surgical gastric procedures. These are: (1) closure of a perforated ulcer; (2) gastrojejunostomy (anterior or posterior), and (3) gastric resection The gastrojejunostomy and gastrectomy may be performed with vagotomy.

Intestinal obstruction is an uncommon sequeli following the surgical treatment of perforated peptic ulcer whether duodenal or gastric. The obstruction may be divided into two main groups. In the first group would appear the non-specific type of intestinal obstruction following closure of a perforated ulcer. By non-specific we mean that this type of bowel obstruction might occur after any abdominal operation as a result of adhesions, plastic exudate or peritoneal infection. The specific type of bowel obstruction after closure of a perforated peptic ulcer is that type which is due to that specific procedure directly.

In the non-specific type of small bowel obstruction a knuckle of bowel may become adherent to the incision in the anterior abdominal wall and result in obstruction, or a loop of bowel may become adherent to the abdominal wall with a volvulus effect, or a loop of bowel may slip through or around a loop so attached resulting in a small bowel volvulus of varying extent. There are many and varied types of intestinal obstruction due to adhesions which form following any abdominal procedure and the closure of a perforated ulcer is not an exception.

Specifically the closure of a perforated ulcer would seem to carry little or no hazard in the causation of small bowel obstruction. This is not the case. A knuckle of bowel may become adherent to the point of closure and so become obstructed. This is particularly likely to occur if long "tails" are left upon the suture used in the closure. If a live loose-attached omental graft is brought up and sutured over the point of perforation, a loop of bowel may slip through the loop so formed and thus produce intestinal obstruction. The closure of a perforated ulcer by purse-string or plicating sutures may so narrow the duodenum or pylorus that stenosis results. In addition to these, the not infrequent subphrenic or pelvic abscess which results from a perforated peptic ulcer may cause bowel obstruction. This may be of three main types: (1) the abscess may produce intestinal obstruction by the edematous changes or a plastic exudate upon the bowel in contact with it; (2) the abscess may be large enough to cause bowel obstruction by compression; (3) as a late sequeli of an abscess violin-string adhesions may form which cause bowel obstruction years later. In addition to the above types of mechanical obstruction, a paralytic ileus is a usual accompaniment of all intra-abdominal infectious processes.

Posterior wall ulcers may penetrate into the pancreas. Although this does not generally result in a diffuse peritonitis, it may cause paralytic ileus as a result of infection in the lesser peritoneal cavity or a pancreatitis of varying degrees. The clinical findings in a case of this type would be those of paralytic ileus due to the penetration of the posterior wall ulcer into the pancreas. The treatment in a case of this type should be conservative if a diagnosis is made clinically. In those cases in which a diagnosis is not made clinically and surgery is performed an opening should be made through the gastro colic omentum and the perforation closed. If the patient is seen early enough gastric resection has been advocated as definitive surgery. Generally cases of this type had best be treated by suction and intravenous alimentation.

Gastroenterostomy and sub-total gastrectomy are by far the most common operative procedures upon the stomach. Of the two, partial gastrectomy is the most common. Each of these procedures, however, carries with it the danger of small bowel obstruction.

The first case in which obstruction and intestinal loop detachment occurred following gastroenterostomy was the case described by Kehr in

1899.[6] This was only 18 years after the first gastroenterostomy had been performed by Wolfler.[14] Although isolated case reports of this type have appeared in the literature from time to time, it still remained a rather uncommon accident. This is especially true in this period in which gastroenterostomy has lost much of its popularity. The type of small bowel obstruction specific to the operative procedure of gastroenterostomy depends to some extent upon whether an anterior or posterior gastrojejunostomy was performed, and in addition whether it was iso-peristaltic or anti-peristaltic.

The most uncommon type of small bowel obstruction is the type described by Hellens and Nummi,[4] in which following an anterior gastroenterostomy with an entero-anastomosis between the loops, some years later it was found that the gastroenterostomy stoma had completely closed. The intestinal loop had become detached from the stomach and had obstructed. A second rather uncommon complication producing small bowel obstruction is due to jejunal prolapse following gastroenterostomy.[11] This occurrence is rather uncommon but by no means rare. Aleman[1] in 1948 reviewed the literature and reported seventy cases of an acute or chronic type to which he added two cases of his own. In an obstruction of this type, the process may be acute or chronic. In some cases the prolapse reduces itself spontaneously and such cases do not require surgical correction. In the acute type of prolapse surgical correction is indicated particularly if the patient is in good condition. In such cases, the gastroenterostomy should be taken down and a partial gastrectomy performed.

If a posterior gastroenterostomy is performed and if the stomach proximal to the line of anastomosis is not well anchored to the opening in the mesocolon, it may tear through with the result that the afferent and efferent limbs of the gastroenerostomy may be so compressed against each other through the small opening that they become obstructed. The signs and symptoms would be those of high intestinal obstruction. The treatment would be prompt surgical correction. Another type of intestinal obstruction following posterior gastroenterostomy may occur. If the jejunum is anastomosed to the dorsal surface of the stomach incorrectly on a horizontal plane, when the patient assumes the erect position the loop of jejunum will tend to twist on its long axis. As a result, the proximal or distal loop may become obstructed at its end. This is particularly apt to occur if the jejunum has become somewhat edematous. In cases of this type signs and symptoms of intestinal obstruction appear within the first ten days. It is imperative that the gastroenterostomy be taken down, the bowel resected, and a new gastroenterostomy properly placed.

In those cases in which an anterior gastroenterostomy is performed, hazards of a different type may occur. If the proximal loop is anastomosed to the greater curvature as a short loop and the distal loop anastomosed to the pyloric side in an iso-peristaltic fashion, volvulus of the proximal or distal loops is unlikely. Retrograde intussusception of the distal loop may occur however through the anastomosis producing intestinal obstruction. A second type of obstruction may result if a loop of small bowel passes into the space lying between the gastroenterostomy in front and the transverse colon behind. Such loops of bowel may slip into this space from left to right or from right to left causing volvulus of the small bowel so internally herniated. Surgical correction as soon as possible is required in such cases because of the marked tendency toward strangulation due to the volvulus.

In cases in which an anti-peristaltic anastomosis is performed by anastomosing a long afferent loop to the pyloric side and a distal loop to the greater curvature side, and if the mesentery is short, it is possible for the mesentery to compress the afferent loop as to produce intestinal obstruction.

Taking down this anastomosis and making an iso-peristaltic type of anastomosis would be the corrective procedure.

Stomal obstruction due to edema, infection or kinking may occur at the opening of the proximal or distal loop into the stomach. If the proximal stoma is obstructed, bile and pancreatic juice will regurgitate into the stomach through the pylorus if patent. If the pylorus is completely stenosed, great duodenal distention may occur. If the stoma of the distal loop becomes obstructed, the line of anastomosis may be jeopardized by the distention of its wall. Serious consequences from proximal or distal jejunal loop obstructions at the stoma are rather uncommon because in most cases the pylorus is patent so that bile and pancreatic juice may

reflux into the stomach in a case of gastro-enterostomy. This can be removed by suction via a Levin tube. This is not the case, however, after a sub-total gastrectomy because the duodenal stump is closed.

A last, but not least important type of small bowel obstruction as a result of a gastro-enterostomy is axial rotation of the jejunum. This only occurs as a result of an error in surgical technique. This occurs when the surgeon begins the jejunal anastomosis on the mesenteric edge and ends the anastomosis on the anti-mesenteric edge. As a result, the jejunal loop anastomosed to the stomach becomes twisted on its long axis undergoing axial rotation and so becoming completely obstructed. Treatment consists in taking down the anastomosis and reconstructing it along straight lines.

Intestinal obstruction after gastric surgery may be of many types. The simplest type of obstruction exclusive of the non-specific variety following any abdominal procedure, is stomal edema.

When we speak of the stoma following partial gastrectomy, we do not refer to the entire gastro-jejunal anastomotic line. We refer only to the lumen of the proximal or distal jejunal loop.[7,8] It should be apparent that regardless of whether one performs a Polya type of anastomosis with a wide stoma or a Hofmeister type of anastomosis with a small stoma, that the true gastric stoma is that opening into which the gastric or intestinal contents are poured, namely, the circumference of the jejunal loop which receives it. In the case of the efferent loop it would be the circumference of the efferent jejunal loop attached to the stomach. Obstruction at this point will produce high intestinal obstruction, whereas obstructions at the stoma of the proximal loop will result in accumulation of bile and pancreatic juice into the proximal loop. This loop having a blind end at the duodenum is apt to result in duodenal stump blow-out with resultant peritonitis.

There are three recognizable types of stomal obstruction. These are in the order of occurence: (1) stomal edema which may be the result of an electrolyte imbalance, either a hypo-chloremia or a hypo-proteinemia: (2) obstruction of the stoma as a result of adhesions or as a result of too high tacking of the jejunal loop to the lesser curvature side of the stomach with a resultant down-drag of the weighted loop causing sharp angulation and obstruction: (3) paralysis of the distal jejunal loop.[9] This is most uncommon. It may occur when the pancreas has been traumatized in the release of a penetrating posterior wall ulcer whether it be gastric or duodenal.

When it has been established that the cause of the obstruction of the stoma is on the basis of stomal edema, the correction of the electrolyte imbalance or hypo-proteinemia results in a release of the obstructing process. Plasma or whole blood may be given intravenously. Ground meat may be given by mouth via a fine polyethelene tube as suggested by Fallis.[2] Constant suction applied to in indwelling Levin tube in the stomach is required. The authors on one occasion treated a patient in this way for 23 days before the obstruction relented and continuity of the bowel was completely re-established. Graham[3] reported one case which he had treated in this fashion for 56 days. If it has been established radiologically that the obstruction is not due to stomal edema but is mechanical in nature, surgical correction is necessary. Lysis of adhesive bands is usually sufficient. In those patients in whom a loop of bowel was tacked too high along the lesser curvature, releasing this loop reduces the angulation and hence also relieves the obstruction.

Paralysis of the distal jejunal loop may occur after sub-total gastrectomy and result in gastro-intestinal stasis. This is an uncommon type of bowel obstruction. Four cases of this type were reported by the authors. In all these patients re-operation was resorted to when conservative measures failed. At the second operation, both the gastrojejunal and the stomal openings were found to be of normal caliber. In each case there was a marked atony of the distal jejunal loop noted. In each case an entero-anastomosis was performed and in each instance the patient expired. It would seem from this experience that the treatment of choice would be long tube alimentation over sufficiently long period of time until the process producing the atony of the distal loop had resolved and peristaltic activity had been re-established. In those patients surgically treated, jejunostomy for purposes of feeding is the procedure of choice.

Volvulus of the stomach may occur at any time following sub-total gastrectomy. This is especially apt to occur if a long loop anterior gastro-jejunostomy is performed. At times an adhesive band or a bridle of omentum may wrap itself around the proximal and distal jejunal loops pro-

ducing a mild partial obstruction. The resultant stagnation of intestinal contents may so weight down the proximal and distal jejunal loops that the stomach undergoes volvulus. In cases of this type, gangrenous changes occur rapidly. Surgical intervention as soon as possible is the only treatment. Volvulus of the stomach may occur in a different fashion. In a review of 425 subtotal gastrectomies performed at Grace Hospital, one volvulus of the stomach was found as a late complication. This patient had been resected several years previously. The stomach had become adherent to the abdominal wall about one-third the distance from the esophageal opening to the line of anastomosis. With this portion of the stomach acting as a fixed point, the distal portion of the stomach and the gastrojejunostomy had undergone volvulus producing a high intestinal obstruction. This same complication may occur following gastroenterostomy.

Adhesions may cause small bowel obstruction after gastric resection by compression of either the gastrojejunostomy or the proximal or distal loops. On occasion, an omental bridle may become adherent to the proximal or distal loops from the duodenum causing bowel compression. On occasion the omentum may pass behind the gastrojejunostomy and sweep from left to right over the proximal and distal jejunal loops obstructing them. Volvulus of the proximal or distal jejunal loops as a result of this latter type of adhesion is not rare. The treatment of this type of case is simple lysis or resection of the omental bridle or band.

Internal herniation may occur following a gastric resection. In the case of a true Polya in which a posterior gastrojejunostomy is performed, the proximal or distal jejunal loops or both may herniate through the opening in the mesocolon. Intestinal obstruction is the usual result of this accident. To prevent this complication the stomach should be well anchored to the opening in the mesocolon. On occasion when the mesocolon is very short, the sutures may pull through with the result that both proximal and distal jejunal loops herniate through the mesocolonic opening and become obstructed. At operation upon cases of this type it may be possible to withdraw the herniated loops of bowel through the mesocolonic opening and anchor the stomach side well to the rent in the mesocolon as well as to the dorsal edge of the transverse colon.

If an ante-colic type of gastrojejunostomy is performed following a gastric resection, it is important to know whether an iso-peristaltic or an anti-peristaltic type of gastro-jejunostomy was done. In the event that an anti-peristaltic type of anastomosis was performed in which the proximal loop was anastomosed to the lesser curvature and the distal loop to the greater curvature, intestinal obstruction of two types may occur. In the first type, if the mesentery of the small bowel is short it may cut into or compress the proximal loop lying behind it and so produce proximal loop obstruction. This results in marked distention of the proximal loop and may result in a blowout of the duodenal stump.[10] A second type of intestinal obstuction as a result of anti-peristaltic gastrojejunostomy of the ante-colic type is produced when the proximal limb twists behind the anastomosis coming to lie between the transverse colon and the gastrojejunostomy producing a volvulus of the proximal limb. The proximal loop becomes tremendously dilated and may become gangrenous because of strangulation or duodenal stump blowout may occur.[13] In cases of this type, if no strangulation has occurred the proximal limb should be tacked to the distal limb with interrupted 000 silk and an enteroanastomosis between the loops performed. If gangrenous changes have occurred, it may be necessary to resect the duodenal stump and the entire proximal limb transplanting the common duct and pancreatic ducts into the jejunum.

Hublin[5] has reported a rather unusual type of bowel obstruction after gastrojejunostomy with enteroanastomosis. Volvulus of the small bowel may occur around the enteroanastomosis producing obstruction. The bowel may also pass between the loops becoming obstructed. To avoid this complication, the two loops both proximal and distal should be sutured together with interrupted sutures and the space between the proximal and distal loops in front and the transverse colon behind should be obliterated by tacking the loops to the transverse colon. Herniation of either the proximal or distal jejunal loops through the gastrojejunostomy may occur producing an intussusception with intestinal obstruction. This is most likely to occur in the anti-peristaltic type in which a long proximal loop is present. It is less likely to occur in the iso-peristaltic type of gastrojejunostomy in which the proximal loop is attached to the greater curvature and the distal loop to the lesser.

The well-known tendency of the intestine to

creep into openings and recesses is responsible for a rather unusual type of intestinal obstruction after gastric surgery. Part of the small bowel may slip into the recess behind the gastrojejunostomy and the transverse colon. Strangulation of much of the small bowel may occur as a result. Generally this hernial opening is so wide that no real herniation with gangrene of the intestine results, except in advanced cases. Passage of intestinal contents through this herniated bowel is blocked with the result that progressive ileus may result. Stammers[14] reported four cases of this rather uncommon occurrence.

Retrograde intussusception is a rare complication of operations on the stomach. A retrograde invagination of the small intestine through the gastrojejunostomy is occasionally found. It has been noted after anterior gastrojejunostomy as well as posterior gastrojejunostomy. Tuomikoski collected twenty-nine cases of this type from the literature and added one of his own. Up to 1951, the number of published cases of this type did not exceed fifty. In one case reported by Hublin this complication recurred two times after gastric resection of the Billroth No. 2 type. The amount of small bowel intussuscepted retrogradely into the stomach is extremely variable ranging from a few inches to as much as two feet. In most cases it may easily be reduced without necrosis. Occasionally necrosis of the intussuscepted loop may occur which require bowel resection. This retrograde intussusception may be acute or chronic. In many of the chronic cases the small loop of bowel spontaneously reduces itself. In the acute case, spontaneous reduction does not occur and surgical correction is imperative. As a rule reduction is simple. Tacking the proximal and distal loops together is usually sufficient as a corrective measure. In those cases in which necrosis of the bowel intussuscepted into the stomach is found, resection and re-anastomosis is required. Intussusception of the proximal loop into the stomach may occur as late as 15 years after a gastric resection with a long proximal loop.

A rather rare and bizarre type of intestinal obstruction described as the "vicious circle" type may occasionally occur. Hublin[5] describes this as occurring after gastroenterostomy or gastric resection. In this type of case, barium is seen to circulate from the stomach through the descending limb through the enteroanastomosis, up the ascending limb and back into the stomach at a very rapid rate. Such patients become nutritional problems. Hublin suggests as treatment the resection of the ascending limb resulting in a Y-shaped gastrojejunostomy. The mechanism involved could be ascribed to wrongly directed peristalsis which does not drive the stomach contents out into the intestine but instead through the enteroanastomosis and into the ascending limb and back through the stomach. Retrograde invagination may be due to peristalsis of this type.

Summary

The non-specific type of small bowel obstruction following gastric surgery will probably always constitute a problem. Little can be done to prevent their occurrence if proper hemostasis, gentleness in handling tissue, avoidance of hot packs and other well-known causes of adhesions are avoided. Stomal edema may be prevented by proper preparation of the patient. Correction of hypochloremia and hypoproteinemia before surgery as well as improving the patient's nutrition will reduce this problem to a minimum. All the types of bowel obstruction that result from a loop type of gastrojejunostomy such as the Polya, Hofmeister, or Billroth No. 2 may be completely eliminated by the simple expedient of avoiding such loop operations whenever possible. The Billroth No. 1 procedure re-establishes the continuity of the bowel without any loop. From this it would appear to be the answer to the majority of obstructions following partial gastrectomy.

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Perforation of the Esophagus

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PERFORATION of the esophagus is a surgical emergency requiring immediate attention. Fortunately most cases are already in the hands of a physician when the perforation occurs so that recognition of the lesion and institution of proper treatment with a favorable outcome is usually possible. Of the fifty cases of perforation of the esophagus reported by Seybold et al[32] from the Mayo Clinic, thirty-three followed instrumentation. The use of the esophagoscope and the Plummer hydrostatic dilator were responsible for the majority of these instrumental perforations. Next in order as the cause of perforation of the esophagus is the swallowing of foreign bodies. Among the intrinsic causes of rupture, a most unusual one is noted in the case presented by Kerr et al[21] of a three-year-old child who bit a filled inner tube. The most common foreign bodies causing perforation of the esophagus are fish and chicken bones. Safety pins are a common cause in infants.

Perforation of the esophagus from extrinsic causes is rare. Among the external causes are trauma, rupture of aortic aneurysm into the esophagus,[5,13] complications following extrapleural pneumothorax[14] and following intrathoracic operations on adjacent structures.[25]

Spontaneous perforation of the esophagus,[1-4,10,18-20,22-24,26,28-30,33,36] practically always occurs in the lower part of the esophagus just above the diaphragm. Anderson[1] in 1952 reported 108 cases of spontaneous perforation of the esophagus with only thirty recoveries and all of the recoveries followed surgery. In the discussion following this paper, Abbott[1] added thirty-one cases, Heroz two, Overholt one, Waterman six, and Fryfogle presented the history of a newborn infant who sustained a rupture of the lower end of the esophagus due to complete obstruction from a congenital diaphragm in the esophagus. Wangensteen (in discussion[1]) does not like the term "spontaneous perforation" and prefers to call the disease "acid-peptic perforations of the esophagus." Samson[30] calls it "post emetic rupture of the esophagus." There has been considerable speculation on the cause of spontaneous perforation of the esophagus. It is said that the usual patient is a middle-aged male, previously healthy, who, following excessive alcoholic intake and vomiting, sustains a rupture in the vulnerable part of the esophagus, i.e., the supradiaphragmatic portion. Many of these patients have given a history suggestive of peptic ulcer.

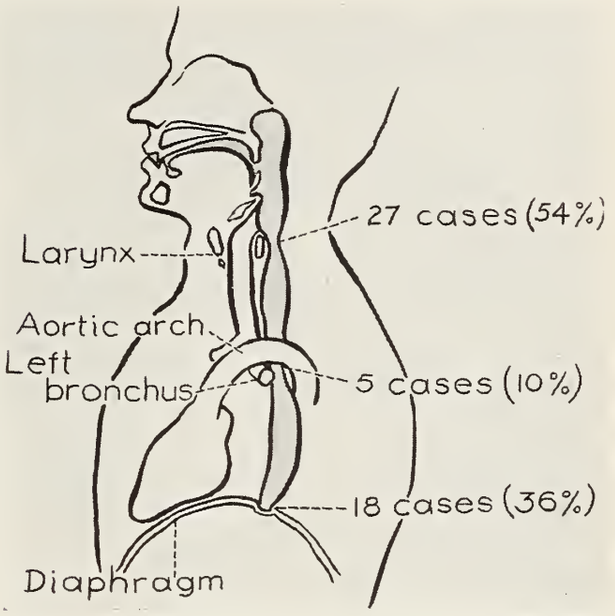


Fig. 1. Location of perforation of the esophagus as reported from the Mayo Clinic.[32] Of the twenty-seven cases of perforation occurring in the cervical esophagus, fifteen occurred at esophagoscopy and seven were due to foreign bodies. The perforations in the upper and mid-thoracic esophagus were due to foreign bodies. Of the eighteen cases of perforation occurring in the lower end of the esophagus, fifteen were due to attempts at dilatation of cardiospasm or stricture.

Perforation of the esophagus following esophagoscopy usually occurs in the cervical esophagus. The pharyngeal funnel narrows abruptly as it enters the esophagus where the inferior part of the inferior constrictor muscle of the pharynx (called the crico-pharyngeus muscle) keeps the esophagus closed. The posterior plate of the cricoid cartilage is held tightly, by the crico-pharyngeus muscle, to the bodies of the sixth and seventh cervical vertebrae. Due to the thinness of the posterior wall of the esophagus, the tonic closure of the esophageal opening and the bodies of the cervical vertebrae directly posterior, perforation of the esophagus here occurs in the

posterior wall of the esophagus. At the time of esophagoscopy, the posterior wall of the esophagus may be traumatized sufficiently to allow a perforation to develop later. Esophagoscopy in a patient who has not had adequate x-ray examination of the esophagus may eventuate in perforation of a diverticulum.[8]

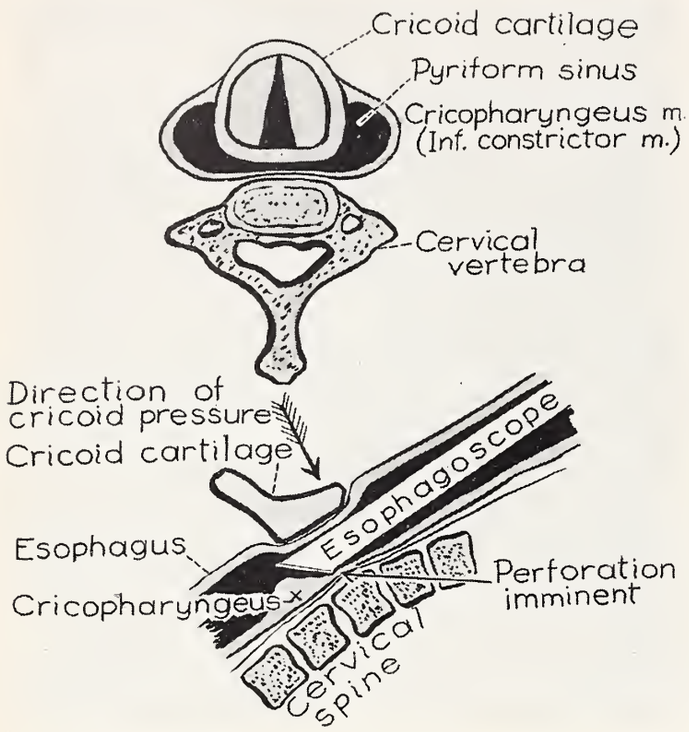


Fig. 2. A diagrammatic cross-section through the pharynx at the level of the cricoid cartilage to illustrate how the cricopharyngeus muscle holds the posterior plate of the cricoid cartilage against the posterior wall of the pharynx and the bodies of the cervical vertebrae. Below, diagrammatic sagittal section illustrating the problem of getting the esophagoscope past the cricopharyngeus muscle.

Following perforation, the esophageal contents escape into the retrovisceral space and inflammation develops. The complaints are pain, and difficulty in swallowing. The signs are air in the tissue, tenderness over the area and rigidity of the cervical spine. X-rays disclose air in the tissues and displacement of the trachea forward. Whereas some of these patients with small perforations will localize their infections and recover, the treatment of choice is drainage of the retrovisceral space as advocated by von Hacker in 1901.[35] This operation, called cervical mediastinotomy, is approached through an incision along the anterior border of the sternocleidomastoid muscle (when the site of the cervical perforation is not definitely localized, the operation should be in the right side of the neck).[8] The sternocleidomastoid, sternohyoid and sternothyroid muscles are exposed and with the carotid sheath, are retracted laterally. When the lateral lobe of the thyroid gland is elevated it may be necessary to ligate branches of the inferior thyroid veins. By blunt dissection, the retrovisceral space behind the esophagus is opened and drained.

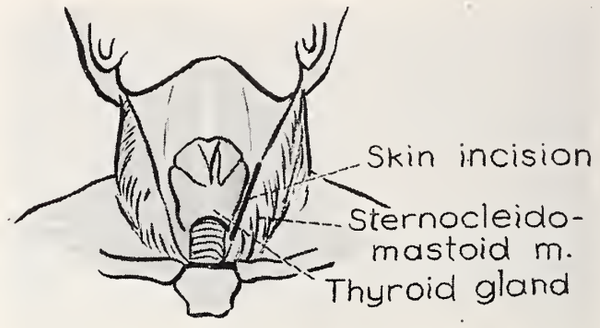


Fig. 3. Cervical mediastinotomy with drainage of the retrovisceral space is the treatment of choice for perforation of the cervical esophagus.

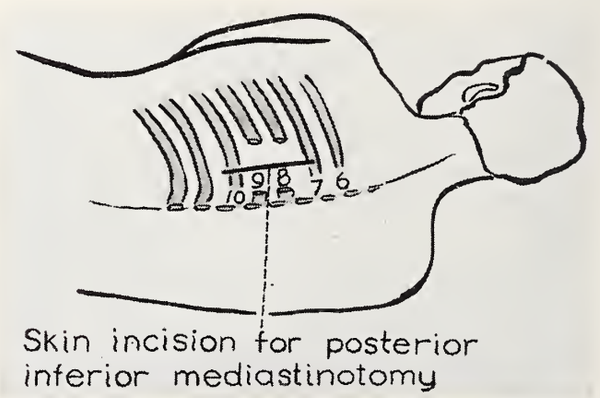


Fig. 4. Posterior mediastinotomy has been used for draining the mediastinum after perforation of the thoracic esophagus. It is probable that transpleural approach will give better results. When there is involvement of the pleural cavity, as there always is in "spontaneous perforation," transpleural approach with suture of the laceration is indicated.

Foreign bodies are more apt to perforate the cervical esophagus than other parts of the esophagus. Here, following proper examination, localization of the foreign body and preparation of the patient, the foreign body must be removed and cervical mediastinotomy performed if inflammation has developed.

Perforation of the thoracic esophagus usually occurs at the points of constriction. These are in the mid-esophageal region where the esophagus is compressed from the left by the arch of the aorta and anteriorly by the crossing of the left main

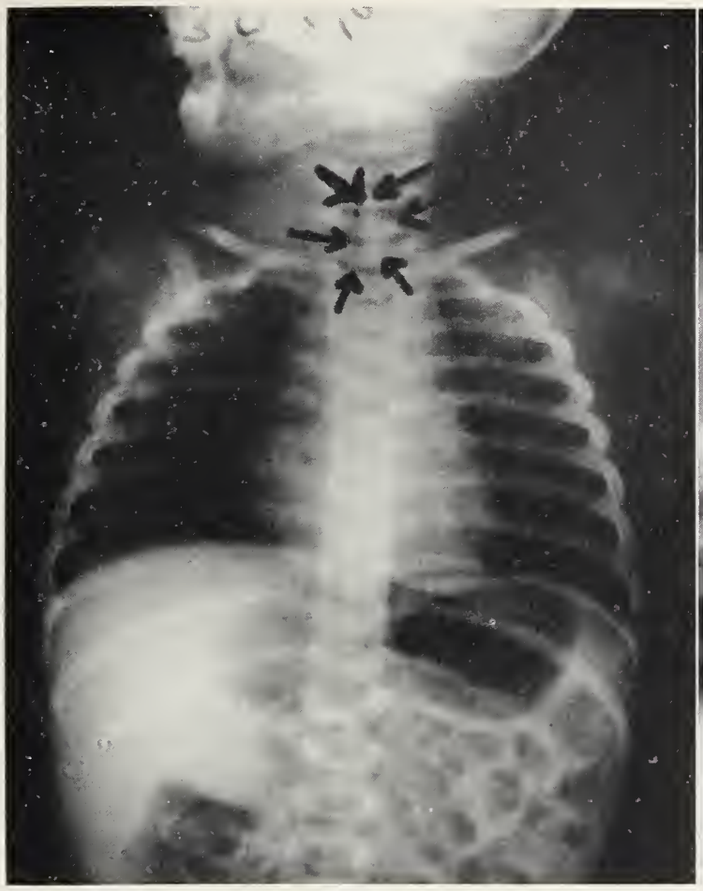


Fig. 5. Initial chest x-ray showing the piece of glass lodged in the cervical esophagus. Glass is partially radiopaque.

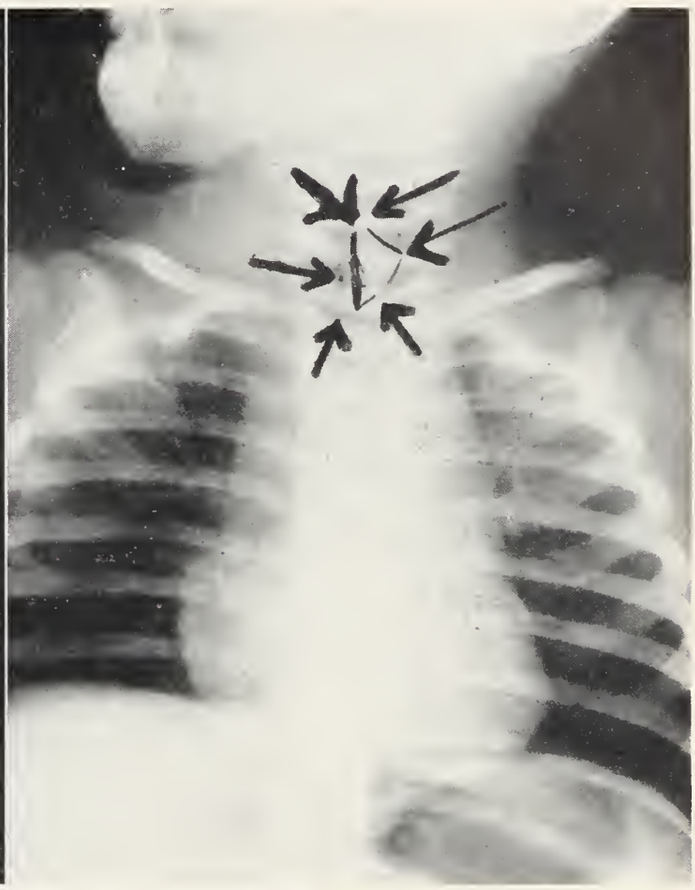


Fig. 6. The piece of glass recovered from stool on the second postoperative day is here superimposed on chest x-ray in Figure 5.

stem bronchus, and just above the diaphragm.

Perforation in the upper and mid-esophagus is usually due to foreign bodies. The supradiaphragmatic portion, besides being the site of the spontaneous perforation, is the place where dilatations for cardiospasm and strictures can readily result in rupture.

Perforation of the upper and mid-esophagus gives rise to mediastinitis and may enter one or both pleural cavities. When the latter occurs, pneumothorax, subcutaneous emphysema and later pleural effusion with emphysema supervenes. The complaints here are pain in the chest, dysphagia, chills, fever, and when the pleural cavity is entered the symptoms are more severe with pain, dyspnea, cyanosis and a shock-like picture. Tension pneumothorax easily develops. When the pleural cavity is entered the chest x-ray is characteristic but when the lesion is confined to the mediastinum, one may see only widening of the mediastinum. Posterior mediastinotomy with retro-pleural drainage has been the operation of choice in treating mediastinitis. However, this approach has certain disadvantages so that transpleural drainage is probably the approach of choice.

Perforation of the lower end of the esophagus is usually due to instrumentation (attempts to dilate cardiospasm or stricture) and to "spontaneous perforation." Perforation at this location is characterized by entering one or both pleural cavities with the resultant complications of pneumo- and hydro-thorax. The complaints are severe pain, usually abdominal and later thoracic, with the rapid development of a shock-like picture. One of us (J.E.S.) has been associated with one such case of "spontaneous perforation" which was operated upon for perforated peptic ulcer; the true lesion, perforation of a peptic ulcer of the lower esophagus, was disclosed at autopsy. The diagnosis is easily made provided one thinks of it. The pneumo-thorax (later becoming a pneumo-hydro-thorax), subcutaneous emphysema, tension pneumothorax and the aspiration of gastric contents from the pleural cavity are characteristic. The diagnostic triad of "spontaneous perforation

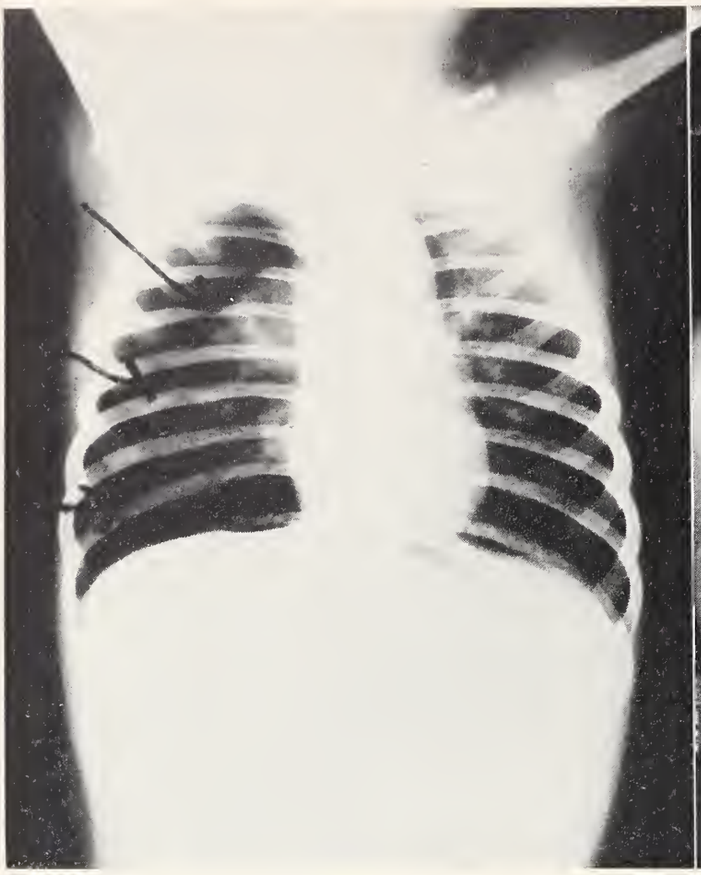


Fig. 7.

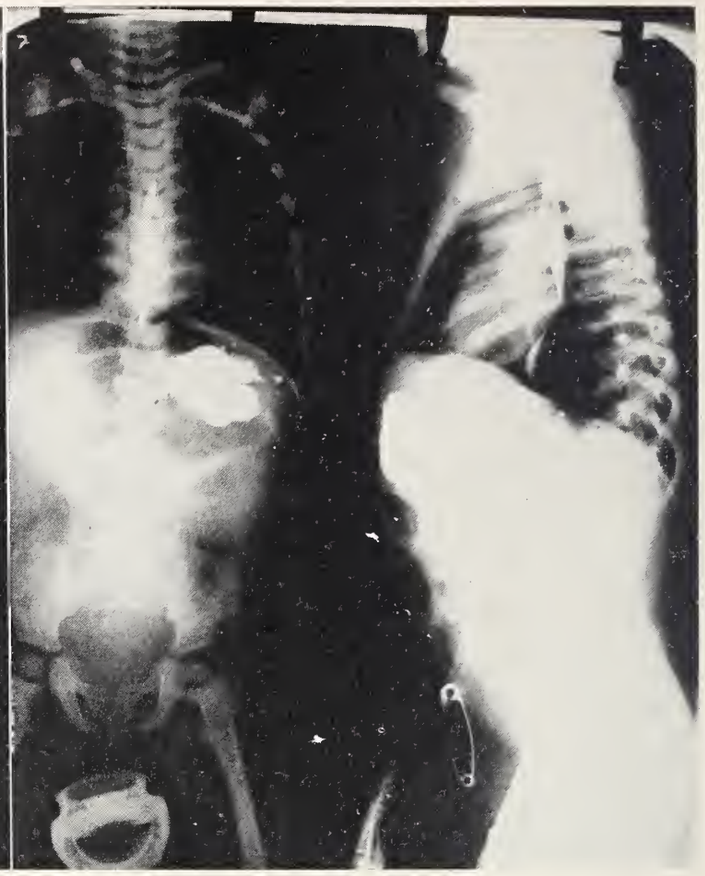


Fig. 8.

Fig. 7. Chest x-ray following esophagoscopy revealed right pneumothorax. The incidence of pleural entry increases as the site of the esophageal perforation moves down; in the cervical esophagus, pleural involvement is unusual; perforation of the lower esophagus practically always involves one or both pleural cavities.

Fig. 8. Oral ingestion of radiopaque material, in this case, does not reveal a laceration of the esophagus even though there has been a direct pleural entry. Pleural effusion would develop rapidly.

of the esophagus"[1] are: (1) rapid respiration; (2) abdominal rigidity, and (3) subcutaneous emphysema.

Such a patient is desperately ill and one may hesitate to operate, but immediate transpleural approach with suture of the laceration and cleansing of the mediastinum and pleural cavity with transpleural closed drainage has given excellent results.[1,2,4,19,20,21,23,30,32,37] It is to be noted that whereas closure by suture with drainage of the mediastinum and pleural cavity is frequently feasible in "spontaneous perforation" occurring in the lower esophagus, perforations in the upper thoracic and cervical esophagus are usually treated by drainage only. The increasing awareness of the profession to the occurrence of "spontaneous perforation" of the esophagus is reflected in the number of papers appearing on the subject.

Case Report, No. 5569

The patient, a ten-months-old white boy, was carried to the emergency room of a hospital Wednesday evening, August 12, 1953. The mother stated that she had seen the baby break a glass ash tray and put a piece of the glass in his mouth, but that she was unable to prevent him from swallowing it. Following this, the baby spit up a little blood and was fretful. The intern on duty had three x-ray films taken and after examining the child told the mother that the baby had not swallowed the glass and to take him home. The infant was very restless that night crying and keeping the family up most of the night. The next day the family doctor was called but he also did not think that the baby had swallowed the glass. Later that day the roentgenologist saw the x-ray film (Figs. 5 and 6) and noted a foreign body in the cervical region. Esophagoscopy was attempted but the foreign body was not recovered. During or shortly thereafter the baby became acutely ill and chest x-ray (Fig. 7) showed right pneumothorax. The infant was then transferred to the Ingham Sanatorium.

Examination revealed an acutely-ill appearing white male infant apparently in respiratory distress. Right pneumothorax was present. Temperature 101 F. rectally; pulse 130, respirations 32 per minute; blood count: RBC, 3.86 million; hemoglobin 11.9 grams (71.4 per cent); WBC 15,300 with 61 per cent polys. The temperature rose to 103 F. rectally. A small amount of radiopaque liquid was given orally and no leak from the esophagus was seen (Fig. 8). Antibiotics were administered.

On August 14, 1953, under ethyl chloride and ether anesthesia, bronchoscopic and esophagoscopic examinations were performed. Bronchoscopy was negative. Esophagoscopy revealed a small defect in the right posterolateral wall of the esophagus just above the level of the aortic arch. Directly following this examination and under endotracheal anesthesia, right thoracotomy was performed. A small amount of thick purulent appearing material was noted in the lower posterior pleural space. Immediately above the root of the lung a laceration in the mediastinal pleura was noted and extensive inflammatory changes were present around this area. The mediastinum was opened and thoroughly debrided and washed out. No definite tear in the esophagus could be demonstrated. The mediastinum was drained retropleurally and closed drainage of the right pleural cavity was instituted. Recovery was uneventful. Drainage was minimal. On the second postoperative day, the infant passed the piece of glass during a normal defecation. One week postoperatively the skin sutures were removed (Fig. 9) and the patient was discharged.



Fig. 9. The patient, seventh day postoperative, showing the thoracotomy wound healed. He is looking at the piece of glass which he had previously swallowed.

Comment

This case illustrates several typical features of perforation of the esophagus by a foreign body. It should be remembered that parents are occasionally correct in their observations; also that glass is partially radiopaque. The foreign body lodged in the cervical esophagus. Just which component, the foreign body or the esophagoscope, predominated as the etiological agent in the perforation of the esophagus is not known. Direct involvement of the right pleural cavity occurred during esophagoscopy. The foreign body transversed the remainder of the gastrointestinal tract without incident.

Summary

Perforation of the esophagus is discussed and a case is presented. Perforation of the esophagus is a surgical emergency which can be successfully treated.

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(Continued on Page 692)

Trichiniasis

Report of Six Cases

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TRICHINOSIS or trichiniasis is an infestation with a round worm, the trichinella spiralis. The infestation is acquired by the ingestion of flesh which contains the encysted larvae of the parasite. The disease is characterized by various local signs and symptoms particularly as regards the muscles and there is generally an associated systemic reaction. The trichinella spiralis has a world-wide distribution, its principal reservoir for human consumption being the pig. However, the trichinella spiralis has been found in rats, mice, bear, dogs, foxes, wild boars, cats and other carnivora. Fish, reptiles and birds have never been found as hosts to the parasite. The United States Public Health Service has estimated through diaphragm studies, that 17 per cent of the population in the United States are infested. This percentage of the population may become ill and exhibit symptoms, of which one-fifth per cent are confined to bed by the disease. All hosts are known to harbor both the larval and adult forms.

Man becomes infested by eating raw or insufficiently cooked porcine products which contain the encysted larvae. This disease has occurred after the ingestion of bear meat and in those countries where dog meat is eaten. Rats are a factor in the transmission of the disease as hogs will consume infected rats, in this manner being themselves infested, and thereby later becoming the source of transmission to man. When man eats pork products containing viable encysted larvae, the cyst capsule is digested in the stomach and the larvae are set free. These larvae attach themselves to the walls of the stomach, jejunum and duodenum. In this area they develop into adult worms in two or three days. The male is about 1.5 mm. and the female 3 mm. in length. The males die after impregnation of the female, but as a rule cannot be found in the stools. The fertilized females penetrate the mucosa of the bowel and about eight days after impregnation fully formed embryos are discharged. These embryos are fully and completely formed when born, being very small (about 0.1 mm. in length) and can easily penetrate the lymphatics and the blood vessels. They are thus readily disseminated throughout the body by way of the portal blood stream, the thoracic duct, subclavian vein and through the systemic circulation.

Those embryos which reach striated muscles survive, the common muscle sites being the diaphragm, tongue, ocular muscles, skeletal muscles, with the deltoids and intercostals preferred. However, the embryos have been found in the heart muscle, spinal fluid, bone marrow and milk of nursing mothers. In the striated muscles the embryos penetrate the muscle fibers and grow to a length of 1 mm. Here they may become coiled and encysted and can remain viable for as long as twenty years. This encapsulation begins at about the thirty-fifth day. The cycle is said to be completed when this muscle food is ingested and the larvae are again liberated.

Many studies have been made to attempt to determine the degree of heat needed to kill the encysted larvae in pork. One hundred and forty degrees Fahrenheit is usually stated to be sufficient. The trichinella spiralis may also be killed by refrigeration at zero degrees for not less than 20 days. This, however, is not practical. The incidence of infestation in corn fed hogs is 0.91 per cent, while garbage fed hogs have a higher rate, it being 4.41 per cent. Thus it can be noted that smoking, pickling or insufficient cooking will not kill the larvae, this making an observation of utmost importance.

Pathology

The pathology of trichinosis is usually based upon the life cycle of the parasite. The microscopic lesions noted in the intestine chiefly, but seen to a lesser extent in the stomach, is that of congestion, small areas of hemorrhage in the mucosa, and at times small ulcers. The adjacent lymph nodes are swollen, soft and congested. The liver, kidneys and at times heart show parenchymatous and fatty changes. The spleen at times becomes enlarged. Hemorrhages may occur beneath the serous membranes. The lungs become congested and pneumonia does occur. Grossly, the skeletal muscles may show small grayish translucent areas which are en-

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capsulated larvae. This occurs after the fifth week of the illness. In hogs, with the disease well encapsulated, the gross lesions can be more easily seen.

Histology

The histologic picture is that of cloudy swelling of the various organs, congestion of the spleen due to the toxemia produced by the larvae, and the tissue reactions produced directly by the larvae themselves. During the wandering stage the destructive action may be seen in the brain, lungs, pancreas, spleen, heart muscles and intestines. There is local inflammation and necrosis with infiltration by eosinophiles, polymorphonuclear cells, lymphocytes and endothelial cells. In the muscles the larvae cause necrosis of the sarcolemma with a cellular reaction as occurs in other organs. Later this inflammatory reaction undergoes fibrosis which forms the capsule of the encysted parasite, and as time goes on this undergoes calcification. Beginning about six days after infestation the toxic symptoms of the disease may be due to poisons produced by the larvae and perhaps poison set free by tissue destruction as well as an anaphylactic reaction from destroyed larvae.

Symptomatology

The symptoms appear to depend upon the severity or degree of infestation. If few trichinella are present, the symptoms may be mild or there may be practically none at all. It is stated that if there are 500 to 1,000 larvae per gm. of muscle, the symptoms are severe; if over 1,000 per gm. of muscle the case is a critical one. Thus the disease occurs in all degrees of severity. Where a number of persons in one family are involved, it is not unusual to see some members desperately ill and even die, while others are ambulant and almost symptom free. Fortunately, many cases are mild.

The disease may be roughly divided into three stages as follows: (1) invasion or intestinal stage; (2) period of muscular dissemination; and (3) period of encystment.

The stage of invasion or onset may last for seven to ten days. The onset is usually abrupt and there is nausea, watery diarrhea, evident fatigue, fever, headache, and vague abdominal pains. Sweating at the onset and throughout the disease often occurs as well as vomiting, general body pains, weakness and chilly sensations. Occasionally constipation occurs. The early picture is not unlike influenza. These earlier symptoms correspond to the period when the ingested and encapsulated larvae are developing and attaching themselves to the mucosa and reaching the adult stage. At this time the worms may be found in the blood and stools. Slight eosinophilia may be present and hemorrhagic areas noted under the finger nails (splinter nails). The toe nails are never involved. At this time there may be decreased elasticity of the muscles, the so-called "lahmigkit" which occurs before the muscular invasion. The fever varies in intensity from 100 degrees to 103 degrees F. and is of the remittent type being higher at night. It may last as long as six weeks and usually terminates by lysis.

The period of dissemination or muscular invasion has its onset about the eighth or tenth day. Penetration of the muscles occurs and with this there is myositis with local muscle tenderness and pains. Commonly at this time the clue to the diagnosis as based upon physical findings may make itself evident, namely, the presence of periorbital swelling. Thus at this stage of the illness two conditions occur which should always arouse the suspicion of the clinician as to the possibility of trichinosis, namely, periorbital swelling and muscle tenderness.

The muscle tenderness and pain is readily elicited by squeezing the muscles preferably nearer to the tendinous insertions as here the trichinae are most numerous. In some cases the muscle pain causes much suffering and disability, producing general body stiffness and weakness. The respiratory muscles may become involved causing breathing difficulties and even death. Difficulty in mastication and speech also occur. In some cases there is complete absence of muscle pain. The eyes often show much involvement. There is often periorbital edema which may be very slight, or there may be marked edema and swelling of the eye lids and periorbital tissues with chemosis of the sclera, and severe conjunctivitis with hemorrhage into the subconjunctival tissues. In one of our cases, the corneae were almost covered by the great swelling of the sclerae. Ocular movements may become painful and fundal hemorrhages have been described. The eye symptoms usually begin about 7 to 10 days after the onset of the disease and persist for about one week.

Various skin lesions occur. Roseola, maculo papular in type, like those seen in typhoid fever

may occur upon the abdomen. Also there may be a generalized erythematous rash not unlike that seen in Brill's Disease (mild typhus). Herpes Labialis occurs, and often severe pruritus as well as urticaria may be noted. Chest complications are not uncommon and there may be a slight bronchitis or severe bronchopneumonia. The latter occurs quite often in severe infestations and at times causes death. Neurological complications often occur due to central nervous system involvement. Severe and constant headaches, vertigo and marked rigidity are frequently seen. Hemiplegia has also been reported with exaggerated knee reflexes and positive Babinski sign. In these cases trichinella have been found in the spinal fluid.

During the height of the illness, if the case is a severe one, the patient may appear flushed, the eyes are injected, extreme apathy and drowsiness is noted but as a rule the patients can be easily aroused. The heart action is rapid, pulse thin and fast and the blood pressure is low. The tongue is usually heavily coated, pulmonary signs are present with rapid respirations and cough. Myocardial involvement is common and myocardial failure and general weakness may cause death. The abdomen is often distended and tender on palpation. Extreme prostration is common and great weight loss is the rule; if the case is mild, the symptoms are proportionately less severe. Trichinae as a rule are not found in the myocardium but occasionally have been demonstrated. Electrocardiographic studies have shown evidence of myocardial degeneration. At this period in the disease, the eosinophile count is often as high as 30 per cent to 50 per cent and severe anemia may be present later.

The period of encystment is the stage of convalescence. The fever gradually declines, the patient brightens mentally, the appetite improves, muscle pains cease, and the strength starts to return. The convalescence is extremely slow in a severe case. The entire illness may last from 10 days to 6 and 8 weeks.

Differential Diagnosis

In an illness with such a varied type of onset and many complaints and symptoms as well as physical signs, many disease entities will enter into the differential diagnosis. Such conditions as the following must be differentiated: influenza, so-called intestinal influenza, sinusitis, ocular infections, rheumatic fever, typhoid-paratyphoid fever, salmonella infections, meningitis, encephalitis, poliomyelitis, periarteritis nodosum, dermatomyositis, pneumonia, undulant fever, Brill's Disease, etc.

Special Tests and Laboratory Examinations

1. *Blood counts.*—Leukocytosis of 12,000 to 30,000 occurs with eosinophilia of 10 per cent to 50 per cent, and at times as high as 80 per cent. The height of the eosinophilia occurs in the third or fourth week and usually begins about 10 to 14 days after the onset. The degree of eosinophilia is not dependent upon the severity of the disease. Mild cases may have high eosinophilia and there may be considerable variation from day to day. Eosinophilia in this disease was first noted by Brown at Johns Hopkins in 1897. A sudden drop in eosinophilia may be due to a secondary infection or if no bacterial infection is present it may be a bad prognostic omen. Eosinophilia is also seen in Loefler's pneumonia, eosinophilic leukemia and other blood dyscrasias, asthma and allergic states, Hodgkin's Disease, other parasitic infestations, periarteritis nodosum, and certain skin diseases.

2. *Intracutaneous Skin Tests.*—The antigen used is a saline extract of the larvae of trichinella spiralis free from the tissue of the host in which the parasite developed. The test, which is based on a sensitivity to trichina substances that develops in the skin, may be applied to any stage in the infection but usually no reaction is observed before the sixteenth day after the onset of the illness. The tests consist of an intradermal injection of .1 c.c. of the antigen in the skin of the forearm. A control consisting of saline or Cocas solution is also injected.

The positive skin reaction is of the "immediate" type. It is characterized by the development within 20 minutes of an elevated wheal or edematous blanched area, from 8 mm. to 15 mm. in diameter from which pseudopods may or may not radiate out into an encircling zone of redness from 20 mm. to 50 mm. wide. The flare reaches its height within one half hour and rapidly subsides. It is essential to have a control so as to eliminate false reactions. The positive skin reaction may persist for several years.

3. *Blood precipitins.*—Positive after 30 days, the material is hard to obtain.

4. *Complement fixation test.*—Positive after 30 days. The State of Michigan accepts the blood and sends it to Georgia for the tests.

5. *Blood studies for finding of the parasite.*—10 c.c. of blood is laked with 3 per cent acetic acid and then centrifuged. The sediment occasionally will show the trichinella. Spinal fluid; Trichinella spiralae have been found in the spinal fluid.

6. *Biopsy.*—Removal of muscle preferably near the tendinous insertions. One may find the encysted trichinella or a local reaction in the muscles.

Therapy

At the onset, thorough catharsis is essential in order to rid the intestinal tract of as many parasites as possible. Ample foods are given and temperature sponges and alcohol rubs used freely. Bed rest is important because of possible cardiac involvement. Supportive therapy by administration of intravenous glucose solutions and transfusions may be required. Many drugs have been used—all of which including convalescent serum by Saltzer having proven ineffectual. Sulfa drugs and antibiotics have been used but have produced no direct effect upon the parasites. They may, however, have some beneficial effect upon some of the complications such as bronchitis or pneumonia.

Recently Davis and Moss in an article in the November, 1951, issue of the *American Medicine* have described a patient with definite trichiniasis. Their patient was extremely ill and was given a five-day trial of Hetrazan in a dosage of 0.3 to 0.6 gm. per day by mouth. This therapy was not effectual. The patient's condition deteriorated, so ACTH was started on the 10th hospital day with the dose of 200 mg. daily, given as 50 mg. every six hours. At times 100 mg. was given in the 24-hour periods. This was continued for over 17 days. Dramatic subjective improvement is mentioned with a fall of temperature and increased appetite. When the ACTH was discontinued some fever returned for a few days.

Hetrazan has been used with some success according to Davis and Moss, against the migratory filarial forms of Wiecheriria Banscroft, Loa Loa and Onchoceria in both experimental infections and in patients. They quote Heuit in stating that the number of adult trichinae in the intestines of treated rats was reduced as compared to control untreated rats. Larval forms were also less. Hetrazan is diethyl carbamaine, and is made by Lederle, the dose being 2 mg. per kilo, t.i.d.

In the treated case Hetrazan was used only for three days so that its value could not be ascertained. An eosinophile drop occurred with the use of ACTH. Muscle invasion was unaffected by ACTH, but the diffuse myositis was altered. There was no evidence of larvicidal effect. The benefit of ACTH was said to be a result of its nonspecific effects. ACTH and cortisone may be agents which are capable of modifying the body's reaction to the invasion of the muscle by the larvae or their products.

Case Reports

Case 1.—O. A., aged 62 years. His occupation was grain and seed dealer. He was admitted to Harper Hospital November 18, 1949, and discharged January 11, 1950.

About two weeks prior to the onset of the illness this man ate smoked ham which was uncooked. He was admitted to the hospital with fever and chilly sensations. The fever rose gradually until it reached 102 degrees. Drenching sweats and diarrhea of seven or eight watery stools daily for about ten days were present. The appetite was not good and there was a weight loss of 10 pounds in 2 weeks. He was thought to have a virus infection since at this time there was considerable so-called "intestinal" flu around the city. One year prior he had had a coronary occlusion from which he made a good recovery. At the time of admission the only physical findings of any importance were fine rales at the left base posteriorly and scattered fine rales over the right upper chest. The initial blood count disclosed white blood cells, 8,600; polymorphonuclear cells, 65 per cent; lymphocytes, 24 per cent; eosinophiles, 4 per cent; Kahn negative. Agglutination tests for typhoid, paratyphoid, brucella abortus, melitensis and dysentery groups were all negative. A blood smear for malarian parasites was negative. The stools were negative for ova and parasites.

On November 23, five days after admission, periorbital swelling and edema were first noted. This became very severe in a few days and even involved the sclera and conjunctiva almost to the extent of excluding the vision. At this time the white blood cells were 12,700 with 12 per cent eosinophiles. Muscle pains were not present at this time or any time during the course of the illness. The heart action was regular and there were no murmurs. The pulse was rapid and soft. The blood pressure was low and the electrocardiograph showed possible bundle branch block. The knee jerks could not be obtained. There was slight neck rigidity and a positive Kernig. On December 6 pneumonia involving the right and middle lobes was noted. The patient was semicomatose and ran a continuous and septic type of fever. He looked like a patient in the third week of severe typhoid fever. His fever continued for about 50 days from the onset of his illness and finally fell by

lysis on December 28. He was seen by Dr. Edward Spalding who concurred in the diagnosis, and reported the cardiac status to be good. He also gave a good prognosis which proved to be correct.

A skin test for trichiniasis was made and was negative. The highest eosinophile count was 33 per cent on November 28. Muscle biopsy made December 12.

Therapy consisted of the following drugs: Sulfadiazine, Streptomycin, penicillin, Chloramycetin and colloidal sulphur. None appeared to have any specific effect. Supportive therapy with high caloric diet, fluid supplements, continuous special nursing care, and oxygen contrived to assure recovery for this critically ill patient.

Case 2.—Mrs. O. A. was admitted to Harper Hospital December 2, 1949, and discharged January 9, 1950. This patient was not very ill. She was admitted with chilly sensations only. There were no gastric symptoms and very little fever. She did have periorbital swelling which was not severe. The white blood count was 12,950 and the eosinophiles were 32 per cent. On December 4, 1949, the skin test for trichinae was definitely positive. At no time during the illness was muscle pain or muscle tenderness noted. Muscle biopsy was made.

Therapy consisted of Chloramycetin and calcium lactate in addition to routine nursing care. She made an uneventful recovery.

Case 3.—G. A. was 24 years of age and was admitted to Harper Hospital November 25, 1949, and discharged January 15, 1949. The illness began on November 20 with fever, cough, fatigue and chilly sensations. Two days later periorbital edema and evident conjunctivitis was noted. His fever rose to 102.8 degrees and he became lethargic and toxic. Macules were present upon the abdomen which had the appearance of "typhoid spots." There was no muscle pain or muscle tenderness at any time. The white blood count was 9,600 and the eosinophiles varied from 17 per cent to 38 per cent. Study of the blood at the onset was positive for trichinae in Toronto. The skin test was slightly positive. Electrocardiogram was normal. Stools were negative for trichinae. Muscle biopsy was done.

Case 4.—Mrs. G. A. was admitted to Harper Hospital December 4, 1950, and was discharged December 30, 1950. This was a mild case, without fever. There was moderate periorbital edema and diarrhea for three days with pains in the calf muscles. The white blood count was 13,100 with eosinophiles 11 per cent. Skin test was negative. Muscle biopsy done.

Case 5.—M. A., aged 36 years, was admitted to Harper Hospital November 24, 1949, and discharged December 18, 1949. The first symptom noted was swelling of the eyelids and conjunctivitis. Fever was present at the onset and persisted until December 11. There were no muscle pains or tenderness. Blood studies for trichinae were negative. The white blood count was 20,000 and the highest eosinophile count was 38 per cent. Muscle biopsy was done. Therapy consisted of Chloramycetin and calcium gluconate in addition to routine nursing care.

Case 6.—S. F, aged 29 years, occupation, meat packer, and sausage manufacturer, was admitted to Harper Hospital January 5, 1950, and discharged January 15, 1950. He became ill on January 1, 1950, with malaise, fever, severe frontal headache. The fever varied from 100 to 102 degrees prior to hospital admission on January 5. Upon hospital admission, a maculo papular rash such as seen in Brill's disease was present upon the chest, abdomen, arms and feet. The rash was not pruritic. The patient had received penicillin. However, the rash did not appear to be a penicillin rash and its onset was too early. There had been pains in the forearms, knees and calf muscles ten days prior to the onset of the illness. This, however, was of frequent occurrence with this man especially during inclement weather. The general physical examination was negative and there was no periorbital edema. The white blood count was 7,500 and the highest eosinophile count was 39 per cent. Agglutination for Proteus x-19 was negative. Stools were negative for parasites. Skin test was negative for trichinae. Fever varied from 99 to 102 degrees. Muscle biopsy was done. Blood cultures were negative. The rash persisted for ten days.

Therapy included Sulfadiazine and Aureomycin.

Of the six patients, two had positive skin tests, four had negative skin tests. Two had muscle pains and four had no muscle pains. In none of the biopsies were encysted trichinae found, although definite eosinophilic infiltration was noted in all of the biopsy specimens. The unusual finding was the complete lack of muscle pains and local tenderness in four of the cases including the most severe one. There was minimal muscle pain in the two milder cases. All of the patients made a good recovery.

For a complete study of trichiniasis the reader is referred to the excellent monograph by Doctor S. Gould.

Cancer morbidity records will, when properly analyzed, show the need for and progress of a cancer control program, give to the medical profession information that will enable them to improve the end results of treatment, bring added benefits to those individuals afflicted with cancer, and assist the community in developing the most effective control program possible with the money available.

The importance of follow-up of cancer patients cannot be over-rated, for it is only by such means that the early detection of recurrences is possible.

* * *

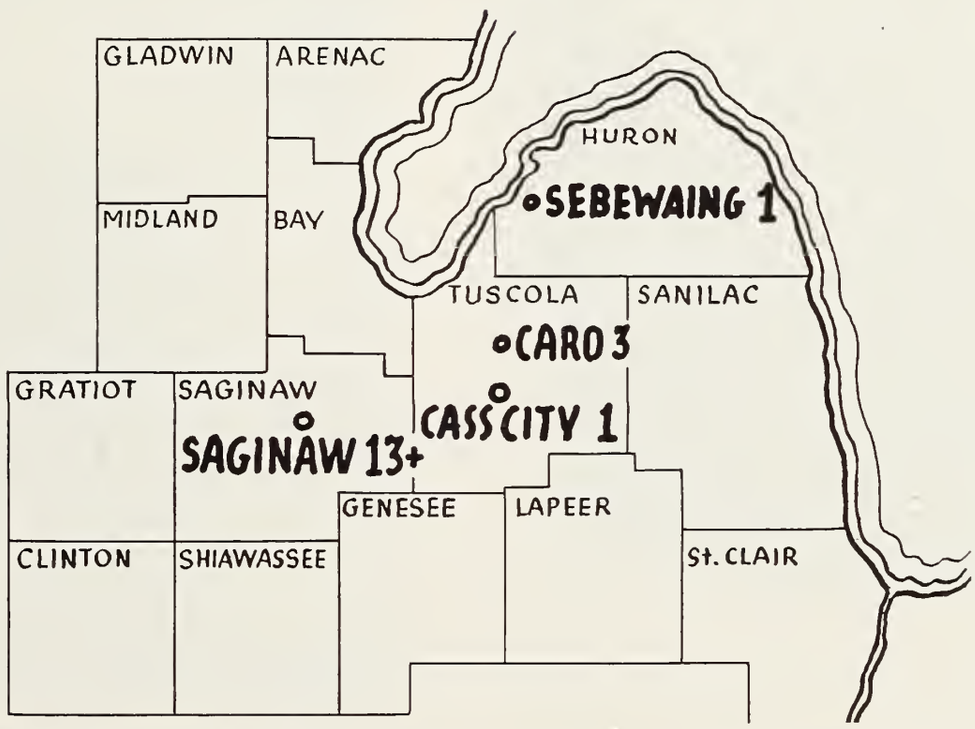
Statistics regarding the incidence, prevalence and survival of cancer cases are of value in planning lay educational programs.

Trichophyton Tonsurans Ringworm

By Eugene A. Hand, M.D.
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and
Lucille K. Georg, Ph.D.
Chamblee, Georgia

TRICHOPHYTON TONSURANS infections of the scalp, glabrous skin, and nails have been common in Puerto Rico and Mexico for many years. Until the past few years the disease has been thought to be rare in most sections of the United States. A number of cases had been reported from several of the eastern port cities, particularly New York City, but the percentage of tinea capitis cases caused by *T. tonsurans* was never high, and the infections were largely confined to individuals immigrated from Puerto Rico.[1] However, numerous cases have recently been presented before the New York Dermatological Society meetings. Also in the past several years, relatively large numbers of isolations have been reported from patients seen in the Southwestern States, particularly Texas, and southern California[2,3,4] and the number of cases has been increasing. In some areas 68 per cent of patients with tinea capitis are infected with *T. tonsurans*. Of these, the great majority are Latin-Americans who have immigrated from Mexico. The infections have spread among the Negro and Anglo-American population, and present an important public health problem.

It is now apparent that the disease is spreading to many areas of the United States. Scattered cases have been reported from at least thirteen different states[1] and from Canada. The present report of eighteen cases from northeastern Michigan indicates that endemic areas may develop in any section of the country where Mexican itinerant workers are employed in large numbers, and where a Latin-American population has become established.



Trichophyton tonsurans cases in Northeastern Michigan.

Slaughter and Cawley[5] reported the first case of *T. tonsurans* ringworm in Michigan in 1946. This was a four-year-old white girl with a circinate lesion on the knee, from a farm in Washtenaw County. The first case the authors have observed

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in the Saginaw area was a white farmer boy, aged eight, from Tuscola County, seen August 9, 1951 with a Wood's negative scaly eruption and with patchy alopecia on the occiput. There was a history of contact with a child of Mexican origin who had a scalp eruption. His father, seen simultaneously, had a lupus erythematosus-like eruption on the temples and forehead. Only the knowledge of his son's infection led one of the authors to do scrapings and cultures resulting in a diagnosis. The same was true of the boy's mother who had a herpetic lesion on the forearm. *T. tonsurans* was isolated from the child, the father, and the mother. This family was presented before the Detroit Dermatological Society (October 10, 1951). In the discussion, Dr. R. H. Grekin mentioned one case with a positive culture from Detroit. The first case from the city of Saginaw was seen late in 1951. Two Negro children also were so diagnosed in 1952. One Anglo-American child and ten Negro children, including one 18-year-old male, have been diagnosed as having *T. tonsurans* infection so far in 1953. Numerous other cases not recorded in this series have been seen in the Saginaw free clinics.

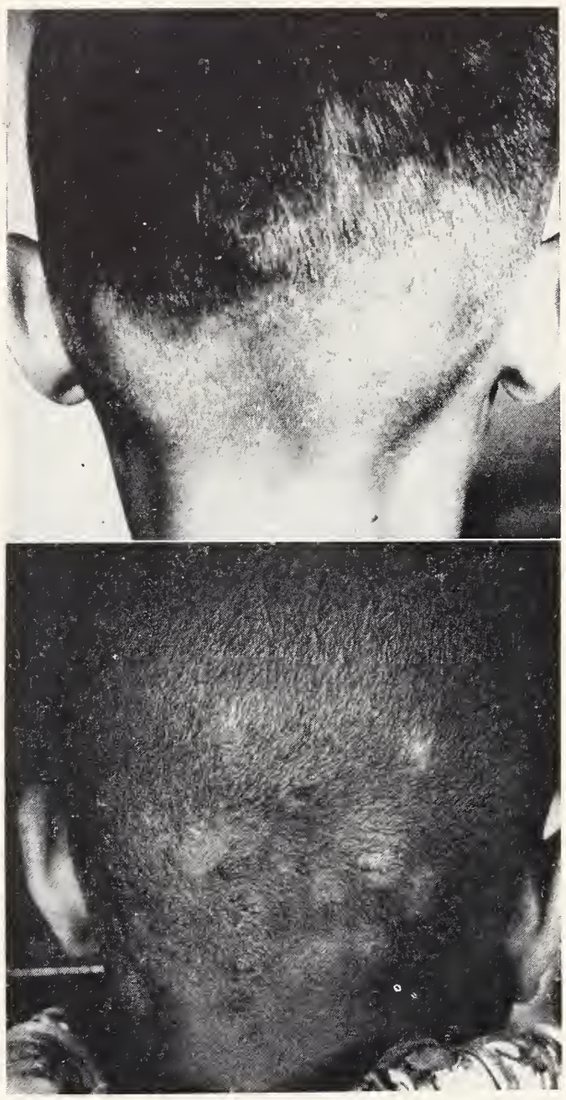


Fig. 1. *Case 1.*—A typical superficial type lesion showing scaling of the scalp and irregularly defined areas of baldness.

Fig. 2. *Case 16.*—Patchy alopecia and beginning suppurative type reaction.

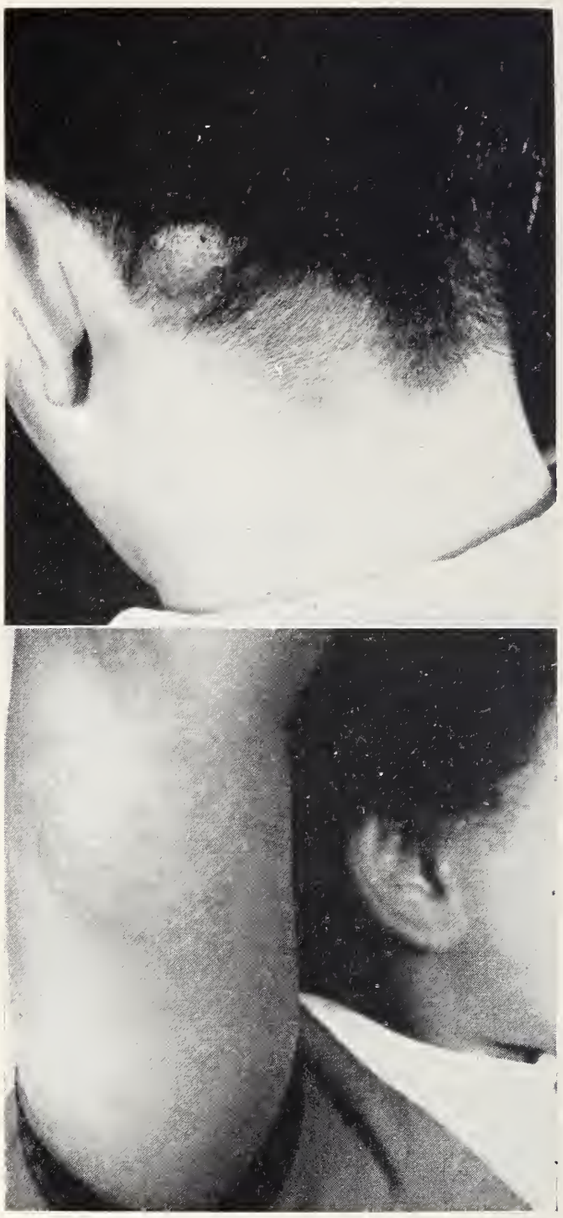


Fig. 3. *Case 9.*—A well-defined kerion.

Fig. 4. *Case 5.*—Agminate folliculitis.

It would seem that Mexican itinerant farm and orchard workers have carried this disease into rural Michigan. The Mexican and Latin-American foundry workers have brought it to Michigan cities. Here this infection is spreading to Negroes, many of whom live in crowded unhygienic conditions in the same districts as the Latin-Americans.

From these sources a few native Michigan, Anglo-American children and adults have been infected. *T. tonsurans* is now endemic in the Saginaw first ward, and may become epidemic.

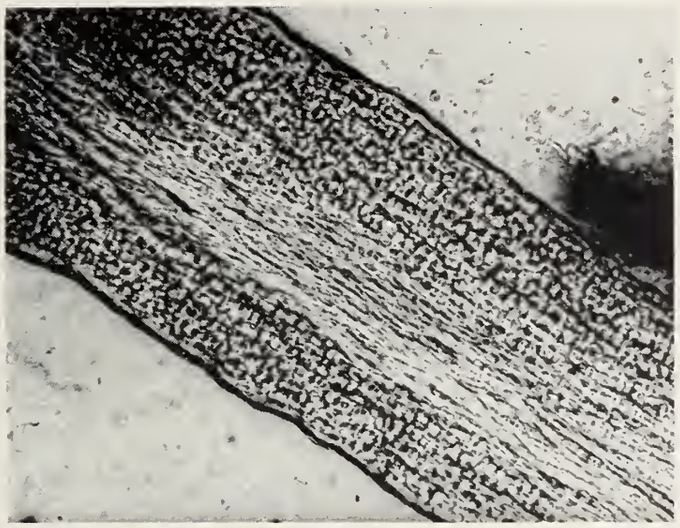


Fig. 5. Hair showing endothrix invasion typical of *T. tonsurans* infection. Note chains of large spores in interior of hair only.

Clinical Characteristics

All the clinical lesions that represent the human body's response to fungus infection in the epidermis, hair, hair follicles, and nails can occur with *T. tonsurans* infections.

The scalp lesions in children and adults are often irregularly defined, scaly patches which can easily be confused with dandruff or even psoriasis. Severe itching is frequently present. Case four illustrates this minimal-type lesion. This was a white, 6-year-old farm girl from Huron County who was first seen in May, 1952, with what appeared to be seborrheic dermatitis sicca of the scalp. The Wood's light examination was negative on numerous occasions, and only the mother's insistence on culture led to the correct diagnosis.

In some cases loss of hair is evident, and stumps of broken off hairs may be found by careful searching. When loss of hair becomes extensive, irregularly defined areas of baldness interspersed with normal hairs may be seen. In such cases where scaling and loss of hair constitute the only tissue reactions, the disease tends to be chronic in nature and is extremely difficult to cure. Figure 1 illustrates such a case.

The development of erythema, suppuration, and kerion is rare in both children and adults, though perhaps more common in the former. Kerion in this series has been more common than is usually seen in *T. tonsurans* infections. Such a tissue reaction is to be desired, as in these cases spontaneous cure usually results. Figure 2 illustrates an early suppurative reaction; Figure 3 shows a kerion.

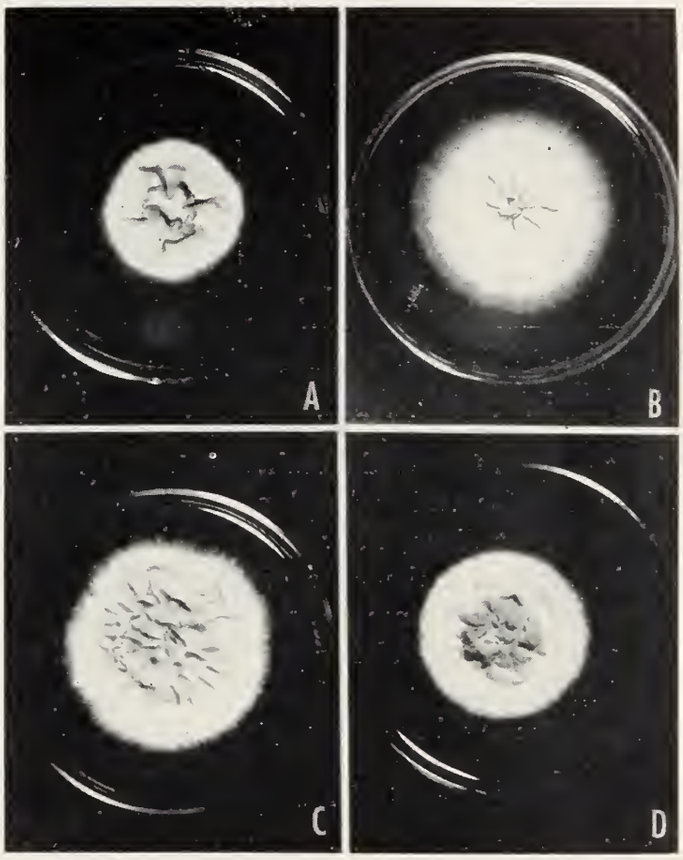


Fig. 6. Colony variants of *T. tonsurans* on Sabouraud's dextrose agar: (A) Variety crateriforme; (B) variety sulfureum; (C) variety cerebriforme; (D) variety acuminatum.

Lesions of the nails and glabrous skin are similar to those produced by the other trichophytons. They often are associated with scalp lesions and this often aids in the diagnosis. The lupus erythematosus-like lesions, as seen with *T. rubrum* infections, are common with *T. tonsurans* infections also. Figure 4 shows a lesion of the glabrous skin.

Wood's Light Examination

For all practical purposes the Wood's light is negative in *T. tonsurans* infections of the scalp. This is most unfortunate and is the chief reason why the diagnosis of this disease is so often missed unless one's index of suspicion is high.

Microscopic Examination

Direct examination with KOH preparations of the hair stumps removed with a fine forcep or point of a scalpel reveals typical endothrix spores arranged in chains (Fig. 5). This arrangement

TABLE I. SUMMARY OF TRICHOPHYTON TONSURANS CASES

Case No.	Age	Sex	Race	Location Lesion	Duration	Type of Lesion	Wood's Light	Microscopic Exam.	Culture	Home Address
1	8	M	W	Occiput	4 Mo.	Scale with patchy alopecia	–	+*	+**	Caro, R.F.D.
2	54	M	W	Face	1 Mo.	L. E. like	–	+	+	Caro, R.F.D.
3	42	F	W	Arm	1 Wk.	Herpetic	–	+	+	Caro, R.F.D.
4	6	F	W	Scalp, trunk	1 Yr.	Scaly circinate	–	–	+	Cass City, R.F.D.
5	10	F	C	Arm	1 Wk.	Agminate	–	+	+	Saginaw
6	8	M	C	Scalp	1 Mo.	Patchy alopecia	–	+	+	Saginaw
7	9	M	C	Occiput	1 Mo.	Kerion	–	+	+	Saginaw
8	4	F	C	Face	1 Wk.	Circinate	–	+	+	Saginaw
9	14	M	W	Occiput	2 Wk.	Kerion	–	–	+	Saginaw
10	4	F	C	Scalp	?	Patchy alopecia	–	Not done	+	Saginaw
11	5	F	C	Scalp	1 Mo.	Patchy alopecia	–	+	+	Saginaw
12	7	M	C	Scalp	4 Mo.	Kerion	–	+	+	Saginaw
13	1	M	C	Scalp	4 Mo.	Impetigo	–	–	+	Saginaw
14	6	M	C	Scalp	2 Wk.	Scaly	–	+	+	Saginaw
15	5	M	C	Scalp	2 Wk.	Scaly	–	Not done	+	Saginaw
16	8	M	C	Scalp	3 Mo.	Patchy alopecia	–	+	+	Saginaw
17	16	M	C	Scalp	1 Mo.	Circinate	–	+	+	Saginaw
18	6	F	W	Scalp, Trunk	3 Mo.	Circinate	–	+	+	Sebewaing

*Microscopic exam. +: Typical endothrix hairs observed.
**Culture +: Typical culture Trichophyton tonsurans recovered.

causes the hairs to be thickened and to break off at the surface. One of the authors (E.A.H.) found this search for and removal of the hair stumps to be very tedious. However, scraping the involved area with the edge of a glass slide and culturing the scrapings gave a positive diagnosis in many cases. The scales from glabrous skin lesions and infected nails reveal fungus elements similar to those seen in other trichophyton infections.

Culture

This organism can be grown with ease on Sabouraud's dextrose agar from infected hairs, scales, or nail scrapings. The culture grows at room temperature in five to seven days and rapidly becomes heaped and folded in various patterns which give a characteristic picture. The surface is usually finely powdery with a range of pigment from white to tan, or shades of rose, violet, or yellow. The fungus is identified on the basis of both the macroscopic and microscopic appearance of the culture. The clinical picture, prognosis, and treatment is the same for all morphologic forms of *T. tonsurans* known as varieties: craterforme, sulfureum, accuminatum, cerebriforme, et cetera. Figure 6 illustrates the common morphologic variants of *T. tonsurans).*

Treatment

T. tonsurans infection of the scalp does not tend to clear at puberty as does *Microsporum audouini* infection. The infection is seen in both children and adults. Temporary x-ray epilation is probably the best treatment, but even here a great deal of after-treatment is necessary to eliminate the infection before the hair regrows.

T. tonsurans infection of the glabrous skin not complicated by scalp involvement responds to fungicidal preparations about as well as that due to the downy type of *T. mentagrophytes.*

T. tonsurans infection of the nails responds poorly to treatment as do all fungus infections of the nails.

Adequate sterilization of barbers' equipment, particularly scissors and clippers, would appear to be an important step in controlling spread of ringworm of the scalp of all types. One of the authors (E.A.H.) is of the opinion that thorough shampoos after hair cuts may help to prevent new cases, and suggests that daily shampoos in sibling contacts may aid in preventing spread in families.

Collodion with or without fungicidal additions painted on the scalp or glabrous lesions has been helpful in cutting down the spread of infection on the individual and also to others.

Conclusions

1. The *Trichophyton tonsurans* organism has been introduced into Michigan by way of farm and foundry workers of Mexican origin. From them it has spread to Negroes and Anglo-Americans, where it involves both the scalp and glabrous skin.

2. *T. tonsurans* ringworm is an important public health problem for the following reasons:

(a) It is difficult to diagnose because the hairs do not fluoresce under the Wood's lamp, and also minimal scalp lesions may be easily confused with dandruff.

(b) It does not tend to clear at puberty and is seen in adults as well as children.

(c) It is refractory to treatment as there is little tendency to inflammatory reaction.

(References on Page 727)

Jimson Weed Poisoning

A Report of Two Cases

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EVERY year 12,000 to 13,000 children in the United States are killed by accidents; 40,000 to 50,000 are permanently injured; and at least 1,000,000 seek medical care because of accidents.[2] One of the common accidents is the injestion of toxic foreign material including plants and plant seeds. This article is a presentation of two cases of poisoning in siblings by Datura stramonium, otherwise known as Jimson weed, Jamestown weed, Thorn apple, Devil's apple, or intimately as "stinkweed," which though not common is far from rare. This form of poisoning is often misdiagnosed with diagnoses varying from acute schizophrenia to alcoholic delirium.[5] The reason for misdiagnosis is probably due to the lack of familiarity with this entity because of the scarcity of publications concerning it. It is for this reason that the following cases are presented.

Case Reports

Case 1.—P. B., aged three years, was admitted to the Edward W. Sparrow Hospital on August 5, 1954, for observation because of "strange behavior" of about two hours duration. The present illness began when the patient awoke from his afternoon nap, and according to the mother acted very excitable, and did not seem to recognize his parents. The past history was negative. The day of admission was not unusual. The family had had breakfast and an early lunch at 11:00 a.m. The children had played in the yard until 1:30 when the patient came into the house and asked to take his nap which was not an unusual event for the child. Following the nap he awoke in the condition stated above.

Physical examination revealed a well-developed, well-nourished, white boy of stated age sitting in bed, not aware of his surroundings, having active hallucinations, and picking "nothings" out of the air. There was pronounced ataxia of the extremities and a mild trunkal ataxia. The child was moderately irritable. The skin was markedly flushed over the entire body, but the temperature was only 98.4 degrees rectally. The pupils were maximally dilated and did not respond to light. The mucous membranes were dry and covered by thick layers of dry secretions. The pulse was 168 and irregular. Over the precordium ectopic beats were heard. The remainder of the physical examination was essentially normal.

Laboratory findings were all within normal limits.

Case 2.—T.B., aged five, sister of the above, was admitted at the same time for "strange actions and staggering." The history here was the same except that she lay down in the yard to take a nap; awoke about 3:00 p.m. and cried, felt sick, staggered and acted strangely.

Physical examination revealed a well-developed, well-nourished child of stated age lying quietly in bed, with occasional clonic movements of the extremities. She was oriented but did not appear interested in her surroundings. The skin was markedly flushed. The pupils were maximally dilated with minimal reaction to light. The mouth and lips were covered with dry secretions. The pulse was 108 and regular. The remainder of the physical examination was essentially normal.

Laboratory examinations were all within normal limits.

The parents were questioned carefully about the possibility of drug ingestion but none could be obtained. They were asked to look in the yard for any weeds, seeds or fruit which the children could have eaten.

Both the children were treated with seconal rectally, and intravenous fluids of glucose in water, and glucose in lactate Ringers solution.

Shortly after admission the girl vomited a small amount of fluid containing many seeds, which were sent to Dr. W. B. Drew of the Michigan State College Botany Department, along with some empty pods and leaves the parents had found in the yard and brought in the following morning. Attempts to lavage the boy were unproductive. Dr. Drew's report was as follows: "Datura stramonium or Jimson weed, which contains the alkaloids of hyoscyamine, atropine and scopalamine in the seeds, leaves, and roots."

Both children gradually improved so that by twenty-four hours after admission they had ceased hallucinating, the ataxia was no longer present, and they were completely aware of their surroundings. There was total amnesia of the preceding twenty-four hours. The skin was no longer flushed, the mucous membranes were moist, and the pulse had slowed and become regular, but the pupils were still dilated. Two days after admission their pupils were still dilated but did have some reaction to light. The patients were otherwise normal and were discharged.

Comment

Jimson weed belongs to the Solanaceae or nightshade family. Distribution is world wide and the plant grows wild in many areas of the U. S., attaining heights of 2 to 6 feet. It flowers in late spring with white, five-lobed trumpet-shaped flowers which have a strong sweet scent. The seed capsules are eggshaped and covered with sharp spines. The leaves are large, angular, and measure 4 to 6 inches in length. The plant is almost as old as history itself. It is believed to have been

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used in ancient Greece for its hypnotic and narcotic effects. It was used in India by thugs to drug their victims.[6] American Indians used it in ceremonies initiating boys into manhood and some tribes used it as an anesthetic.[2] Probably the first case of Datura poisoning in this country was that described by Robert Beverly in 1676.[3] Cases have been reported off and on since that time, among which are several deaths. The usual cause of death is due to respiratory failure.

The earliest toxic manifestations are flushed cheeks, dryness and burning of the mouth, thirst, and visual disturbances. The pupils become dilated and do not react to light or accommodation. Further signs are rapid weak pulse, elevated blood pressure and difficulty with urination.[1] Weakness, giddiness, staggering, mental confusion, excitement and delirium may follow.

Treatment varies with the severity of the manifestations. In mild cases withdrawal may be the only treatment necessary. In severe cases, lavage of the stomach with weak iodine, strong tea or 4 per cent tannic acid may be used, followed by giving the patient magnesium sulphate. Sedation may be used but the patient must be observed for respiratory failure in which case artificial respiration or stimulants may be necessary. In severe poisoning with a long recovery, nursing care is very important in the prevention of complications, such as pneumonia. Parenteral fluids may be used and be helpful, as will hydrotherapy if fever is present.[4] Pilocarpine may be used to help alleviate the dryness of the mouth and the visual disturbances, but it will not shorten the course of the intoxication.

Poisoning due to the ingestion of Datura stramonium or Jimson weed occurs not infrequently and will undoubtedly be seen more often as a result of the present trend of families to reside in suburban areas. This possibility should be included in the differential diagnosis of every case presenting bizarre symptoms and signs, which in any way suggest atropine intoxication.

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PERFORATION OF THE ESOPHAGUS

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Use and Abuse of Corticosteroids, Antibiotics and Antihistamines in Dermatology

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THE ENTHUSIASTIC reception of cortisone and corticotropin in the treatment of skin diseases has waned considerably during the past year. Warnings concerning their hazards plus the fact that their effects are only palliative are indicated.

It has been apparent since the first use of steroids in Dermatology five years ago that they did not cure patients with skin diseases. It is true that in some cases rather spectacular improvement occurred and that life expectancy can be extended in such fatal dermatological diseases as pemphigus and acute disseminated lupus erythematosus. The administration of these drugs may produce serious and prolonged reactions. These unfavorable and often serious sequelae may become manifest months after the administration of the drug is stopped. Patients differ greatly in their tolerance of these hormones.

The administration of cortisone and corticotropin suppresses the secretion of endogenous adrenocorticotrophic hormones by the anterior lobe of the pituitary body. O'Leary[3] has emphasized that in addition to the unfavorable side effects as noted in the skin, namely increased pigmentation, hirsuitism or alopecia, seborrhoeic-like dermatitis, acne, atrophic striae, and the "moon face" of Cushing's syndrome, it is necessary to bear in mind that cerebral disturbances such as euphoria, depression states, frank psychoses, convulsive attacks and changes in personality may develop. In addition, alterations in electrolyte metabolism resulting in retention of salt and water associated with edema and gain in weight may require adjustment in intake of sodium chloride and potassium. The transient hyperglycemia is usually readily controlled and disappears when administration of the drug is stopped, although the hypertension that frequently develops may persist and be serious. Intercurrent infections such as tuberculosis, peritonitis, streptococcic and staphylococcic infections and influenza may be masked by the administration of these drugs and accordingly over-looked. Other complications include the development of gastric or duodenal ulcers from which severe bleeding may occur or even perforation without warning, and interference with healing of operative wounds. Suppression of the adrenal cortical function may occur and be manifested by weakness, fatigability, and a drop in blood pressure. Contraindications to the use of these steroids include heart failure, hypertension, renal insufficiency, psychotic tendencies, duodenal ulcer and tuberculosis.

Beneficial Effects of Corticosteroids

It is now accepted that these drugs are not curative and that the favorable results of treatment in skin diseases is very variable. In those cases in which marked improvement can be expected, complete failure may occur and in others in which marked benefit is not anticipated, spectacular improvement may take place. The two diseases in which cortisone or ACTH are definitely indicated and may be life-saving, at least temporarily, are acute disseminated lupus erythematosus and pemphigus. They apparently are more effective in the vulgaris type of pemphigus than in the foliaceous and vegetative types.

In most cases of pemphigus the oral administration of 200 mg. or more of cortisone per day will stop the formation of blebs and blisters. In an occasional case the oral administration of 400 to 500 mg. of cortisone per day or the intramuscular injection of 100 to 150 units of corticotropin may be necessary to control the pemphigus. Oral administration of 50 to 100 mg. of cortisone or the intramuscular injection of 10 to 40 units of ACTH per day is usually necessary to maintain a remission. Potassium chloride and ascorbic acid are valuable adjuncts. When the administration of steroids is discontinued or its dose is reduced too rapidly, the cutaneous lesions usually recur. Such recurrent lesions are more severe and resistant to treatment than were the original lesions.

In a few cases of pemphigus the disease has been controlled without remission for three years with maintenance doses of steroid. In other cases of pemphigus the disease has not recurred even after maintenance doses have been discontinued. However, in these cases of supposed cure the question arises as to the accuracy of the original diagnosis. Unfortunately, many patients have not de-

rived any benefit from steroid therapy and have died of the disease.

In cases of acute disseminated lupus erythematosus of the severe systemic type administration of corticosteroids will frequently produce a remission that may be maintained for several years. Although such clinical remissions occur, laboratory examinations reveal little change. The L.E. cells persist as well as increased sedimentation rate, leukopenia, albuminuria and reversed A.G. ratio. Unfortunately, most clinical remissions are of short duration and the patients have eventually died of the disease.

In cases of sarcoidosis, lymphoblastoma, dermatomyositis, scleroderma, and acrosclerosis the results of treatment with steroids are unsatisfactory. Recently, injections of hydrocortisone into the local lesions of sarcoidosis has been reported by Herman Beerman and Associates[4] as producing rapid involution of such lesions although recurrence has occurred in less active form.

There is a great temptation to use steroids in the treatment of atopic dermatitis. Temporary relief can be secured by such therapy but relapse invariably occurs often with exacerbation of symptoms and frequently associated with severe depression and suicidal tendencies. The feeling of well-being, euphoria and clinical improvement in such patients rapidly brings on addiction to the steroids and this addiction is often as difficult to break as the morphine habit.

Uncomplicated psoriasis should not be treated with these steroid drugs. However, when complicated with exfoliative dermatitis or psoriatic arthritis its use may be justified but recurrence can be expected.

ACTH and Cortisone will probably prove of greatest service in acute self-limited dermatoses. Such recommendation, however, will depend upon further experience with the delayed serious reactions that seemingly may occur even after small doses of steroids. In general, they should not be used in chronic recurrent non-fatal dermatoses which can be managed with conventional methods. The most gratifying results are seen in severe penicillin urticaria and severe dermatitis medicamentosa. Its use is indicated in severe erythema multiforme of the Stevens-Johnson type and anaphylactoid reactions. It may be justified in severe dermatitis venenata such as poison ivy where highly gratifying results can usually be obtained. Unless the cause is recognized and no longer acting, however, steroids should not be used.

Hydrocortisone acetate ointment in strengths of 1 and 2½% for local use has recently become available. It has proven very effective in many cases of contact and allergic dermatoses. It has also been a valuable addition to the treatment of localized patches of neurodermatitis and pruritus ani and vulvae. Fortunately, there is evidently so little absorption from such local use that systemic toxic manifestations have not been reported to date. Unfortunately, it is so expensive that its use is not practical except in small localized patches of dermatitis.

In conclusion, the use of Cortisone and ACTH should be limited to the following conditions:

1. Serious and otherwise fatal conditions, such as pemphigus and systemic lupus erythematosus;
2. Self-limited hypersensitivity reactions of severe degree unresponsive to more conservative measures;
3. Steroids should not be used in chronic recurrent non-fatal dermatoses which can be managed with conventional methods;
4. Hydrocortisone ointment used locally is seemingly effective in contact and allergic dermatoses, localized neurodermatitis and pruritus ani.

Antibiotics

The first and still the best antibiotic for systemic treatment of acute cutaneous pyogenic infections is penicillin. It is not recommended, however, for local treatment because of the high incidence of cutaneous sensitivity reactions which occur as the result of topical application. Many newer antibiotics are being used in the treatment of various skin infections such as impetigo, ecthyma, pyoderma, erysipelas, cellulitis, and lymphangitis. These include aureomycin, terramycin, neomycin, bacitracin, polymixin B and more recently erythromycin and achromycin. These latter antibotics are uncommon sensitizers when used locally. Some of these antibiotics, such as neomycin, bacitracin and polymixin B, are used primarily for topical application and not for systemic use. There is an advantage in selecting them for local use rather than those that are extensively used systemically since, if sensitization does occur, it will not deprive the patient of a useful drug for possible future systemic treatment should a serious infection occur.

Antibiotics when used locally are usually applied as ointments. Their use in watery solution or wet dressings is often more effective than in ointment bases. They should be used in concen-

trations of from 0.1 mg. to 1.0 mg. per c.c. The powdered antibiotics may also be added to lotions in a concentration of 1 mg. per c.c. when indicated. Neomycin sulfate and polymixin B are stable in aqueous solutions for indefinite periods, but aureomycin, bacitracin and terramycin are unstable in solution. These latter antibiotics should not be prescribed in an ointment base or lotion containing water.

The *in vitro* results and preliminary clinical experiences with erythromycin indicate that it is very effective for both hemolytic streptococci and staphlococcus aureus. Since these organisms are the cause of the vast majority of skin infections, it should prove the most uniformly effective of all the antibiotics. The results of *in vitro* sensitivity tests of the more common antibiotics may be summarized as follows according to Clarence S. Livingood:[2] For staphylococcus aureus the order is erythromycin, neomycin, terramycin, penicillin and bacitracin; for hemolytic streptococci the order is erythromycin, penicillin, terramycin, aureomycin, bacitracin, and neomycin.

No single antibiotic is superior for all infections. Of late, there is a tendency to employ a combination of antibiotics in ointments instead of a single preparation in order to secure more efficiency. Unfortunately, no such combination is uniformly effective. Ideally, bacterial cultures and in vitro sensitivity tests should be made to the causative organisms in selecting the most suitable antibiotic for local or systemic use. This is especially indicated in chronic resistant infections. If such sensitivity tests cannot be done, selection should be made on a trial and error basis. If marked improvement with a given preparation does not occur within a week a different antibiotic should be selected. It is desirable in making a selection of an antibiotic to be employed, to be familiar with the evaluation of its therapeutic efficiency for the type of infection present.

Penicillin is still the treatment of choice for both syphilis and gonorrhea. There is no evidence to date of penicillin resistance developing in either of these diseases. There is, however, an ever increasing incidence of penicillin sensitization which may limit its use more and more in the future. Penicillin is of no value in the treatment of chancroid, lymphogranuloma venereum, or granuloma inguinale. It is commonly used in the treatment of chancroid and such use masks a possible syphilitic infection if present. The treatment of choice for chancroid is sulfonamide therapy. Sulfonamides are also of value in the treatment of lymphogranuloma venereum. The mycins, except for streptomycin in syphilis, are effective in the treatment of all five of the venereal diseases, although they are the treatment of choice only in lymphogranuloma venereum and granuloma inguinale. Although they are not as effective as penicillin in the treatment of syphilis and gonorrhea, they are suitable substitutes if severe penicillin sensitivity exists. They may also be used in the treatment of chancroid if contraindications to the use of sulfonamides exist, although such use will also mask an associated syphilis if present.

The sulfonamides, although not antibiotics, are valuable in the treatment of skin infections. They, however, like penicillin, should not be used locally because of the frequency of cutaneous sensitivity from such use. The common practice, particularly in the past, of employing sulfathiazole ointment to leg ulcers and stasis dermatitis, frequently caused severe dermatitis venenata or medicamentosa. Sulfapyridine, which has little other value and is one of the more toxic sulfonamides, is most effective in the treatment of dermatitis herpetiformis and some cases of so called nummular eczema. Frequent blood counts and urinalyses should, however, be made on such patients.

Antihistaminic Drugs

Histamine plays an important role in the phenomena of hypersensitivity. Antihistamines should neutralize, or at least inhibit, the effect of histamine in allergic skin diseases. When introduced it was hoped that they would prove highly effective in the control of all types of allergy. Unfortunately, further experience has not justified this hope.

The exact mechanism of action of these drugs is not known. They are not effective in all allergic manifestations and are not universally useful in any particular syndrome. They may provide symptomatic but not curative relief for urticaria, angioneurotic edema, and serum sickness. They have been a disappointment in atopic and contact dermatitis where their value is largely limited to their sedative effects.

These drugs are often helpful in controlling pruritus when used locally due to their anesthetic action. They have, therefore, been recommended for the control of pruritus in localized neuro-

dermatitis, lichen planus, pruritus ani, etc. Such local use is, however, no longer recommended because of the high incidence of cutaneous sensitivity reactions which occur as the result of such topical application. Preparations containing antihistaminics for local application, therefore, are no longer approved by the Council on Pharmacy and Chemistry of the American Medical Association, or listed in *New and Non-Official Remedies.*

An important limitation to the systemic use of these drugs is their toxic effects. The major undesirable symptom, particularly to their ambulatory use, is sedation. This may be evidenced by inability to concentrate, loss of alertness, dizziness, weakness or marked sleepiness. In occasional cases excitation occurs, manifested by tachycardia, nervousness, irritability, or insomnia. In other patients, nausea, vomiting, headache and blood dyscrasias, such as agranulocytosis, anemia, and leukopenia may develop.

The large number of antihistaminic drugs being presented these days is very confusing. It is impossible to be experienced with them all. It has been suggested by Feinberg[1] that these preparations be divided into three groups and that the practitioner become acquainted with at least one preparation from each group. *Group one* might comprise the less sedative and usually less potent antihistaminics, such as Antistine, Neohetramine, Perazil, and Thephorin. *Group two* would comprise the more potent and moderately sedative members, such as Chlor-Trimeton, Histadyl, Neo-Antergan, Pyribenzamine, Pyrrolazote and Trimeton. *Group three* might contain the most sedative drugs, such as Benadryl, Decapryn, and Phenargan. It is suggested that the physician select one member from each of these groups. Selection from such a triad would satisfy the majority of the cases who respond to antihistamines.

It may be indicated in some cases with severe allergic manifestations to increase the average adult dose from two to four times. When using such large dosage, however, the patients should be under constant observation. The use of antihistaminics suitable for intramuscular or intravenous administration such as Benadryl, Histadyl or Chlor-Trimeton often produce more prompt and powerful action than their use orally. Such use is ordinarily restricted to emergencies and such situations are often more effectively met by the use, if available, of corticosteroids.

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POLIO VACCINE CONFUSION AND FACT

(Continued fom Page 656)

The Council in originally adopting a policy of PR foresight.

This preliminary review is in no way intended as an "I told you so" paean of self-praise; too many problems still lie ahead. Nevertheless the Michigan medical profession is justified in being rather proud that its concept of public relations has a stronger foundation than mere "co-operation" in or acquiesence to such an obvious and popular measure as "free" polio inoculations. In this instance, courage was a basic ingredient in an increasingly successful PR activity. Lacking courage, MSMS never would have accepted what its leaders considered a sincere responsibility to give facts to the people of Michigan no matter what the cost (in "popularity").

Economic Advantages of Early Ambulation

By D. J. Leithauser, M. D.
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THE HIGH COST of medical care, particularly hospitalization, has become a matter of vital concern everywhere, to the patient, to hospital management, to the medical profession, to insurance companies and to the community as a whole. Hospital costs naturally have soared because of the general inflationary trend, but the problem has been further aggravated by abuse of hospitalization because of prepaid hospital insurance. This economic problem must be solved, or hospital care will soon be priced beyond the reach of a majority of those who need it, whether it is paid directly or through hospital insurance premiums. A significant contribution to the solution of this problem could be made by reducing the average period of postoperative hospitalization, since the majority of admissions in community and private general hospitals are surgical and obstetrical. Fortunately, the means are already available for doing this, if all surgeons would take advantage of recently improved methods of postoperative care, for these methods result in more rapid recovery of the surgical patient, and definitely shorten the hospital stay. Development of these procedures was motivated originally by the desire to improve medical care, but their enormous economic advantage furnishes another compelling reason why they should be more widely and effectively applied.

Hospital Stay Can Be Reduced

In our practice, through use of early ambulation, the average period of hospitalization after over 4,000 major surgical operations performed since 1938 has been reduced to less than half the time required in a comparable series of cases observed earlier, when patients were confined to bed after operation. In a large series of consecutive cases, the period of hospitalization after appendectomy was reduced from eight to two days; after cholecystectomy, from fourteen to seven days; following herniorrhaphy, from fourteen to five days, and following hysterectomy, from twelve to six days. In many individual cases, the hospital periods have been considerably shorter than these averages.

Reduction of hospital stay by at least 50 per cent has been reported also by other surgeons who have applied early ambulation aggressively and consistently. Despite enthusiastic reports from many surgeons, the general statistics on the length of hospital stay demonstrate clearly that many surgeons are still not achieving the maximum benefits possible with modern methods, because they are not using early ambulation with sufficient emphasis and insistence, particularly in patients who have been subjected to extensive procedures. In 1953, among patients insured in the Blue Cross, representing 45.8 per cent of all hospital admissions in the State of Michigan, the average period of hospitalization for all uncomplicated major surgical cases was still thirteen days. Since this figure represents the total period before and after operation, the postoperative period would probably be one to one and a half days less. This still leaves a considerable discrepancy between what can be done and what is being done generally.

Professional Attitude Toward Early Ambulation

That this matter has great significance from the standpoint of cost of hospital insurance in the aggregate and for every individual who is insured is emphasized in a letter sent by the Chairman of the Advisory Committee of the Michigan Hospital Service, in December, 1953, to all physicians in the state. This letter stated that the length of hospital stay has "crept up since 1951," and warned that "should the average length of stay increase by one day it would cost Michigan Blue Cross $10,000,000 in 1954."

When this letter came, it recalled another letter once received from the Wayne County Medical Society, after I had begun to advocate early ambulation after surgery, on the basis of my own favorable experiences. This earlier letter is mentioned because it is pertinent to the present discussion in explaining why the full impact of the modern therapeutic methods has not yet been realized in the practice of surgery generally. The letter, dated September 26, 1939, reads as follows:

> "The Ethics Committee has obtained legal opinion to the effect that if some untoward results should follow such a short stay in the hospital after an operation and should result in a lawsuit that the defendant (the physician) could not anticipate a favorable decision. It is also the opinion of insurance companies that they would tend to avoid the handling of such a case."

These two letters testify that within a little more than a decade there has been a complete reversal in the official attitude of the medical profession in regard to the optimal period of hospitalization after surgery. It is historically interesting and indicative of the rapidity of recent medical progress, that the shortening of hospital stay which was criticized and censured in 1939 has attained such status by 1953 that the insurance organizations sponsored by the Michigan State Medical Society urge all doctors to practice it because of its corollary economic advantage.

In this connection, it also should not be forgotten that the attitude of active opposition to early ambulation after surgery persisted for several years. In 1940, when results on early ambulation were presented before the Detroit Academy of Surgery, the discussion, in general, was ruthlessly antagonistic.* There was no widespread acceptance nor general application of early ambulation after surgery until about 1946, although a few surgeons in the larger medical centers had experimented with the method prior to that time. This means that the general trend toward methods that promote rapid recovery has taken place entirely within the past ten years. In view of this, it is not surprising that the maximum benefits possible with this new procedure have not yet been fully realized by the entire profession. It is perhaps more surprising, when one considers the natural conservatism of the profession, that the newer methods have been so thoroughly tested within such a short time, that they have received official sanction and that medical teaching in regard to postoperative care has changed so radically.

The majority of surgeons now in active practice received their training more than ten years ago, when it was believed that constant bed rest was required for wound healing, though this is now known to be a fallacy. Early ambulation was either unheard of or definitely frowned upon (as proved by the letter cited) as a hazardous procedure. Because of their training, many of these older men are naturally skeptical about the merits and safety of early walking after surgery, especially if they are working in small communities where they have not had the opportunity to observe the beneficial results at first hand. Even though they may recognize the possibility of beneficial results in theory, timidity frequently inhibits them when it comes to actual practice. Such timidity is usually attributable to certain misconceptions caused by incomplete understanding of the physiologic principles on which the rationale of early ambulation is based.

*Dr. Roy D. McClure was the only one present who expressed an objective interest and urged that the investigation be continued. Early encouragement also came from Dr. Alexander W. Blain. An article on the results of these experiments, prepared in 1939, was rejected by four national surgical journals. It was finally published in 1941 in the Archives of Surgery, but only after intercession and recommendation by Dr. Anton J. Carlson, Professor of Physiology at the University of Chicago, who had been impressed with the soundness of the physiologic principles involved, after a thorough review of the author's data.

Why Early Ambulation Is Necessary

In my previous publications, the physiologic necessity for ambulation immediately after operation has been fully explained.* After an operation, because of noxious reflexes initiated by the surgical injury, the arteriolar bed as a whole contract, choking off the blood supply to the organs and voluntary muscles. Similar contraction also occurs in the bronchioles and air cells, thus reducing oxygen content in the blood which supplies nourishment to the various organs and voluntary muscles. Oxygen lack and the accompanying imbalance in body fluids and electrolytes account for the weakness after an operation, which is usually in direct proportion to the magnitude of the surgical procedure. Walking reverses this functional imbalance and cripppling by substitution of a strong counter or compensatory reflex, demanding more oxygen for the muscles. This stimulates a chain reaction of biochemical responses resulting in opening of the bronchioles and arterioles, so that pulmonary ventilation is improved and blood flows to the viscera and extremities more rapidly. The patient's general physical improvement, as a result of this, is almost unbelievably prompt, as can be demonstrated by the "rapid recovery experiment."

"Rapid Recovery Experiment"

Early in our investigations on early ambulation, the "rapid recovery experiment" was so called because it was used when the patient's general condition demanded a particularly strong stimulus for re-establishment of normal function, or to furnish a striking demonstration of the immediate effects of exercise to fearful patients and doubting observers. At present, however, this "experiment" is

*These principles are also emphasized in a motion picture film produced in 1944, which also demonstrates the "rapid recovery experiment." This film is available for loan to medical organizations and hospital staffs upon request.

now incorporated into the postoperative regimen as routine practice; *three times out of bed in rapid succession immediately after recovery from the anesthetic is a standard order and is supervised by nursing personnel.*

Every surgeon can convince himself of the value of immediate postoperative exercise if he will perform this "rapid recovery experiment" on a patient who has undergone a major operation, e.g., cholecystectomy or gastrectomy. Immediately after the patient recovers from the anesthetic, assist him to get out of bed from the recumbent position and instruct him how to do it. Have him turn on his right side, then sit up with his feet over the edge of the bed, stand on the stool, then step down to the floor. Have him walk a few steps and then return to bed and resume recumbency, for about a minute. Then repeat the procedure twice. Each of the three times that he gets out of bed, insist that he walk as many steps as possible; each time he will be able to go farther. After this exercise period (about five minutes) is completed, allow the patient to rest in the recumbent position for ten minutes, and then visit him again. You will be amazed at the improvement in his general condition.

The surgeon should perform this experiment personally on three different patients; by then he should be so thoroughly convinced of its efficacy that he will be ready to adopt it as routine procedure, and to train his assistants and nurses in the management of patients during this immediate postoperative exercise. After this first "triple-rising" procedure, most patients can get out of bed by themselves, without assistance, and they are instructed that walking should be repeated frequently. If the patient is somewhat resistant or fearful, then each time he gets out of bed, have him bend over and touch the floor several times; this relieves any feeling of faintness and gives the patient confidence. If the patient should be still lagging or fearful on the day after operation, urge him to walk more rapidly or to walk up a flight of stairs. Encouragement and aggressive insistence are necessary to instill confidence in some patients, and become routine responsibilities of surgeons, interns and nurses in hospitals where early ambulation is effectively practiced.

Early Ambulation Hastens Wound Healing

Fear of wound disruption, which apparently still lurks in the minds of many surgeons, is absolutely groundless, as has been proven by all authors who have written on early ambulation. Actually, the wounds of patients who exercise immediately after operation heal more rapidly, and in all reported series, the incidence of incisional and recurrent hernias has been greatly reduced. Every surgeon who believes in his own technical ability to make a proper incision and to suture a wound securely can apply early ambulation effectively (which means radically) and consistently in all cases, with perfect confidence that his patients will recover more rapidly and that there will be far less danger of wound disruption and other complications than there would be if they were kept in bed for several days after operation.

Immediate Postoperative Walking Decreases Complications and Hospital Costs

In focusing attention on the economic aspect of the problem, the most important factor is timing, since the beneficial results are directly dependent on when (that is, how early) ambulation is established. When a surgeon understands the underlying physiologic principles, he knows why the earliest possible moment is the correct time to have the patient walk after an operation, and then he achieves effective results. He understands why "dangling" is a poor excuse for walking. "Dangling" and periods of sitting in a chair for several days before ambulation is started are undoubtedly responsible for certain reports that ambulation does not prevent venous thrombosis and consequent fatal pulmonary embolism. Early and frequent walking exercises beginning immediately on recovery from the anesthetic promote acceleration of the blood flow which washes away sludge and sticky clumps of red cells before they have time to become large fatal clots.

When the time of getting out of bed is left up to the patients (a relatively common practice), then only the more vigorous and active persons, who need it less than others, get the benefits of early ambulation. The ones who offer resistance and elderly patients and those more severely ill, who need ambulation the most, do not get it. Patients in these groups are the ones in whom postoperative complications may develop. Such complications always lengthen the period of hospitalization, increase expense for the patient (and incidentally, for the hospital and the community), besides causing him undue suffering and sometimes risk to his life.

Misuse of Hospital Facilities

Failure to comprehend these facts is extremely harmful, from the standpoint of optimal surgical care, and also extremely costly. If every surgeon in the State of Michigan were to use early ambulation, with proper timing, and with insistence on a consistent program that would yield full therapeutic benefits, the average period of hospitalization for surgical cases could undoubtedly be reduced by several days. Since the costs of hospitalization are constantly increasing, it becomes the duty of every surgeon to take advantage of the recent improvements, not only to hasten recovery and reduce the risk of complications, but also to ease the economic burden for the patient. Each day of hospitalization that is not definitely necessary represents unjustifiable waste and is depriving some other sick person of hospital care.

In a study conducted by the Michigan State Medical Society and the Michigan Blue Cross in which over 12,000 consecutive clinical records in twenty-five typical Michigan general hospitals were analyzed, Becker has reported that more than 28 per cent of all hospital admissions "contained some element of faulty use" which was more frequent among insured patients. Blue Cross members misused their hospital stays in nearly 36 per cent of the cases. In terms of hospital days, 11,172 of 76,238 days studied were deemed unnecessary to the recovery, safety or reasonable comfort of the patient. "Nearly one out of five days used by a Blue Cross patient was not a necessary day." Over 18 per cent of Blue Cross patients remained in the hospital in excess of their need. Becker has also emphasized the abuse of hospital facilities through admissions for laboratory and x-ray studies that could be handled much more economically on an out-patient basis. The figures cited indicate that unnecessary hospitalization is a practical problem of great magnitude. To solve it, every physician and every surgeon must co-operate by using methods that reduce the necessity for hospitalization to the minimum consistent with optimal medical care.

Trend of Future Developments

The possible advantages of early ambulation have by no means been completely exploited, even by those of us who have studied it most thoroughly and applied it most vigorously. Observations in selected cases, following various surgical procedures, have furnished convincing evidence of this. Recovery has been so rapid in some instances that patients have been allowed to leave the hospital the day following cholecystectomy and herniorrhaphy, and dismissal on the day after appendectomy is a fairly common occurrence. In no instance of this type has there been any untoward development or complication. In fact, patients who have left the hospital earlier than usual and have regulated their own activities have displayed exceptionally and almost unbelievably prompt recovery. When early ambulation is practiced aggressively and the value of exercise is constantly stressed, the patient's attitude changes, so that he no longer boasts of how desperately ill he was, nor of how long he was incapacitated. Instead, he gets his satisfaction and makes his bid for attention on the basis of his superior accomplishments in achieving recovery at the earliest possible moment. He becomes proud of what he *can* do, instead of what he cannot do. Desirable psychologic attitudes and increased activity, each enhanced by the other, are the two essential factors which hasten recovery and reduce the hospital stay.

In the future, the architecture of hospitals and the planning of floor space will be modified to conform with modern practices. The function of the recovery room for the surgical patient will be expanded to include instruction in the proper method of getting out of bed, with supervision of his first ambulatory period, which is so important from the standpoint of rapid recovery, by skilled professional personnel. Then, when he returns to the surgical floor, he can care for most of his own needs under less highly trained supervisors and ward assistants. On the convalescent floor, a cafeteria dining room will be available where he will choose his own food, serve himself and enjoy sociable companionship with other patients during meals. This will represent a saving to the hospital by eliminating unnecessary service and reducing food waste. An improvised dining room of this type at our hospital has been enthusiastically accepted by the patients, during a two-year experimental trial. The foregoing is but a small sampling of possibilities for the near future.

As more and more experience is gained by the entire surgical profession, as hospital structures and routine functions are modified to conform to present methods and needs, and as more patients learn to assume a positive attitude toward rapid recovery after operation, it seems certain that the majority

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Michigan Veterans Trust Fund

By Lawrence J. LaLone, Executive Secretary
Lansing, Michigan

WE ARE grateful for this medium and this opportunity to tell the Veterans Trust Fund story to the members of the medical profession in our great state. We welcome this opportunity not only because our organization has paid over $2,000,000 in medical and hospital bills for Michigan veterans and their families since we started operations in 1946—but also because these and other needs that this organization was designed to meet will be with us for years to come. With some 40 per cent of our grants going for medical emergencies, it behooves us to work closely and harmoniously with those whose services are so essential to veterans and their families in time of need.

The scope and mission of the Michigan Veterans Trust Fund Board of Trustees have been broadened extensively since this program was first organized some eight and a half years ago, but, fundamentally, the mission is to provide financial assistance to meet the emergent needs of qualified World War II and Korean veterans and their legal dependents. However, rehabilitation is really the primary objective and, in addition to financial assistance, we consider it our mission not only to help applicants through the resources of our own organization but also to refer them to other resource agencies, private as well as public, "to help the man to help himself." In this connection, all applicants are expected to make every possible effort to solve their problems through their own resources, within reason. But on the other hand, assistance should be and is granted in those cases where the applicant would undergo undue or dire hardship unless outside assistance was forthcoming.

The "$50,000,000 Trust Fund" story actually goes back to 1943 when the Michigan State Legislature transferred $50,000,000 from surplus (believe it or not, the state had a surplus in those days) in the state treasury to a postwar reserve fund for the purpose of "liquidating Michigan's obligation, after termination of the war, to its returning servicemen, their widows and dependents."

Subsequently, Act No. 9 of the Public Acts of 1946, 63rd Legislature, Extra Session, was unanimously passed by the Legislature. This act created the Michigan Veterans Trust Fund and its Board of Trustees, giving it control of the $50,000,000 fund and outlining, in general terms, provisions for its administration.

The fund is administered entirely by World War II and Korean veterans, solely for the benefit of honorably discharged veterans of World War II, Korean veterans and their dependents.

This aid is granted for temporary emergent needs of qualified veterans and their dependents and is in no sense intended to be a continuing fund or a public assistance fund that will duplicate already existing agencies set up to render assistance to individuals with chronic or long-range requirements.

Only the earned income from the corpus of the $50,000,000 Trust Fund is utilized in making these grants to veterans. The earnings approximate $1,171,000 a year. That is the gross annual return. However, at the time this fund was invested in government bonds, the $50,000,000 was able to purchase only $47,000,000 in bonds at the then-price of the bonds. The Michigan State Treasurer, who is custodian of the fund, is amortizing the premiums on these bonds, as any trust company would do, so that whenever the bonds come due, by setting aside a certain sum from the earnings each year, the state will still have its $50,000,000 intact. In other words, by utilizing only the earned income, the program is able to render millions of dollars in assistance without using any of the taxpayers' money from the general fund.

Each of the eighty-three counties in the state receives its respective share of the earnings from the fund, based on the veteran population in each county (as determined from time to time by the Board of Trustees) and all such allocations remain to the credit of the respective counties. Any portion of the county allotments unused at the end of a fiscal year carry forward and are added to subsequent allotments.

In order to take advantage of the maximum earning capacity of the earned income, disbursements to the counties are confined to amounts required to meet needs of the immediate future. However, any county may at any time request any portion, or, for that matter, all of its undisbursed allocations, if conditions in the county warrant such action.

Disbursements of funds at the county level are

made by the respective county treasurers directly to the beneficiaries or vendors upon order of the local county committee.

In its broadest sense, need is defined for the purpose of this act to be any emergency in the life of an honorably discharged World War II veteran, Korean veteran and/or his or her dependents which requires immediate assistance in order to prevent dire and undue hardship to the applicant.

The emergencies may involve hospitalization, medical services which cannot be secured from any other federal, state, or county agency or from any privately owned insurance coverage; food, fuel, clothing, shelter, necessary transportation, or other unforeseen emergencies requiring prompt attention.

As an indication of the autonomy as well as the latitude that county committees enjoy under the broad provisions of our program, we have granted as little as $5 for a bus ticket, and we have paid over $2,000,000 in hospital and medical bills for individual veterans and their families.

Since we started operations on July 1, 1946, our eighty-three county committees have approved over 100,000 applications and have expended nearly $6,000,000 in behalf of these applicants and their families. As we mentioned earlier, over $2,000,000 of this amount was for the payment of medical and hospital bills. Approximately $3,000,000 was spent for subsistence items—food, clothing, shelter, et cetera. And as we pointed out, all of this money has been granted at no expense to the taxpayers because the State of Michigan will eventually get its $50,000,000 back, as we use only the interest from the corpus of the fund.

The Michigan Veterans Trust Fund is the state's official agency for most matters involving Michigan veterans (particularly those nonservice-connected in nature) but time and space preclude any detailed summary of these other responsibilities. For instance, our Student Loan Fund, which our organization administers, has made it possible for over 10,000 Michigan students to continue their education when many of them might have had to drop out but for timely loans from this fund. Unlike the Trust Fund program itself, which involves outright grants, the Student Loan Fund, as the name implies, is a revolving fund where individual loans up to a maximum of $100 are made to veterans when their regular subsistence checks from the federal government are delayed, lost, et cetera. Since July 1, 1946, we have loaned some $700,000 to eligible students through the revolving provisions of this program.

Suffice it to say, that Michigan has good reason to be proud of the national recognition it has received as a leader in providing for the needs of her veterans. In recognition of the generosity of the people of Michigan, those of us charged with the responsibility of administering this program recognize that these privileges entail adherence to the strictest principles of sound and economic administration, coupled with prudent judgment. To that end, it is the goal of this program to help veterans to help themselves and to be worthy of the traditionally American concept that those who served in our armed forces in the hour of our nation's greatest need should themselves be served in their hour of need.

ECONOMIC ADVANTAGES OF EARLY AMBULATION

(Continued from Page 700)

of surgical patients will require only one or two days' treatment in the hospital following all but the most formidable surgical procedures. When that time comes, it will bring with it the saving of millions of dollars in the State of Michigan alone.

Summary and Conclusions

1. Early ambulation after surgery promotes rapid recovery, prevents complications and shortens the hospital stay.

2. To be maximally effective, early ambulation must be instituted *immediately* on recovery from the anesthetic, as demonstrated by the "rapid recovery experiment."

3. If *all* surgeons would apply this practice effectively and conscientiously, the hospital stay of surgical patients would be reduced, on the average, by several days.

4. By this means, hospital facilities could be used more efficiently, and hospital costs and the cost of prepaid hospitalization insurance could be reduced. This would save millions of dollars each year in the State of Michigan.

Edict or Ethics

President's Message



An undercurrent of discussion is prevalent among Michigan doctors of medicine. It concerns the powers of the Michigan State Board of Registration in Medicine. And it concerns the inability of the organized profession of medicine to exercise discipline of its own membership. The finger of the Michigan court points to the Board of Registration as the only disciplinary body in authority. Discussion revolves upon how much and what authority should this Board have. Thought is also directed to the medical society and its responsibility in matters of professional misconduct.

Our attention is invited to a recent law passed in the State of Washington, and sponsored by members of the Washington State Medical Society. We do not have the details of how this law is to be administered. But it is directed at authorizing "disciplinary action against licensed physicians who are guilty of professional misconduct."

Perhaps our Michigan State Board of Registration needs its authority more explicitly defined. Certainly, professional misconduct needs definition. So much of what may be called, by some, professional misconduct is truly not a matter for law but rather a matter of ethics. The AMA Principles of Ethics are basic for our profession. Many other attempts have been made to list codes of behavior for doctors of medicine, a recent one appearing in the March 1954 issue of *The Modern Hospital.*

We believe that we should not entrust to law the definition of good moral conduct nor apply legal penalties in an attempt to legislate morals. Such attempts have failed in American experience.

It will require sharp discrimination to separate the legal responsibilities of the practising physician from his basic moral obligations to his profession and the public.

Robert H. Baker

President, Michigan State Medical Society

Editorial

MICHIGAN STATE MEDICAL SOCIETY ANNUAL SESSION
Civic Auditorium—Pantlind Hotel, Grand Rapids
Wednesday-Thursday-Friday, September 28, 29, 30, 1955
YOU are invited to attend the Ninetieth

MICHIGAN MEDICAL SERVICE

Medicine's Answer

THIS MONTH, we again salute the medical profession's answer to the threat of socialized medicine. In the course of events, the answer had to come. The time was right for an excursion into the realm of providing prepaid, voluntary medical and hospital care for a people deep in the despair of a long-continued depression, with not much hope for better things. The profession asked the regular insurance companies to offer some relief and were told that prepaid medical care was uninsurable. Some of our national medical leaders suggested we practice medicine and keep out of insurance.

In Michigan and some other parts of the country, local groups refused to give up. The Blue Cross-Blue Shield movement was almost spontaneous, the most spectacular growths ever witnessed, and Michigan was in the vanguard. We started with some ideas and a borrowed $10,000. Blue Shield, Michigan Medical Service, is now a great public trust, protecting 3,243,431 persons (January, 1955) in our state. (Blue Cross has 3,369,231)

In conjunction with Michigan Hospital Service, our service plans own a grand home office building valued at $3,250,000. Michigan Medical Service has a healthy reserve of almost $7,500,000 and has paid out in behalf of subscribers up to February 28, 1955, $155,238,311.30.

The Michigan State Medical Society and every member should be justly proud of such achievement. It represents untold hours of attending organizations and administrative meetings, and, on the part of our pioneer doctor of medicine in the earlier years at least, literally thousands of hours of automobile driving, alone and at night, in order to give the needed service and return to our patients waiting at home.

We salute the attained "miracle," but we also salute those men of vision who would not give up, even under tremendous stress and coercion.

TAKING A TRIP?

A GREAT many of our doctors and their families take trips abroad in these days of fast travel and many international meetings. Our patients also have the same notions. All who travel in foreign lands must take certain definite precautions. The San Diego Department of Public Health has prepared a pamphlet, copied with permission by the Calhoun County Health Department. Several items are given emphasis.

"Be vaccinated, depending on the area of travel, against typhoid, paratyphoid, smallpox, typhus, cholera, yellow fever. Do this early enough to be well protected.

"One should have a complete medical check-up. The doctor will advise about medication to take along, because this might be difficult or impossible to get in some places. A simple First Aid Kit is important, look after teeth, have an extra pair of glasses.

"Watch your food and drink. In some places eat or drink nothing that has not been recently boiled or cooked. Avoid ice, ice cream, milk, butter, cheese, raw fruits or vegetables, salads, raw meats. The United States Consul is a safe friend in case of illness or trouble."

Don't try to take a shot of insulin in a plane 15,000 feet high without first equalizing the pressure within the bottle—you might break your syringe.

We have made these suggestions because they might easily be overlooked.

ETHICS BY RULE

THE JUDICIAL COUNCIL of the American Medical Association, at the Miami meeting, November-December, 1954, made a report (accepted by the House of Delegates) from which we quote:

". . . Ophthalmologists cannot ethically provide glasses for their patients unless the service is unavailable without hardship or inconvenience to the patient.

"It is unethical for ophthalmologists to profit from the sale of glasses.

"Ophthalmologists cannot derive income from merchandising and still be considered on a professional level.

"Ophthalmologists may not accept rebates from optical houses.

"It is unethical for an ophthalmologist to profit from the services of an optician working either in his office or on a referral basis . . ."

We contacted the general manager of the American Medical Association regarding this report and were told that before arriving at the above statement, the Judicial Council had written to the officers of the Section on Ophthalmology of the American Medical Association, The American Academy of Ophthalmology and Otolaryngology, and the American Ophthalmological Society asking whether they considered it ethical to receive profit from the providing of glasses to patients. The answer to this basic question should be given only after thorough canvass of the membership. This was not done, however. The opinion obtained was not representative of the membership. The officers questioned are men who have retired from practice, are practicing surgery, or are engaged in teaching ophthalmology, and probably have not refracted eyes for glasses in private practice for years.

If only rebates were contemplated, which was evidently the impression, we all deplore them. (Incidentally, one man could have qualified to speak officially for all three groups. Three did.)

About 80 per cent of ophthalmology is concentrated in fitting glasses and making the patient see comfortably. If a doctor does the finest and most accurate refraction, then sends his patients out to hunt for glasses, both will be disappointed. Fully one third of the comfort in wearing glasses is in the proper frame selection and fitting. Unless the doctor attends to it himself, the patient will be unhappy, will return to the optician and be told the doctor *must have made a mistake*—a black eye for the doctor.

We believe that complete service is what the patient expects and has a right to receive. The Michigan State Medical Society, at one of its annual sessions, stated its belief that the complete fitting of glasses is just and ethical. We do not believe the providing of glasses is in any way merchandising. If the ophthalmologist assumes the complete service, he is entitled to make a suitable charge. He furnishes materials, looks after his own collections, and is under as heavy expense as those in any field of medicine.

The Judicial Council also declared that a doctor must not dispense drugs or have any interest in a pharmacy. He must in no way make a profit from medication he prescribes. How ridiculous can one be? Under such an interpretation, one does not dare hold stock in any of the well-known drug houses.

TRADE MARKS AND REGISTRATION

A FEW days ago, we received a strong letter from the Patent Counsellor of one of the large pharmaceutical manufacturing companies protesting the use of the trade-marked name of a drug in one of the articles in the February JOURNAL. We have had several letters of this nature in the years past. When we know and recognize a trade-mark name in a paper submitted for publication, we have been indicating it with a special mark ® or by capitalizing.

Some years ago, one of the big manufacturers sent us a list of their trade-mark names, several hundred in all. The list from this company the other day was one hundred and eighty-seven.

We have no disposition in any way to contribute to loss of a manufacturer's rights by mentioning names of articles and forgetting, but mostly not even knowing, that they are trade-marked. Our authors who contribute papers are not intentionally conspiring against the manufacturer.

We in the editorial office, as well as the proof readers at the printer's office, do not have, and do not know of an all-inclusive listing of these trade-mark protections, nor do we have the list from any specific company except when an incident occurs as did in our February JOURNAL.

If an all-inclusive master list of all trade-marked pharmaceuticals is available, we might use it even though an unusual burden would be imposed requiring that every drug name mentioned be compared with the list. If any of our authors or authors-to-be read this comment, will they please properly indicate the sign of registration (®) in their writing? This would be a help to all editors, and the manufacturing pharmacists should be thankful.

BEAUMONT MEMORIAL

THOSE of us who have followed the action of several thousand members of the Michigan State Medical Society as reported in THE JOURNAL will be pleased and proud that these generous

donors have completed and given to the State of Michigan a lasting memorial commemorating the pioneering work in digestion.

On June 2, 1822, a young doctor, William Beaumont, M.D., who was attached to the military reservation on Mackinac Island, had an opportunity presented to him. Like so many historic physicians, he finally took advantage of a chance to write his name in lasting medical history.

For many years our medical people in Michigan had contemplated preserving this memorial. The project has now been accomplished and enduring preservation assured. The shrine will ultimately contain among the relics and equipment, a list of our members whose gifts made the restoration possible. We are sure those whose names are inscribed will feel pride in their accomplishment. The list is not yet closed.

This act of certain members of the Michigan State Medical Society may have precipitated a movement which could rival the restoration at Williamsburg. There is enough historical background in the Mackinac Island area to do so.

The efforts so far accomplished have now been officially recognized and made permanent. The Michigan Legislature, by joint resolution, has recognized this history-making gift to the people of Michigan.

STATE OF MICHIGAN
MICHIGAN LEGISLATURE

Senate Concurrent Resolution No. 34

Offered by Senators Perry W. Greene, Carlton H. Morris, Haskell L. Nichols, Lewis G. Christman, Frank Andrews and Creighton R. Coleman

(Representatives T. Jefferson Hoxie, Arnell Engstrom, Clayton Morrison and Harold Hungerford named co-sponsors)

A CONCURRENT RESOLUTION IN RECOGNITION OF THE GIFT OF THE BEAUMONT MEMORIAL ON MACKINAC ISLAND TO THE STATE OF MICHIGAN BY THE DOCTORS OF MEDICINE OF MICHIGAN ON JULY 17, 1954, SAID MEMORIAL HONORING A GREAT MEDICAL PIONEER, WILLIAM BEAUMONT, M.D., WHO BY HIS MEDICAL FINDINGS MADE A NOTEWORTHY CONTRIBUTION TO MICHIGAN AND TO THE UNITED STATES OF AMERICA.

WHEREAS, On Mackinac Island in the retail store of the American Fur Trading Company, on June 6, 1822, Alexis St. Martin, a French-Canadian voyageur, suffered an accidental gun shot wound which was immediately treated, but which left a permanent opening into his stomach through which William Beaumont, M.D., was able to study stomach physiology; and

WHEREAS, Dr. Beaumont made scientific report of his findings revealing the chemical nature of the digestive processes, thereby laying the foundation of our knowledge of digestion; and

WHEREAS, The findings of Dr. Beaumont have contributed to the welfare of humanity and have been acknowledged by the medical profession and the world of science; and

WHEREAS, The Michigan State Medical Society in recognition of Dr. Beaumont—who was an honorary member of the Michigan Territorial Medical Society,, forerunner of the Michigan State Medical Society—organized, financed by voluntary contributions of its membership, and successfully culminated the project of restoring the American Fur Trading Post on Mackinac Island and presented it to the people of Michigan; and

WHEREAS, This Memorial was accepted on July 17, 1954, by the Mackinac Island Park Commission en toto and in the person of W. F. Doyle, Resident Commissioner, who, himself, was a stimulating force in the development of this Memorial; now therefore be it

RESOLVED BY THE SENATE (the House of Representatives concurring), That the members of the Michigan Legislature welcome this opportunity to recognize the contribution to the health and welfare of mankind made by Dr. William Beaumont, Michigan's greatest medical pioneer, and expresses its appreciation to the doctors of medicine of Michigan in the form of their representative organization, the Michigan State Medical Society, for this most appropriate gift to the people of our state; and be it further

RESOLVED, That a copy of this resolution be transmitted to the Michigan State Medical Society; to Dr. Otto O. Beck, Chairman of the Beaumont Memorial Committee; to W. F. Doyle; and to the surviving members of Dr. Beaumont's family.

Adopted by the Senate, March 17, 1955.
Adopted by the House, March 17, 1955.

Norman E. Philleo
Clerk of the House of Representatives.

Fred I. Chase
Secretary of the Senate.

INTESTINAL OBSTRUCTION AFTER GASTRIC SURGERY

(Continued from Page 676)

10. Quinn, W. F., and Gifford, J. H.: The syndrome of proximal jejunal loop obstruction following anterior gastric resection. California Med., 72:18-21 (Jan.) 1950.

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12. Stammers, F. A. R.: Small bowel obstructon following anticolic partial gastrectomy. British J. Surg., 40:58-60 (July) 1952.

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14. Wolfler: Zentralbl. f. Chir. u. Grenzgeb., 8:705, 1881.

Grace Hospital



Medicine's Unsolved Problem

By Robert L. Novy, M.D.

President of Michigan Medical Service

THE American people have had a good taste of voluntary prepayment and what they are saying about it is unmistakable. They like it. The way they have taken to it has already exploded one of the pet early theories, that prepayment is primarily a device for serving the needs of the low income groups. Everybody wants prepayment. Michigan's Blue Cross and Blue Shield Plans today cover members of the State Bar Association and the Farm Bureau, top-bracket auto executives and assembly line workers, millionaires and dime-store clerks. Nation-wide it is estimated that 98 million people have some kind of surgical coverage and more than 100 million are covered for hospital expense.

Government medicine is no longer an imminent threat, but it must be added in the same breath that voluntary prepayment is no longer a defense mechanism. It has become a popular phenomenon on its own, a mighty big American reality, shaped by events in every phase of our lives and felt everywhere. A. L. Kirkpatrick, manager of the U. S. Chamber of Commerce insurance department, reported in the December, 1954, issue of *American Social Security* that "About 900 insurance companies, in addition to all of the other various mechanisms, are now engaged in writing some of the health insurance coverages. The premiums paid for health insurance now exceed $3 billion annually and the assets of the insurers run into many billions of dollars."

Outstrips Automobile Insurance

"We are accustomed," Kirkpatrick continues, "to think of the automobile industry as an outstanding example of the miracle of modern industrial development. But the growth of health insurance has outstripped the growth of automobile insurance both in volume and premiums, in its rate of growth and in the number and aggregate size of the insurers engaged in writing this protection."

Let me admit that these facts astonish me, even stagger me a little, although I am now in the middle of my thirteenth consecutive year as President of Michigan Medical Service and have seen the membership of the medically controlled plans grow from less than a million to their present 32,000,000.

Looking back to 1942, when the life of Michigan Medical Service hung very much in the balance, and the commercial carriers were waiting for us doctors, in all our innocence, to do the pioneering work in this strange new field, my pride in what has been accomplished is no greater than my astonishment.

"This development of modern health and accident insurance," Kirkpatrick comments in the same article, "is the outcome of voluntary efforts in the best tradition of the American private enterprise system. It has not resulted from government sponsorship or compulsion."

The Unsolved Problem

We doctors can be justly proud of the part we have played in this epic achievement. Yet one problem among many stands out in alarming relief. It is the problem of inadequate coverage. We know what inadequate coverage may mean in disappointment to the patient, in possible hardship, the worse because unexpected, for him and his family. We know how it can embitter physician-patient relations, and how it is doing precisely that each day of the week. To have 98 million people covered for surgical expense is an achievement, to be sure. But the fact is that the coverage of millions of these people is inadequate, and that in too many millions of cases it is pathetically inadequate.

What is particularly bad is that the coverages

provided by many of our Blue Shield Plans are as inadequate and unrealistic as those of a large number of our commercial carriers.

Our business is patients, not quantitative statistics. Our measure of the job must be what it is doing for the individual who is our patient. Let us look at him. Can we expect the average lay citizen to know whether the coverage he is buying will prove adequate when he comes to use it? The answer being obvious, are we doing our job?

Leaving it to the People

Can we honestly expect the commercial carriers to do business in any other way than by taking the path of least resistance? The path of least resistance is simply selling the people what they think they want. And how are the people to know what they want from our extremely complex profession if we are silent? Or worse, if we allow our own plans to offer coverages that have little relationship to the realities of the cost of today's medical and surgical services?

There are those among us who are very much disturbed because the commercial carriers in the past five years have run circles around the Blue Shield Plans in the matter of enrollment. I for one am not too worried about this development. I see no compelling necessity for Blue Shield to worst the commercial carriers in competition. To me, as a practicing physician, Blue Shield is essentially the instrument through which I can hope to establish realistic and professionally responsive standards in medical coverage, and make them felt competitively.

Role of Blue Shield

Organized medicine in the U. S. has a formidable instrument in Blue Shield for maintaining the balance of control in the surgical-medical prepayment field, for influencing the competitive quality and scope of all of the coverages, and for providing the people with an honest, objective and professionally realistic standard of coverage.

This is the role I see for Blue Shield. I have no desire to see it become a monopoly. I want it to serve primarily as a powerful catalyst in the growth and development of prepayment. But this is not the role Blue Shield is playing now. We doctors have become complacent, and under the influence of our complacency so many of the Blue Shield Plans have become tight little clubs of local smugness. Where the Blue Shield Plans should be catalysts, they show only stagnation.

A Few Shortcomings

Some of our Blue Shield Plans reflect this stagnation in four characteristic ways:

- By refusing to increase benefits.
- By an increasing indifference to the principle of service benefits.
- By meeting all national challenges with a chip-shouldered leave-me-alone attitude.
- By a fond preoccupation with quantitative statistics.

Nor is it easy to expose and cope with these shortcomings, for their roots go back, unfortunately, to the very beginnings of Blue Shield.

The Blue Shield Plans were established in the main because the doctors, subjected to various pressures, came to realize that they had to offer a voluntary program of prepaid medical care or face the alternative of government medicine. To most of the doctors it was a reluctant choice between two evils. They turned to Blue Shield as the lesser of the two, as simply the necessary evil. Here in Michigan, where the effort to establish a prepaid medical plan caused considerable dissension in the ranks of the doctors, the division was between those who saw the hard unpleasant necessity for the effort and those who saw it only as folly. None was enthusiastic.

Necessary Evil

This concept of Blue Shield as a necessary evil has persisted to this day. The first years of Blue Shield brought their inevitable troubles. Learning by the trial and error method proved a painful experience, in some cases embarrassing to the medical profession. Some of the unhappy results brought on a mood of stubborn caution.

When things eased up a bit, and the plans began to grow and gain strength, the doctors relaxed in a defensive sort of a way, but the mood of caution remained, as did the concept of the necessary evil.

Today it is obvious that prepayment is the shape of the medical economics of the future. Moreover, this future is traveling toward us in seven-league boots. Voluntary prepayment is offering the American people and the medical profession unlimited opportunities for financing the nation's health needs on a scale never before imagined.

The New Challenge

Prepayment is no longer something for the doctors to sponsor or not to sponsor. It is here. As Kirkpatrick has pointed out, it is already a multi-billion dollar business, growing at a phenomenal rate even for an American phenomenon, with billions in reserve. Employers, labor unions, trade associations, farm organizations, are raising and putting aside more and more hundreds of millions of dollars each year to provide coverage for increasing millions of people, without so much as consulting the doctors. Independent plans, largely sponsored by labor unions that represent the extreme left wing of opposition to organized medicine, already provide surgical and medical coverage for more than five million people.

This is prepayment 1955. It is time that we doctors abandoned the attitudes of the 1930's and 1940's. It is imperative that the medical profession step in vigorously in today's prepayment developments to make its influence felt. This we will be unable to do until we bury once and for all the antiquated concept of Blue Shield as a necessary evil.

Developments in the prepayment field have already moved dangerously away from the necessary influences of the medical profession. It would be nothing but folly on our part to continue nursing our complacency and smugness while the billions in premiums and reserves build up a power beyond our control.

Looking Ahead

The medical profession needs a program:

1. We must set for ourselves the clear objective of getting the balance of control in the surgical-medical prepayment field into the hands of the medically controlled plans, and achieving this end through the development of quality coverages of the highest professional standard.

2. We must completely reappraise our attitude toward the Blue Shield Plans, and recognize them for what they are—our only effective means for making the professional view and professional standards felt on the competitive market.

3. We must stop bemusing ourselves with quantitative statistics and get our thinking in line with the realities of the situation.

The prepayment movement has assumed a decided national pattern. It is on the national enrollment front that we are weakest, too, and primarily because of the local smugness of so many of our Blue Shield Plans. Our large manufacturing and transportation industries, our chain stores and the many other nation-wide enterprises, are tending more and more to cover their employees with national contracts. Also within the labor unions enrollment decisions and enrollment planning have tended to move more and more to the level of the internationals.

The Major Handicaps

The following are the major handicaps that have hamstrung the Blue Shield Plans, and which one must add they can scarcely hope to overcome without the positive backing of the medical profession:

A. Too few of the Blue Shield Plans are real service plans. Management and labor see only the disadvantages in negotiating contracts on the national level with a dozen different indemnity plans—although they call themselves Blue Shield—when a commercial carrier can do the whole job with a single indemnity contract.

There is no getting away from the fact that to management and labor union officials, as well as to the average citizen, real service benefits are the distinguishing mark of the medically controlled plans and spell out the advantages of professional sponsorship. Nor have the doctors any other way of imposing professional standards on their coverages than by underwriting services rather than dollars.

A Blue Shield Plan that is not a real service plan turns out to be neither fish nor fowl in the national enrollment picture.

B. The Blue Shield Plans that offer service benefits are still too addicted to unrealistic income limits, which in too many cases destroy the advantages offered by the service benefits.

C. Unlike the Blue Cross Plans, the Blue Shield Plans have not as yet developed the necessary national mechanics for working out uniform benefits for the national accounts that desire them.

National accounts generally want uniform benefits for all of their employees. The unions are even more disinclined than management to offer their members a motley of benefits, differing from state to state, often from city to city.

It is not my suggestion that the Blue Shield Plans should all adopt uniform fee schedules and uniform rates for their total operations. Nothing

in my estimation would be more unrealistic. What is proposed is that the Blue Shield Plans adjust themselves to the necessities of cooperating with other plans in the development of programs for national accounts that call for uniform benefits.

Need for Action

If the medical profession will take the necessary steps to eliminate the three handicaps I have described the Blue Shield Plans will then find themselves in a position of influence in the national enrollment area, that is the area in which our economy is making its major adjustments to prepayment. Unless this is done, unless we make it possible for the Blue Shield Plans to strike a practical balance between their responsibilities to their local communities and their function in serving the needs of the national economy, it is very much my fear that most of them will shortly become mere anachronisms.

Should the latter happen, organized medicine will suffer what may well turn out to be a disastrous defeat. The distinguishing mark of American medicine is the almost undivided responsibility the profession has in determining the standards and the direction of its own practice. This has been the source of its dynamics and its vitality, from which the people have derived such large benefits. It is this tradition of undivided responsibility that is now at stake.

It is at stake because unless organized medicine can now reveal the vigor and vision to extend its concept of professional responsibility into the prepayment field, it faces the real danger of becoming the pawn of those who control the rapidly accumulating billions going into prepayment. We doctors cannot regulate prepayment through legislation, for that would be compounding the danger. We cannot hope to influence it with professional advice. Under our system we can be an influence to be reckoned with only if we make our ideas and our standards competitively significant in the process that is shaping medical prepayment.

Power is not my thesis, but professional realism before this tremendously important new social development. It would be a social tragedy if in this hour, when the American people are spending increasing billions to secure for themselves the benefits of our services, that they were to be left to build their prepayment program in a medical vacuum.

This is what is beginning to happen and unless we doctors rid ourselves of our 1930 preconceptions and our 1940 attitudes, this may well happen with a swift and irreversible finality.

FORMER MICHIGAN HOSPITAL SERVICE EMPLOYES NOW WITH OTHER BLUE CROSS SERVICES

Name	*Hired*	*Left MHS*	*Present Position*
Block, L. F.	5-16-50 PT	1-22-54	Manager, Public Relations Division, Blue Cross-Blue Shield Commissions, Chicago, Illinois
Mody, R. W.	10-22-45	8-29-52	Assistant Director, Blue Cross Commission, Chicago, Illinois
Cheney, Jean (Mrs.)	11-11-46	7-24-53	Statistician. United Medical Service (Blue Shield) New York
Jensen, M. L.	4-14-49	7-31-53	Sales Service Health Service, Inc., and (BC) Medical Indemnity of America, Inc. (BS) Chicago, Illinois
Cavanaugh, W. H.	10-15-51	7-24-53	Hospital Council of Southern California, Los Angeles, California
Cruse, W. H.	1-16-47	4-23-53	Hospital Accounting Consultant (BC) Oakland, California
Hersey, L. G.	7-13-39	9- 1-49	Executive Director, Blue Cross-Blue Shield, Salt Lake City, Utah
Kruger, E. O.	10- 1-46	6-23-54	Hospital Council of Southern California, Los Angeles, California
Mannix, John R.	2-15-39	6-30-44	Director of Blue Cross, Cleveland, Ohio
Ramige, G. W.	10-15-41	7-15-44	Comptroller, Blue Cross, Indianapolis, Indiana
Skelley, W. R.	7- 9-46	1-28-49	Comptroller, Blue Cross, Denver, Colorado
Brown, James C.	1-28-46	1-15-49	Actuary, Blue Cross District XI, serving Los Angeles, Portland, Oakland, Seattle, Boise and Salt Lake City.



Nationalism versus Provincialism

By Lewis G. Hersey
Salt Lake City, Utah

Actually, I was asked to speak on "Nationalism," however, I am inclined to believe that a paper solely on Nationalism without some discussion of provincialism with respect to our mutually common problem would be amiss on the 21st day of March, 1955, which can well go down in the history of Blue Cross and Blue Shield Plans as the day of decision.

In fairness to all of us in attendance at this meeting, whether we be Directors of Plans, elected officers of Plans, Trustees or Directors of Boards or just interested hospital administrators or practicing physicians, perhaps we should draw our ground rules with respect to a definition of our subject. According to Webster, Nationalism may be defined to be "devotion to, or advocacy of, national interests or national unity." In contrast with that definition of Nationalism, Webster has this to say about Provincialism, namely, "that which is characteristic of a province, a certain narrowness, illiberality, or lack of polish or enlightment—a district remote from the mother country or from the metropolis." After hearing the definition of Provincialism, I am sure that most of you must realize why someone from the State of Utah was asked to speak on this subject.

Utah is one of the newer states in the Union, reaching statehood in 1896—only fifty-eight years old; one of an area of 84,916 square miles with a population of 730,000—less than ten persons per square mile. With this situation, we should have some provincial characteristics and we are frank to admit our Blue Cross-Blue Shield philosophy in the past was most provincial—but today we do have a national viewpoint with respect to Blue Cross and Blue Shield.

Keeping these two differences in mind, I should like to review from my own memory and experience certain highlights or mileposts in the growth of this great, much copied movement. There are some in this room that can well remember in the beginning of their particular Plan, be it Blue Cross or Blue Shield, that it was definitely the leader in their particular area. Why was it a leader? Because it had a new philosophy which had tremendous public appeal. For the first time in many areas, prepaid coverage through your Plan was providing equal benefits for the spouse and eligible dependent children. Insurance companies prior to the birth of your Plan were only interested in the employed male because that risk provided the insurance company with a guaranteed margin of profit. Your Plan also probably covered children from birth, a complete innovation to later insurance company practice which perhaps covered children after ninety days of age, possibly after thirty days of age. Most Blue Cross Plans started with the magic number 21 as the limit of number of days. There was no magic about it, but it was a known fact that 98 per cent of all hospital cases never went beyond twenty-one days. For the first time, Blue Cross offered service benefits—such as they were, instead of a limited number of dollars toward the ancillary services necessary in hospital care. Blue Shield also offered service benefits for surgical procedures —an unheard of approach except for those comparatively few people in the country who may have enjoyed service benefits offered or maybe one or two doctors under contract by their employer. Blue Shield, therefore, offered free choice of physician, enhancing the inherent pride of every American to choose his own doctor and thus also protecting the private practice of medicine. Enough for the basic difference in philosophy—service as against cash indemnity. Unfortunately, a few Blue Cross Plans had too many initial contract benefits on a restricted service or on an indemnity basis, most of which have been changed.

Similarly, and for what reason I'll never know, certain medically sponsored Plans did not establish a Blue Shield Plan as we know it, on a service-benefit basis, but merely set up an insurance company on a limited indemnity basis. Why any group of doctors would ever go into the insurance business in competition with one of the biggest over-all industries in the world, I'll never know, because it offered nothing new aside from perhaps equal cash allowances for dependents and the privilege of continuation of the coverage when the subscriber left his place of employment, in addition to making payment directly to the doctor. The foregoing definitely falls into the category of provincialism, or perhaps you would rather I would say local autonomy. For a number of years, this method of operation

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Mr. Hersey, Executive Director of Blue Cross-Blue Shield in Utah, was formerly associated with Blue Cross-Blue Shield in Michigan.

Presented at the Annual Conference of Blue Cross-Blue Shield Plans, Chicago, Illinois, March 21, 1955

prospered; more people were served and the great American public was awakened to the fact that prepaid hospital and professional care was here to stay. The great telephone industry had its beginning in much the same manner. Years ago, I dare say, there were hundreds of local telephone companies in this country, each with varying equipment, varying rates and with varying limits as to the service afforded their subscribing customers. With the development of new equipment, however, what used to be a marvelous thing of being able to talk to another person across town became common place when it was possible to talk to persons hundreds, yes, even thousands of miles away. For the telephone industry to accomplish this amazing feat was not an easy one. There had to be standardization and there had to be uniformity of certain types of equipment, and there had to be much giving and taking on the part of undividual telephone companies, and had that not occurred, today the telephone on your desk would be a very limited means of communication in this modern world.

In the development of Blue Cross and Blue Shield, generally speaking, Blue Cross was the first Plan in a given community primarily because it was much easier to organize a small group of hospital administrators who served a large number of the public than it was to organize the number of doctors serving that same number of the general public. Again, hospitals had a number of common problems whereas physicians traditionally have successfully maintained a position of definite independence. Therefore, the hospital Plan was started and it was soon found that a surgical Plan was needed to better serve the community and for Blue Cross to grow, so that in most areas, Blue Cross preceded Blue Shield. The notable exception to this was in the Pacific Northwest where for years large and small timber companies had owned a hospital and had engaged the services of a physician to provide the necessary treatment for the employe. In most instances this eventually was extended to cover the employe's dependents. After a number of years, the doctors so engaged in such practice found that the employer was dictating, not only the doctor's practice, but his fees or income as well. The doctors took the position that they could be of more service to the community and have more freedom in their profession if they themselves set up the plan for prepayment, allowing the same timber companies and others to pay a fixed fee in order to provide their services to the subscribers, so that in this area the doctor-sponsored plans preceded the formation of Blue Cross or hospital service plans as we know them today.

While in this area of the country I would be remiss if I did not point out to the representatives of Plans from other areas that while the multiplicity of medical bureaus in Washington and Oregon may sound like provincialism, these same plans have recently established a pattern which all Blue Shield Plans should consider as a workable solution toward nationalism in this business. For example: one of our subscribers is out of our area—but is in Oregon. He requires the services of an Oregon doctor, who never heard of our Plan, but who is quite familiar with the Oregon Physicians' Service. The doctor reports the case to Oregon Physicians' Service. They in turn advise our office of the case and at the same time advise us what fee they would normally pay for the service. We confirm liability and forward our check to OPS for delivery to their participating physician in an amount their physician is accustomed to receiving for similar services. Why do this? It is a start toward making a service Plan—one of real service—despite limits of state or area boundaries. It is good for the doctor—and good for the subscriber—and automatically buys good public relations at no additional cost. What can be done in this area I believe can be worked out on a nationwide basis if—Blue Shield can be truly a service Plan—rather than cash indemnity.

As Blue Cross and Blue Shield Plans were started in many areas, the services of both Plans were merchandised to Johnny Q Public as one program, or at least as two companion programs. In some areas there are two governing Boards, one for each side of the program, each having their own Executive Director. In other areas, two Plans each with a governing Board, will have but one Executive Director, and there are areas where there are two Plans, but one Board, with one Executive Director. In some areas the two Plans operate entirely independently from the standpoint of relationship to each other, but each sells its services to a common prospect. Finally, we have those areas where the doctors' plan sells doctors' services on a service basis and hospital benefits on an indemnity basis. In the same area, the Blue Cross Plan sells hospital services on a service basis and professional services on an indemnity basis. In these same areas, these two Plans are competing with one another—ultimately confusing the public in many instances. The prime shadow that has fallen across our path of progress nationally with respect to joint operation has been the unfortunate human equation which permitted a difference in personalities to blossom to a difference in philosophy to the point that a Blue Shield and a Blue Cross Plan decided to go their own separate ways. I need not comment on the areas where this has occurred; however, I say without fear of contradiction, that everyone lost by reason of it, most importantly, the public, and secondly, each individual Plan so involved, and finally all other Plans, the degree of harm depending upon the proximity of your Plan to the scene of the fire. It breeds many questions, not only in the minds of subscribers—but creates suspicion with potential groups. Think not for one minute that commercial insurance

companies did not capitalize on such situations—brought about by tragic short-sighted thinking. If you doubt this, get the figures—and they will speak for themselves. Blue Cross-Blue Shield lost—and the commercial insurance companies gained. Fortunately this situation was provincial rather than national. The foregoing is not news to many people in this room, but in my opinion is necessary to provide part of our stage setting in this hour of decision.

After a few years of operation it became quite evident that our future growth in the field of service to more people was definitely limited as we could not provide a common denominator for those national accounts, which in this business is uniformity of coverage although not necessarily uniformity of rates—rates are academic. The executives of national accounts—and labor unions, national in scope, have no concern for the limited area served by each of our Plans. Let's take something tangible such as an automobile. Can you imagine for one minute the purchasing agent of Proctor and Gamble wanting to place a fleet order with one of the major automobile manufacturers for a specified type of panel truck to be painted black and white, with a V-8 type engine, automatic transmission, taxicab-type springs, and tires of a specific size. Then imagine the automobile manufacturer in discussing the potential order tells Proctor and Gamble that for sake of economy they will be glad to make delivery from eight assembly plants throughout the country, but that in California they have no black or white paint, so the panel trucks will be painted red; that from Atlanta assembly plant the cars will be delivered with a straight 6 cylinder motor—in Kansas City the cars will have standard transmissions, in Seattle, standard springs and in Utah there is a real problem—there the cars will be delivered with no tires at all—Gentlemen—right there is where the "nuts came off the buggy." I am sure that the purchasing agent of Proctor and Gamble would quickly seek a new supplier for a thousand automobiles. The buyer in this instance wants uniformity—he has to keep cost figures—he wants uniformity of equipment for a given job. He is the buyer—and as such is in the position to dictate the specifications of the product he is interested in purchasing. In this business of ours many national employers and nationwide unions not only seek, but demand uniformity of coverage for their personnel whether they are located in New York, Chicago, or the Pacific coast, and I need not mention one example—for you each have one of your own. We established a vehicle to provide such potential groups with this uniformity known as Health Service and Medical Indemnity, and while on the hospital side of the picture such uniformity can be offered, but on the professional side we fall quite short of being able to do the job as well—because it is indemnity—and a number of Blue Shield Plans are unable or unwilling to "take off" such underwriting in their areas. With limited capital and surplus—our vehicle is brought almost to a standstill.

At this point, at the risk of being severely censured, I wish to express an opinion for what it is worth. Some may think it is idealistic and that it will only be possible with the millennium. Others will believe it is not necessary, but I wish to take the position that it is necessary and **can** and **must be accomplished** if our great movement is to progress at the pace it well deserves. I maintain that no Blue Shield Plan has any reason for being in operation unless it is on a service basis. To operate otherwise is to merely mimic the insurance industry, be a "me too" business—instead of the leader. It is essential in the first place because the medical profession itself is the only means which can provide service benefits to the public, and Blue Shield is but an arm of the profession. Opponents to this idea, be they doctors of medicine, Board members, or Plan directors, must realize that there has to be a will to succeed in this matter or it never can come to pass. To make it possible for it to come to pass, doctors must be paid a realistic fee and not be asked to subsidize the Plan beyond the initial period of such transition. Service benefits are what the public wants, and, make no mistake, what the public wants it usually obtains. If we are not able to provide service benefits, I am sure that there are those in politics who could dream up a service benefit plan over which you or I or the practicing physician would have no voice or control. If this can be accomplished rapidly enough we will then have established a sufficient common denominator to be compatible with the common denominator on the Blue Cross side, such common denominator being available by uniform contracts, Health Service, or the well known syndicate. Obviously the fee schedules of the numerous Plans need not be identical, but should be acceptable to the medical profession in their particular community. Briefly, if all Blue Shield Plans could see this picture on the horizon of perhaps a dual program with a dual fee schedule and dual rates, one perhaps with a family income ceiling of $3,500.00 to $5,000.00, and the other with, say, $6,000.00 or $7,500.00, this, coupled with a broad Blue Cross base, would afford every national group with a program it would be difficult for them to avoid. Right now we in Utah even have an experimental group with a service income ceiling of $10,000.00. The public would be eager for it, organized labor would demand it, and the national employer would, I am sure, accept such a combined and wide service as unique. Sure, this idea is idealistic, but unless we make a determined effort to achieve this goal it will never be accomplished.

You will pardon this reference to our own situation. With all due respect to members of my two Boards in attendance here today, and like due respect to their predecessors, I am sure that they will

agree that the situation in Utah six years ago was definitely provincial in character. Why shouldn't the Boards have been provincial and thus, the Plans be provincial, when the words "local autonomy" were taken too literally—too often. Ladies and Gentlemen, we had our problem in Utah. We had one product to sell and it was a case of the buyer taking that one or he bought from someone else. Today we have a multiplicity of contracts and if an employer or labor group does not find the product that they want currently on our shelves, we make certain that we promptly develop a product which embraces the benefits he wants, at a realistic price, of course. I dare say that had I not lead with my chin with both my Boards, we today might still be writing one, or possibly two contracts and seeing a lot of business go elsewhere. Define the national common denominator on a service basis—and we will get aboard. Our rate of growth is not phenomenal, but it is sound and steady. Many other Plans have seen fit to become public conscious and have similarly developed several patterns for sale. They, too, can get aboard quickly. Unfortunately, there are other areas in which I am inclined to believe that the Executive Director has not taken a position of leadership with his Board telling them the facts of life about national accounts and thus we do not have as much uniformity available for national accounts. Far be it for me to suggest that each Plan rewrite all of their local business under a uniform type of national contract, but I do say that every Plan should have a contract available that will meet the requirement for sale nationally. I know of no manufacturer today who is making but one product who would not be willing to vary the product sufficiently if such a modified product could be sold to buyers he at present cannot reach. If there be such manufacturers, I must state that they are provincial in nature.

I am sure that there are many in this room who have attended previous national conferences or especially called national meetings to meet a situation of a national account. At such meetings a poll is taken to determine whether or not individual Plans can comply or accede to modifications necessary to make the national account work. Much lip service is given. There are precious few negative positions indicated, but when the chips are down, it is found that there are big holes in the national pattern so that the national account loses interest in Blue Cross-Blue Shield in favor of a carrier which is not confronted with provincialism and short thinking. I am inclined to believe that individual Boards of Directors or Trustees and Members of State Medical Associations could be sold the virtues and advantages that will inure to them individually and to the profession at large by adopting the service principle. Little did I think in 1940 or '41 when I was given the opportunity to attend a national meeting of Blue Cross in Chicago at the Palmer House on this very subject when the crux of the problem at that time was uniformity of benefits, uniformity of rate being purely a secondary and academic question, that some 15 years later I would find myself addressing a similar gathering with the problem more acute and still yet unsolved—so it is not new. It must be solved at this Conference. Surely no one in this room, including myself, has any idea of destroying local autonomy of any Blue Cross-Blue Shield Plan, but there are many of us in this room, I am sure, who feel that local autonomy must be amended sufficiently to provide ways and means of offering our service collectively to national accounts. I need not repeat why the non-operating employes of the major railroads did not choose Blue Cross and Blue Shield. Obviously, there was no single reason why, but there were some reasons which could have been avoided or at least lessened by some giving and taking on the part of Blue Shield and Blue Cross Plans.

My hat is off to those many persons on the so-called task force who worked their hearts out in this particular instance and in many other instances only to find that what they wanted to sell and could have sold, just was not available. I ask you, Ladies and Gentlemen, is this progress or is this stagnation? Is it nationalism or provincialism? While I have a number of friends with General Motors and with Ford Motor Company, I am sure they will forgive me for what I am about to say, but it is apropos to our situation. Ford Motor Company led the field for many years then Chevrolet took first position for another number of years. Each of you read recently where Ford Motor outsold Chevrolet. Was that an easy task? I know nothing about the manufacture or sale of automobiles but I will guarantee you that every person on the Ford payroll had that objective in mind, and now the shoe will be on the other foot—watch Chevrolet next year. In our business we were once the leaders where we rightfully belong. Are we to regain that leadership, or are we to die on the vine? Discussion in the bar or in your individual suites will not produce the type of program necessary to do the job, but you Executive Directors and you Board members must return to your respective Boards and shake off any ideas of false security under which your Plan may be laboring, namely, that what you are presently offering is good enough for national accounts. Personalities, in my opinion, have no place in this business when they stand in the way of progress, and for my own Board members here, that goes for Utah as well. This movement is bigger than any individual or small group of individuals. The movement in general was born of necessity. It has prospered; it has become a household byword and, Ladies and Gentlemen, we would be derelict in our duty to the American people, the American Medical Association and the American hospital system if we allow anything to stand in the path of progress. You have all heard the quotation or motto, "the diffi-

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John W. Castellucci Assumes New Duties

John W. Castellucci, well known to doctors throughout Michigan as Assistant Director of Michigan Medical Service in charge of Professional Relations, has assumed his duties as Executive Director of the Blue Shield Commission in Chicago.

Castellucci's twelve years of vigorous association with Michigan Medical Service were marked by his complete understanding of doctors' problems, and his constant recognition that Blue Shield progress depended on its originators, the doctors.

As the energetic force which brought interpretation of Blue Shield to every doctor in Michigan through the MMS Professional Relations Department, Castellucci also was one of those responsible for the Michigan Veteran's Home-Town Care Plan, which set the pace and pattern for service-connected veterans care for the entire country.

Castellucci joined Michigan Medical Service in 1943 and was assigned to the Claims Department. He soon saw that much of the difficulty of processing doctors' reports could be eliminated if all the doctors thoroughly understood Blue Shield, their own Plan.

It was then that the Professional Relations Department was expanded. Doctors were contacted individually for their ideas, as well as for their further understanding of Blue Shield procedure. From these personal interviews came helpful information which Blue Shield absorbed to alter, simplify and modify procedures necessary to carry out the Plan to offer the greatest benefit to doctors and subscribers.

Just as the Professional Relations program began to gain ground another related problem developed in 1945. Veterans of World War II were returning to their homes, many of them with service-connected disabilities. The veterans wanted care from their own family doctors and the Michigan State Medical Society and Blue Shield wanted to serve them. From this need of the veterans and determination of Michigan doctors evolved the Michigan Veterans Care Plan, winning approval from the Veterans Administration as the most logical method presented to handle the tremendous problem.

Castellucci, a member of the committee which went to Washington to present the Michigan Veterans Plan, had the task of reducing to a minimum the required government paperwork and red tape. He not only succeeded in reducing the forms which doctors had been required to fill out from eight pages to one, but pushed the simplified form through for approval by the Veterans Administration.

With the Veterans Plan underway, Castellucci returned to his Professional Relations work, only to be called to the Blue Shield Commission in Chicago in 1947 as an Assistant Director, dividing his time between Commission duties and Michigan Medical Service. This added task, however, was an extension of his Professional Relations work, since its success in Michigan had brought interested queries from other Blue Shield Plans across the country.

Castellucci continued his work in Michigan with the Veterans Care program and Professional Relations, however, while he traveled extensively explaining the MMS Professional Relations program to other Blue Shield Plans. The result was that many Plans adopted the Professional Relations procedure as developed in Michigan, and Castellucci's manual for Professional Relations soon became a nation-wide guide for Blue Shield.

Castellucci returned to Michigan Medical Service on a full-time basis in July, 1951 to expand the work of the Professional Relations program, which had developed from a one-man operation to one requiring 12 field representatives covering the entire state.

Born in Boston in 1906, Castellucci spent his earliest childhood in Portland, Maine, moving with his family to Detroit when he was of high school age. Prior to that time, he had won a musical scholarship to Manlius Military Academy near Syracuse, N. Y., and upon his arrival in Detroit began playing professionally while a student at Eastern High School. An accomplished violinist, he also played guitar, banjo and French horn with orchestras in Detroit.

Entering pre-medical school at College of City of Detroit (now Wayne University) in 1925, he decided after two years to travel abroad. He spent a year in Paris, returning to the University of Detroit to help produce the school's first musical. He then decided to study law at Detroit College of Law.

He had already been working since 1931 for the City of Detroit as special investigator of fraud cases for the Hospital Investigation Bureau, and, since two brothers were lawyers, he never practiced law. But, he could not stay away from music. He organized and directed an 85 piece

symphony orchestra for the American Legion Washington Post and directed the Highland Park Symphony for two seasons.

In his spare time he set up a summer music camp near Pontiac, raising money, borrowing Detroit Street Railway buses, Army tents and even an Army cook to give 80 children a musical vacation for two summers.

Shortly after Pearl Harbor, Castellucci volunteered for the Army. He was injured during his officer candidate training and was discharged in June, 1943 with the rank of corporal. Two months later he joined Blue Shield.

As Castellucci has contributed his knowledge and experience gained with Michigan Medical Service to other Plans across the country, several other MMS associates have also left Michigan to service Blue Shield elsewhere. Among them are Charles H. Coghlan, Kenneth E. Trim, Lynn A. Doctor and Leonard J. Raider, M.D.

Charles Coghlan is now Executive Vice-President of Ohio Medical Indemnity (Ohio Blue Shield), having served with Michigan Medical Service from 1940 to 1945, first as a claims examiner and later as Manager of the Professional Relations Department. Currently, he is also a member of the Blue Shield Commission and is Resident Vice-President of Medical Indemnity of America.

Kenneth Trim, now Assistant Executive Director of Blue Cross-Blue Shield of Alabama, joined the Professional Relations Department of MMS in January, 1946, serving the southwestern part of Michigan, with headquarters in Grand Rapids. Prior to that time he spent four years as a District Manager at Battle Creek for Michigan Blue Cross. He left Michigan Medical Service in October, 1950 to co-ordinate the physicians relations program for the Blue Shield Commission.

Lynn Doctor, who joined Michigan Medical Service in December, 1945 as statistician, left MMS in February, 1948 to serve in the same capacity with the Blue Shield Commission. He is now Vice-President in charge of Statistics and Underwriting for United Medical Services, Inc. (Blue Shield), of New York, serving seventeen counties, including New York City.

Dr. Leonard Raider joined Michigan Medical Service as Assistant Medical Director in 1949 when he was discharged from the U. S. Navy Medical Corps. He left MMS in 1950 to become Chief Medical Claims Examiner of United Medical Services, Inc. (Blue Shield), of New York, where he is now Vice-President in charge of Claims and Professional Relations.

NATIONALISM VS. PROVINCIALISM

(Continued from Page 714)

cult we do right away; the impossible takes us a little longer." I ask you, now that the difficult is a reality, are we not this very moment facing the impossible? Maybe the obstacle in your area is one of a legal nature; maybe it is an ingrown philosophy that must be changed. Maybe it is Plan management. Whatever it may be, every one of us here must accept the challenge and hasten the solution in this hour of decision.

In conclusion, I repeat the definition of nationalism, "devotion to, or advocacy of, national interests of national unity," and I implore each of you to determine here and now that you will take the necessary steps with your governing Boards to at least provide the necessary common denominator to make national enrollment a reality instead of the ever present insurmountable problem that it is, with what we have to offer today.

HIGHLIGHTS OF THE COUNCIL

(Continued from Page 644)

waukee, February 24-26, was received with thanks and referred to Editor Haughey for insertion in JMSMS.

- **G. B. Saltonstall, M.D.,** Charlevoix, was appointed as MSMS representative to attend the Annual Session of the State Medical Society of Wisconsin, Milwaukee, May 3, 4 and 5; Ralph W. Shook, M.D., Kalamazoo, was appointed as official representative to the Georgia State Medical Association Annual Session, May 3, 4 and 5.
- **Legal Counsel J. Joseph Herbert** reported on several matters including (a) suit of Wm. A. Kopprasch, M.D., vs. MSMS et al, (b) preservation of books in the Beaumont Memorial through help of the University of Michigan; (c) privilege communication status of physicians' records; (d) on a number of legislative bills now in the Michigan Legislature of interest to the medical profession.
- **J. S. DeTar, M.D.,** Milan, was congratulated on being chosen as President Elect of the American Academy of General Practice March 30 in Los Angeles.

TIMES HAVE CHANGED

A speaker reported, "An encyclopedia published in 1878 had five lines on 'atom' and five pages on 'love.' One of the latest encyclopedias published in 1954 had five pages on 'atom' and nothing on 'love.' Does this explain 'cold war' or 'peaceful co-existance'?"

Michigan State Medical Society

The Ninetieth Annual Session



William Bromme, M.D.
Detroit
Council Chairman



R. H. Baker, M.D.
Pontiac
President



J. E. Livesay, M.D.
Flint
Speaker



L. Fernald Foster, M.D.
Bay City
Secretary

OFFICIAL CALL

The Michigan State Medical Society will convene in Annual Session in Grand Rapids, Michigan, September 26-27-28-29-30, 1955. The provisions of the Constitution and By-Laws and the Official Program will govern the deliberations.

R. H. Baker, M.D.
President
William Bromme, M.D.
Council Chairman
J. E. Livesay, M.D.
Speaker
K. H. Johnson, M.D.
Vice Speaker

Attest:
L. Fernald Foster, M.D.
Secretary



K. H. Johnson, M.D.
Lansing
Vice Speaker

TWO-DAY SESSION OF HOUSE OF DELEGATES

September 26-27, 1955

The 1955 House of Delegates of the Michigan State Medical Society will hold a two-day session beginning Monday, September 26, at 10:00 a.m. The business of the House of Delegates will be transacted in the Grand Ball Room of the Pantlind Hotel, Grand Rapids.

The House will meet also on Monday at 2:00 p.m. and at 8:00 p.m. and on Tuesday, September 27, at 9:30 a.m. and at 8:00 p.m.

The intervals between meetings of the House of Delegates have been spaced to permit the Reference Committees ample time to transact all business referred to them.

SEATING OF DELEGATES

"Any Delegate-Elect not present to be seated at the hour of call of the first meeting may be replaced by the accredited Alternate next on the list as certified by the Secretary of the component County Society involved." —MSMS By-Laws, Chapter 8, Section 6.

OUTLINE OF 1955 ASSEMBLY AND SECTION SPEAKERS

90th Annual Session MSMS

Grand Rapids, September 28-29-30, 1955

Time	Wednesday September 28	Thursday September 29	Friday September 30
A.M. 8:30– 9:00	Registration Exhibits open	Registration Exhibits open	Registration Exhibits open
9:00– 9:30	*Surgery Panel* *Chairman* STANLEY O. HOERR, M.D., Cleveland	*Surgery* BARRY J. ANSON, Ph.D. Chicago, Ill.	*Gastroenterology-Proctology* (Beaumont Lecture) GARNET W. AULT, M.D. Washington, D. C.
9:30–10:00	Participants: R. RUSSELL BEST, M.D., Omaha, Neb.; RALPH COLP, M.D., N. Y. C.; and RICHARD H. LYONS, M.D., Syracuse, N. Y.	*Ophthalmology* HUGO L. BAIR, M.D. Rochester, Minn.	*Dermatology* RICHARD L. SUTTON, JR., M.D. Kansas City, Mo.
10:00–11:00	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS
11:00–11:30	*Industrial Surgery* RUSSELL S. FISHER, M.D. Baltimore, Md.	*Otolaryngology* JAMES B. COSTEN, M.D. St. Louis, Mo.	*Radiology* HAROLD W. JACOX, M.D. New York, N. Y.
11:30-12:00	*Urology* WILLIAM N. TAYLOR, M.D. Columbus, Ohio	*Nervous & Mental* FRANCIS J. BRACELAND, M.D. Hartford, Conn.	*Dermatology* ROBERT R. KIERLAND, M.D. Rochester, Minn.
12:00 noon	DISCUSSION CONFERENCE	DISCUSSION CONFERENCE	DISCUSSION CONFERENCE
P.M. 1:00– 2:00	LUNCH HOUR One Section Meeting 1:00–2:00 p.m.—luncheon *Urology* WILLIAM N. TAYLOR, M.D. Columbus, Ohio	LUNCH HOUR One Section Meeting 1:00–2:00 p.m.—luncheon *Otolaryngology* JAMES B. COSTEN, M.D. St. Louis, Missouri	LUNCH HOUR
2:00- 2:30	*Pediatrics* RALPH V. PLATOU, M.D. New Orleans, La.	*Obstetrics* SAMUEL A. COSGROVE, M.D. Jersey City, N. J.	*Anesthesiology* FREDERICK H. VAN BERGEN, M.D. Minneapolis, Minn.
2:30– 3:00	*General Practice* LEON S. MCGOOGAN, M.D. Omaha, Neb.	*Gynecology* RICHARD W. TELINDE, M.D. Baltimore, Md.	*Medicine* ARTHUR M. MASTER, M.D. New York, N. Y.
3:00– 4:00	INTERMISSION TO VIEW EXHIBITS	INTERMISSION TO VIEW EXHIBITS	3:00-3:30 FINAL INTERMISSION TO VIEW EXHIBITS
4:00– 4:30	*Obstetrics* WILLARD R. COOKE, M.D. Galveston, Texas	*Pediatrics* WALDO E. NELSON, M.D. Philadelphia, Pa.	3:30-4:00—*Medicine* OVID O. MEYER, M.D. Madison, Wisc.
4:30– 5:00	*Nervous & Mental Diseases* MAURICE LEVINE, M.D. Cincinnati, Ohio	*Public Health & Preventive Medicine* FRANKLIN H. TOP, M.D. Iowa City, Iowa	4:00-5:00 *Medical Symposium* A. CARLTON ERNSTENE, M.D. Cleveland, Ohio PENN G. SKILLERN, M.D. Cleveland, Ohio
5:00– 6:00	THREE SECTION MEETINGS	FIVE SECTION MEETINGS	FOUR SECTION MEETINGS
	Pediatrics RALPH V. PLATOU, M.D. New Orleans, La.	*Public Health & Preventive Medicine* FRANKLIN H. TOP, M.D. Iowa City, Iowa	*Dermatology & Syphilology* RICHARD L. SUTTON, JR., M.D. Kansas City, Mo.
	General Practice LEON S. MCGOOGAN, M.D. Omaha, Neb.	*Gastroenterology-Proctology* GARNET W. AULT, M.D. Washington, D. C.	*Medicine* OVID O. MEYER, M.D. Madison, Wisc.
	Surgery STANLEY O. HOERR, M.D. Cleveland, Ohio	*Ophthalmology* HUGO L. BAIR, M.D. Rochester, Minn.	*Anesthesiology* FREDERICK H. VAN BERGEN, M.D. Minneapolis, Minn.
	8:30–10:30 p.m. Officers' Night *Biddle Lecture* CHARLES L. ANSPACH, Ph.D. Mt. Pleasant, Mich.	*Obstetrics-Gynecology* SAMUEL A. COSGROVE, M.D. Jersey City, N. J.	*Radiology* HAROLD W. JACOX, *M.D.* New York, N. Y.
		Nervous & Mental FRANCIS J. BRACELAND, M.D. Hartford, Conn.	
		10:00 p.m. to 1:00 a.m. State Society Night MSMS Entertainment	END OF ASSEMBLY

Michigan State Medical Society

The Ninetieth Annual Session

PANTLIND HOTEL—CIVIC AUDITORIUM, GRAND RAPIDS
SEPTEMBER 26-30, 1955

INFORMATION

- **GRAND RAPIDS WILL BE HOST TO MSMS IN SEPTEMBER, 1955.**
- **MSMS HOUSE OF DELEGATES** convenes Monday, September 26 at 10:00 a.m., Grand Ball Room, Pantlind Hotel. It will hold three meetings on Monday and two meetings on Tuesday, September 27.
- **THE PROGRAM OF THE ASSEMBLY** for the 90th Annual Session of the Michigan State Medical Society lists guest speakers from all parts of the United States. They are the usual stars in the medical world who always grace the podium at annual conventions of the Michigan State Medical Society; they insure a valuable concentrated continuation course in all phases of medicine and surgery for the busy practitioners of Michigan, neighboring states and the Province of Ontario, on September 28-29-30.
- **REGISTRATION,** Tuesday afternoon through Friday afternoon, September 27-30, Civic Auditorium. Advance registration—on Tuesday and early Wednesday morning—will save the doctors' time. Present your State Medical Society or Canadian Medical Association membership card to expedite registration.

  NO REGISTRATION FEE FOR STATE MEDICAL SOCIETY AND CMA MEMBERS.

  Doctors of Medicine, who are not members of their state medical society or of the Canadian Medical Association, will be accorded the privileges of the MSMS Annual Session upon payment of a $25.00 registration fee.
- **REGISTER AS SOON AS YOU ARRIVE. ADMISSION BY BADGE ONLY.**
- **ALL SUBJECTS** at the MSMS Annual Session are applicable to clinical medicine. They stress diagnosis and treatment, usable in everyday practice.
- **POSTGRADUATE CREDITS** given to every MSMS member who attends MSMS Annual Session.
- **SIX ASSEMBLIES** and one public meeting—fourteen Section Meetings—three Discussion Conferences, all on September 28-29-30.
- **A DISCUSSION CONFERENCE**—featuring the guest speakers of each day—will be held daily from 12:00 noon to 1:00 p.m. in the Black and Silver Room of the Civic Auditorium. Audience participation invited.
- **SECTION MEETINGS** will follow the daily Assemblies—5:00 to 6:00 p.m.
- **PAPERS WILL BEGIN AND END ON TIME.** This scientific meeting will feature by-the-clock promptness and regularity.
- **TECHNICAL AND SCIENTIFIC EXHIBITS** will contain much of interest and value. Intermissions to view the exhibits have been arranged.
- **C. ALLEN PAYNE, M.D., AND FELIX S. ALFENITO, M.D., OF GRAND RAPIDS** are co-chairmen of the Committee on Arrangements for the 1955 MSMS Annual Session.
- **WALTER I. LILLIE, M.D., OF GRAND RAPIDS** is Chairman of the Scientific Exhibit for the 1955 MSMS Annual Session.
- **CABARET-STYLE DANCE AND ENTERTAINMENT,** with the compliments of the Michigan State Medical Society, will be held in the Grand Ball Room of the Pantlind Hotel on Thursday evening, September 29. All who register, and their ladies, will receive a card of admission and are cordially invited to attend.
- **THE WOMAN'S AUXILIARY** to the Michigan State Medical Society will present an attractive social and busines program at the Pantlind Hotel. The wife of every MSMS member is cordially invited to attend.
- **MEMBERS OF MICHIGAN MEDICAL SERVICE** will meet in annual session, Tuesday, September 27, at 2:00 p.m. This meeting will follow the annual MMS luncheon to be held in the Grand Ball Room of the Pantlind Hotel.

SCIENTIFIC ASSEMBLY

Wednesday-Thursday-Friday, September 28-29-30, 1955

SAVE AN ORDER FOR THE EXHIBITOR AT THE
MICHIGAN STATE MEDICAL SOCIETY ANNUAL SESSION

Michigan State Medical Society

The Ninetieth Annual Meeting

PANTLIND HOTEL, GRAND RAPIDS, SEPTEMBER 26-27, 1955

HOUSE OF DELEGATES
ORDER OF BUSINESS*

MONDAY, SEPTEMBER 26

Grand Ball Room, Pantlind Hotel, Grand Rapids

10:00 a.m.—First Meeting

1. Call to order by Speaker
2. Report of Committee on Credentials
3. Roll call
4. Appointment of Reference Committees
   - (a) On Officers Reports
   - (b) On Reports of The Council
   - (c) On Reports of Standing Committees
   - (d) On Reports of Special Committees
   - (e) On Constitution and By-Laws
   - (f) On Resolutions
   - (g) On Special Memberships
   - (h) On Rules and Order of Business
   - (i) On Legislation and Public Relations
   - (j) On Hygiene and Public Health
   - (k) On Medical Service and Prepayment Insurance
   - (l) On Miscellaneous Business
   - (m) On Executive Session
   - (n) On Emergency Medical Service
5. Speaker's Address—J. E. Livesay, M.D., Flint
6. President's Address—R. H. Baker, M.D., Pontiac
7. President-Elect's Address—W. S. Jones, M.D., Menominee
8. Annual and Supplemental Reports of The Council—William Bromme, M.D., Detroit, Chairman
9. Report of Delegates to American Medical Association—W. A. Hyland, M.D., Grand Rapids, Chairman
10. Brief of Annual Report of Woman's Auxiliary —Mrs. A. F. Milford, Ypsilanti, President
11. Brief of Annual Report of Michigan State Medical Assistants Society—Mrs. Charlotte Ash, Kalamazoo, President
12. Selection of Michigan's Foremost Family Physician

1:00 p.m. LUNCHEON, Continental Room

PANEL ON UNDERGRADUATE MEDICAL EDUCATION

Moderator

J. E. Livesay, M.D., Flint, Speaker, MSMS House of Delegates

Participants

A. C. Furstenberg, M.D., Ann Arbor, Dean, University of Michigan Medical School

G. H. Scott, Ph.D., Detroit, Dean, Wayne University College of Medicine

MONDAY, SEPTEMBER 26

Grand Ball Room, Pantlind Hotel, Grand Rapids

2:00 p.m.—Second Meeting

13. Supplementary Report of Committee on Credentials
14. Roll call
15. Resolutions**
16. Reports of MSMS Standing Committees:
    - A. Committee on Postgraduate Medical Educatio
    - B. Preventive Medicine Committee:
      - (1) Committee on Rheumatic Fever Control
      - (2) Cancer Control Committee
      - (3) Maternal Health Committee (and Subcom committees)
      - (4) Venereal Disease Control Committee
      - (5) Tuberculosis Control Committee
      - (6) Industrial Health Committee
      - (7) Mental Health Committee
      - (8) Child Welfare Committee (and Subcommittees)
      - (9) Iodized Salt Committee
      - (10) Geriatrics Committee (and Subcommittees)
    - C. Public Relations Committee (and Subcommittees)
    - D. Ethics Committee
    - E. Legislative Committee
17. Reports of Special Committees
    - A. Beaumont Memorial Committee
    - B. Scientific Radio Committee
    - C. Advisory Committee to Woman's Auxiliary
    - D. Advisory Committee to Michigan State Medical Assistants Society

Reports of the Committees of The Council, including Committee on Scientific Work, are included in Annual Report of The Council.

MONDAY, SEPTEMBER 26

Grand Ball Room, Pantlind Hotel, Grand Rapids

8:00 p.m.—Third Meeting

18. Supplementary Report of Committee on Credentials
19. Roll call
20. Unfinished business
21. New business
22. Reports of Reference Committees:
    - (a) On Officers' Reports
    - (b) On Reports of The Council
    - (c) On Reports of Standing Committees
    - (d) On Reports of Special Committees
    - (e) On Constitution and By-Laws
    - (f) On Resolutions
    - (g) On Special Memberships
    - (h) On Rules and Order of Business
    - (i) On Legislation and Public Relations
    - (j) On Hygiene and Public Health
    - (k) On Medical Service and Prepayment Insurance
    - (l) On Miscellaneous Business
    - (m) On Executive Session
    - (n) On Emergency Medical Service

*See the Constitution, Articles IV, VII and XII, and the By-Laws, Chapter 8 on "House of Delegates."

**All resolutions, special reports, and new business shall be presented in writing in triplicate (By-Laws, Chapter 8, Section 10-m).

TUESDAY, SEPTEMBER 27

Grand Ball Room, Pantlind Hotel, Grand Rapids

9:30 a.m.—Fourth Meeting

23. Supplementary Report of Committee on Credentials
24. Roll call
25. Unfinished business
26. New business
27. Supplementary Reports of Reference Committees

TUESDAY, SEPTEMBER 27

Grand Ball Room, Pantlind Hotel, Grand Rapids

3:00 p.m.—Fifth Meeting

28. Supplementary Report of Committee on Credentials
29. Roll call
30. Unfinished business
31. Supplemental Report of The Council
32. Supplementary Reports of Reference Committees
33. Elections:
    (a) Councilors:
        2nd District—R. S. Breakey, M.D., Lansing—Incumbent
        3rd District—G. W. Slagle, M.D., Battle Creek—Incumbent
        15th District—D. Bruce Wiley, M.D., Utica—Incumbent
        16th District—G. T. McKean, M.D., Detroit—Incumbent
    (b) Delegates to American Medical Association:
        W. D. Barrett, M.D., Detroit—Incumbent
        W. A. Hyland, M.D., Grand Rapids—Incumbent
        R. A. Johnson, M.D., Detroit—Incumbent
    (c) Alternate Delegates to American Medical Association:
        W. W. Babcock, M.D., Detroit—Incumbent
        O. J. Johnson, M.D., Bay City—Incumbent
        E. F. Sladek, M.D., Traverse City—Incumbent
    (d) President-elect
    (e) Speaker of the House of Delegates
    (f) Vice-Speaker of the House of Delegates
34. Adjournment.

ADVANCE REGISTRATION OF DELEGATES

Sunday, September 25, 1955

8:00 to 10:00 p.m.

Lobby of Pantlind Hotel

REGISTRATION

also on

Monday, September 26, 1955

8:00 a.m.

Lobby of Pantlind Hotel

ANNUAL SESSION APPOINTMENTS

- *Co-chairmen of Arrangements*

  C. Allen Payne, M.D., and
  Felix S. Alfenito, M.D., Grand Rapids

- *Chairman of Scientific Exhibit*

  Walter I. Lillie, M.D., Grand Rapids

- *House of Delegates Press Relations Committee*

  K. H. Johnson, M.D., Chairman
  L. C. Carpenter, M.D.
  L. Fernald Foster, M.D.
  R. A. Johnson, M.D.
  J. E. Livesay, M.D.
  C. L. Weston, M.D.

- *Scientific Assembly Press Relations Committee*

  P. W. Kniskern, M.D., Chairman
  H. G. Benjamin, M.D.
  F. C. Brace, M.D.
  C. A. Payne, M.D.
  L. Paul Ralph, M.D.

HOTEL RESERVATIONS
MICHIGAN STATE MEDICAL SOCIETY
90th Annual Session
Grand Rapids, September 28-29-30, 1955

The reservation blank below is for your convenience in making your hotel reservations in Grand Rapids. Please send your application to the Committee on Hotels for MSMS Convention, Pantlind Hotel, Grand Rapids, Michigan. Mailing your application now will be of material assistance in securing hotel accommodations.

As very few singles are available, registrants are requested to co-operate with the Committee on Hotels by sharing a room with another registrant, when convenient.

— — — — — — — — — — — — — — — — — —

Committee on Hotels,
Michigan State Medical Society
c/o Pantlind Hotel
Grand Rapids, Michigan

Please make hotel reservation(s) as indicated below:

..... Single Room(s) ..... persons

..... Double Room(s) for ..... persons

..... Twin-Bedded Room(s) for ..... persons

Arriving September ..... hour ..... A.M. ..... P.M.

Leaving ..... hour ..... A.M. ..... P.M.

Hotel of First Choice: .....

Second Choice: .....

Names and addresses of all applicants including person making reservation:

Name	Address	City	State
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Date ..... Signature .....

Address ..... City .....

MSMS HOUSE OF DELEGATES, 1955

Delegates and Alternates

(Names of Alternates appear in Italics)

OFFICERS

J. E. Livesay, M.D., 621 Mott Foundation Bldg., Flint, Speaker
K. H. Johnson, M.D., 1116 Michigan National Tower, Lansing, Vice-Speaker
L. Fernald Foster, M.D., 919 Washington, Bay City, Secretary
L. W. Hull, M.D., 1701 David Whitney Bldg., Detroit, Immediate Past President

ALLEGAN

L. F. Brown, M.D., Otsego
E. B. Johnson, M.D., Allegan

ALPENA-ALCONA-PRESQUE ISLE

E. S. Parmenter, M.D., P.O. Box 192, Alpena
J. E. Spens, M.D., Professional Bldg., Alpena

BARRY

A. B. Gwinn, M.D., City Bank Bldg., Hastings
H. S. Wedel, M.D., 134 E. State St., Hastings

BAY-ARENAC-IOSCO

O. J. Johnson, M.D., 207 N. Walnut, Bay City
D. A. Bowman, M.D., 101 W. John St., Bay City
W. G. Gamble, M.D., Mercy Hospital, Bay City
M. J. Medvesky, M.D., 1106 S. Madison Ave., Bay City

BERRIEN

D. W. Thorup, M.D., 610 Fidelity Bldg., Benton Harbor
N. J. Hershey, M.D., 1648 Broadway, Niles
F. A. Rice, M.D., Niles
H. J. Klos, M.D., Mercy Hosp., Benton Harbor

BRANCH

H. J. Meier, M.D., 87 W. Pearl St., Coldwater
R. J. Fraser, M.D., 22 W. Pearl St., Coldwater

CALHOUN

H. C. Hansen, M.D., 417 Post Bldg., Battle Creek
L. R. Keagle, M.D., 196 North Ave., Battle Creek
J. W. Hubly, M.D., 1407 Security Tower, Battle Creek
S. B. Winslow, M.D., 612 Post Bldg., Battle Creek

CASS

S. L. Loupee, M.D., Dowagiac
U. M. Adams, M.D., Marcellus

CHIPPEWA-MACKINAC

W. F. Mertaugh, M.D., Central Savings Bank Bldg., Sault Ste. Marie
E. S. Rhind, M.D., 300 Court St., Sault Ste. Marie

CLINTON

F. W. Smith, M.D., St. Johns
A. C. Henthorn, M.D., Route 3, St. Johns

DELTA-SCHOOLCRAFT

H. Q. Groos, M.D., 1015 S. First, Escanaba
J. H. Fyvie, M.D., 202 S. Cedar St., Manistique

DICKINSON-IRON

L. E. Irvine, M.D., 326 W. Genesee, Iron River
E. R. Addison, M.D., 412 Superior St., Crystal Falls

EATON

P. H. Engle, M.D., 121 S. Main St., Olivet
B. P. Brown, M.D., 116 Pearl St., Charlotte

GENESEE

F. D. Johnson, M.D., 312 Paterson Bldg., Flint
J. E. Livesay, M.D., 621 Mott Fdn. Bldg., Flint
C. W. Colwell, MD., 706 Citizens Bank Bldg., Flint
R. M. Bradley, M.D., 421 Genesee Bank Bldg., Flint
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G. E. Anthony, M.D., 1015 Detroit St., Flint
J. C. Benson, Jr., M.D., 709 Genesee Bank Bldg., Flint

GOGEBIC

D. C. Eisele, M.D., 109 E. Aurora, Ironwood
W. A. Gingrich, M.D., 109 E. Aurora, Ironwood

GRAND TRAVERSE-LEELANAU-BENZIE

D. G. Pike, M.D., 876 E. Front St., Traverse City
C. E. Lemen, M.D., 216 E. Front St., Traverse City

GRATIOT-ISABELLA-CLARE

M. G. Becker, M.D., Edmore
E. S. Oldham, M.D., Breckenridge

HILLSDALE

A. W. Strom, M.D., 32 S. Broad St., Hillsdale
L. W. Day, M.D., 112 E. Chicago St., Jonesville

HOUGHTON-BARAGA-KEWEENAW

L. C. Aldrich, M.D., Quincy St., Hancock
P. S. Sloan, M.D., 609 Sheldon, Houghton

HURON

C. W. Oakes, M.D., Harbor Beach
E. E. Steinhardt, M.D., Elkton

INGHAM

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K. W. Toothaker, M.D., 930 N. Washington Ave., Lansing
Milton Shaw, M.D., 320 Townsend, Lansing
R. E. Kalmbach, M.D., 301 Seymour St., Lansing

IONIA-MONTCALM

Glenn W. House, M.D., Greenville
L. W. Bunce, M.D., Trufant

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N. D. Munro, M.D., 740 W. Michigan, Jackson
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T. B. Thompson, M.D., 424 W. Michigan, Jackson

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S. E. Andrews, M.D., 224 E. Cedar St., Kalamazoo
J. G. Malone, M.D., 420 John St., Kalamazoo
P. F. Cooper, M.D., 252 E. Lovell, Kalamazoo
R. R. Dew, M.D., 252 E. Lovell, Kalamazoo

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G. L. Smith, M.D., Imlay City

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W. H. Hewes, M.D., Mill St., Adrian

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H. C. Hill, M..D, 116 N. Michigan, Howell
L. E. May, M.D., 924 W. Grand River Ave., Howell

LUCE
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D. C. Adams, M.D., Newberry State Hospital, Newberry

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O. D. Stryker, M.D., County Bldg., Mt. Clemens

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E. B. Miller, M.D., 425 River St., Manistee

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B. C. Baron, M.D., Munising

MASON
H. G. Bacon, M.D., Scottville
E. B. Boldyreff, M.D., Custer

MECOSTA-OSCEOLA-LAKE
Paul Ivkovich, M.D., 111 S. Chestnut, Reed City
D. N. Kilmer, M.D., 102½ W. Upton, Reed City

MENOMINEE
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H. R. Brukardt, M.D., Electric Square Bldg., Menominee

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H. L. Gordon, M.D., Dow Chemical Co., Midland

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B. L. Masters, M.D., 111 W. Dayton St., Fremont

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G. L. Schaiberger, M.D., West Branch

NORTHERN MICHIGAN COUNTIES
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L. E. Grate, M.D., Charlevoix

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E. B. Cudney, M.D., Pontiac Motor Division, Pontiac
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J. J. Vrbanac, M.D., Hart

ONTONAGON
W. F. Strong, M.D., Ontonagon
K. L. Olmstead, M.D., White Pine

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R. K. Hart, M.D., Croswell

SHIAWASSEE
C. L. Weston, M.D., Matthews Bldg., Owosso
V. L. Hoshal, M.D., Durand

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E. N. Elmendorf, M.D., Vassar

VAN BUREN
R. W. Spalding, M.D., Gobles
E. L. Copeland, M.D., Decatur

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V. M. Zerbi, M.D., 220 Pearl St., Ypsilanti

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L. R. Leader, M.D., 1129 David Whitney Bldg., Detroit 26
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HOUSE OF DELEGATES, 1955

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J. Earl McIntyre, M.D.

A man who was to become known as "Dr. State Board of Medicine" to thousands of medical students and M.D.'s in Michigan first met a member of the medical profession in Bettsville, Ohio, on February 15, 1884. At that initial encounter there was little of the dignity and understanding that was later to mark his contact with medical men; only a sharp slap on the backside by the doctor and a loud wail from the infant who was to be named J. Earl McIntyre, a signature which you will find on an important piece of parchment hanging somewhere in the offices of most M.D.'s of Michigan.



The "M.D." was added after J. Earl McIntyre's name in 1908 when he was graduated from the former Detroit College of Medicine, now Wayne University College of Medicine. Internship and a year's residency in internal medicine at Harper Hospital followed his graduation; then he returned to Lansing which had become his home town. He has remained in Michigan's Capital City ever since, engaging in active practice for 40 years with the exception of time spent along the Mexican border chasing Pancho Villa during 1916 and 1917 as a Captain in the 11th Provisional Field Artillery.

He had already given up his bachelorhood in 1914 to marry Sally Barclay of Menominee.

From that union, the name of McIntyre will continue in the medical circles of Michigan, for Jack B. McIntyre, M.D., Dr. and Mrs. McIntyre's one son, now is in residency training at Henry Ford Hospital, Detroit. And already the possibility of a third generation Dr. McIntyre has appeared, since one of J. Earl's two grandchildren is a boy.

To anyone so diligent and hardworking as the young J. Earl McIntyre, it was only natural that he was to have many interests outside his devotion to his first love, the private practice of medicine. From his earliest days in Lansing, Dr. McIntyre took an active part in medical and professional organizations on both the local and state level.

One of his early extracurricular jobs was as member and secretary of the original Board of Control of the Ingham County Tuberculosis Sanatorium in 1912. Dr. Mac also was county physician in 1912 and later was coroner of Ingham County during 1920-22. For 25 years from 1920 to 1945, he was member and President of the Lansing Board of Health.

His interest in medical organization grew and he became President of the Ingham County Medical Society in 1925, and later a member of The MSMS Council and its Executive Committee.

All this activity was bound to attract attention. In 1928 he was appointed to the State Board of Registration in Medicine, later becoming its President, and, for the past 22 years, its Secretary.

In 1933, when the offices of the State Boards were moved to Lansing from Detroit, Dr. Mac was Board President. Therefore he was surprised when the Governor handed him the key to the new office. When he protested that he was not the Secretary, the Governor advised him that as of that moment J. Earl McIntyre, M.D., was both President and Secretary. Shortly thereafter, when the Board unanimously elected Dr. Mac as Secretary, he resigned as President and he put on the badge of office which he has worn ever since.

With that badge firmly affixed, Dr. McIntyre

took up his guard post at the portals of Michigan medicine, jealously protecting them against cultists and other pseudo doctors and from the product of sub-standard and inferior medical schools. The result: Michigan has maintained one of the highest standards of medical education and licensure in the entire United States.

In this position, he has served as father advisor and counselor to a multitude of medical students and young doctors. Many—some now leaders in their particular fields of medicine—were persuaded personally by Dr. Mac to stick out their medical education after facing the discouragement which at one time or another comes to almost every medical student when he finds there's no easy path leading to an M.D. degree.

Such a busy schedule as Dr. Mac cut out for himself finally led in 1950 to an attack of what has been called in some quarters the occupational disease of the M.D.—a coronary occlusion. With that, he gave up even part-time private medical practice, and today his pet gripe is "they won't let me do anything to even smell like a man"—the result of a strict diet, with no hard beverages or tobacco. There are a few diehard ex-patients, however, like the man who walked into the office of the State Board recently and insisted that he wanted a complete physical examination right then and there, much to the consternation of the staff.

Through his years as Secretary of the State Board of Medicine, Dr. Mac has time and again stopped action from many sources to lower the standards of medical licensure in Michigan; he has resisted or ignored pressures of many kinds from many places where there was a question that the credentials of an applicant were not adequate by Michigan standards.

Anecdotes of events serious at the time, but mellowed through the years, are many. Perhaps the favorite concerns the time he discovered that two young men, newly arrived for internship at one of Michigan's approved training hospitals, were actually graduates in a healing art which still officially bears the label of "cult." The two young gentlemen were promptly and quietly escorted to the state line, under Dr. McIntyre's direction, carefully stripped of their phony credentials.

Full realization of how much of his life has been devoted to the State Board of Medicine came suddenly the other day when Dr. McIntyre signed the license of a young M.D. and then remembered that in his own first year as a member of the State Board he had delivered the newly licensed doctor and signed his birth certificate.

Coronary or no coronary, however, you can't keep a man like J. Earl McIntyre from seeking new worlds to conquer, even though practice of medicine is a thing of the past. His great crusade today is the development of a Uniform Medical Practice Act, acceptable for the entire United States. This has been a project thrust upon him as a Committee member for the Federation of State Medical Boards of the United States, of which he was President in 1941-42, the first M.D. from Michigan to be so honored. Another honor of which he has reason to be proud is his membership on the National Board of Medical Examiners from 1945 to 1954.

Right now the possibility of an influx of men holding M.D. degrees from colleges and universities beyond the borders of the United States and Canada is of considerable concern to members of the State Board of Registration and its Secretary. Methods for assuring that only those who can qualify under the standards set in Michigan for American-trained doctors of medicine are their present goal. And it's a good bet that J. Earl McIntyre, in his position as guardian of the portals, will find a way.

—A. C. FURSTENBERG, M.D.

TRICHOPHYTON TONSURANS RINGWORM

(Continued from Page 690)

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Mrs. Charlotte Ash

Medical Assistant, Magna Cum Laude

At the 90th Annual Session in Grand Rapids, if you should run into a very attractive woman, smartly clothed and wearing an equally smart hat, she is very likely to be Mrs. Charlotte Ash, President of the Michigan State Medical Assistants Society for 1955.

Charlotte was born in Vicksburg, Michigan, and was graduated from Vicksburg High School and Parsons Business College. Her ambition while attending high school was not to work in a business office but to become a Registered Nurse. Also, she thought a great deal about entering law school, but an illness, and the depression with its lean years, made the furthering of that ambition an impossibility. Business college was the alternative.



She says that she felt fortunate to obtain work in the "Dirty Thirties" since jobs were few and far between. Upon completion of business college, Charlotte worked for a time for a manufacturer of fretted string instruments in the credit department; and at that time, being a busy doctor's right hand was farthest from her mind.

She married and after her son, now fifteen years old and a sophomore in high school, was born, she remained at home for about three years, although during this period she was active in community affairs assisting with the work of the Rationing Board in Kalamazoo.

Eight years ago, she began working in the office of Homer Stryker, M.D., of Kalamazoo, as a medical assistant. When she started this work, Dr. Stryker was in private practice alone. However, a year later R. Grant Howard, M.D., joined him, and four years later Robert E. DeLong, M.D., became associated.

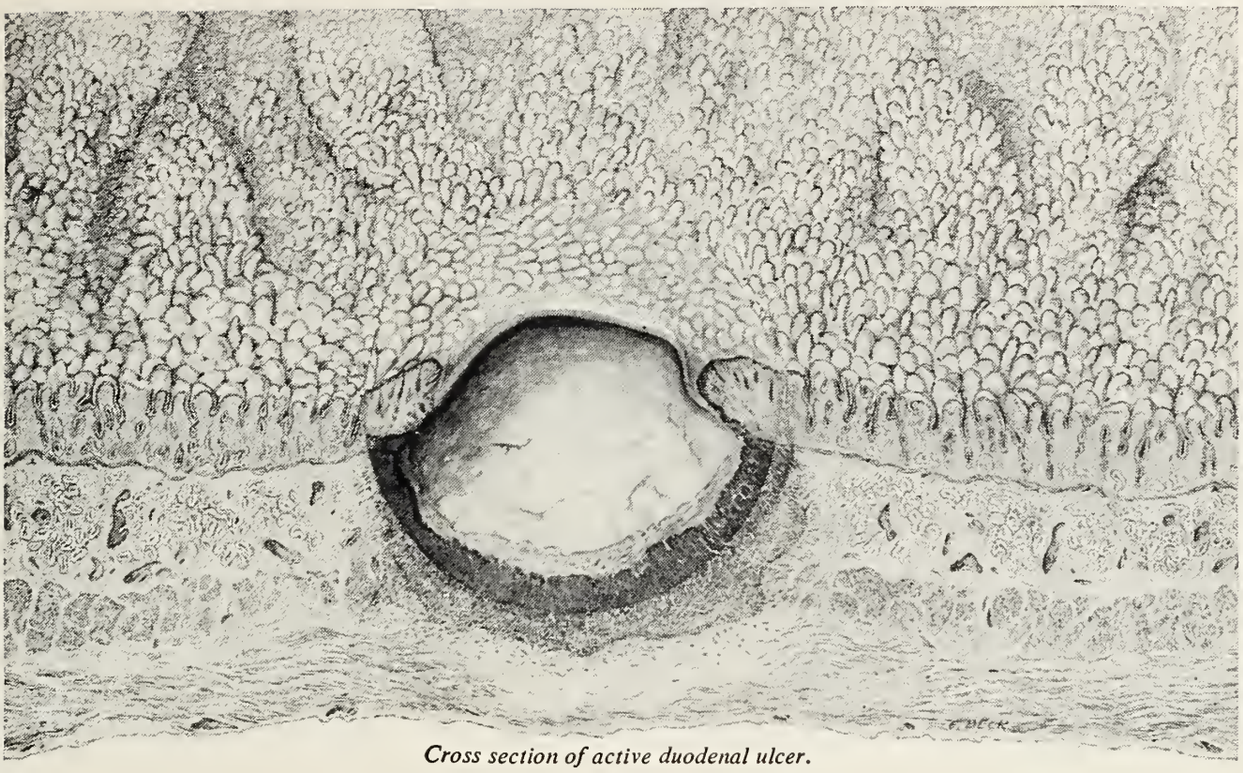
Since that time, Charlotte has continued to be "our girl Friday" to these three hard-working physicians. She has carried the tremendous load without apparent effort. Her co-workers have stated that she is never critical and never expects others to carry her burden of work for her, but always finds time to lend a helping hand to those who need it. She is always even-tempered and pleasant to everyone. It is no small job to keep an office for three busy specialists running smoothly and efficiently, and this she does with one asistant.

Mrs. Ash is a charter member of the Kalamazoo County Medical Assistants Society and became its President in 1951. The previous year, 1950, she served on the Membership Committee of the MSMAS and in 1953 served as Chairman of the Convention Committee in Grand Rapids. This was a major undertaking and Charlotte spent many long hours planning for that function. At this Convention, Mrs. Ash was voted into office as President-Elect of MSMAS and took office as President in September, 1954.

Charlotte has always been active in her church and its organizations. She is a member of the Eastern Star in Vicksburg, and the Library and Child Study clubs. Too, she found politics interesting and has been active in her party organization. She says she enjoys being "the crew" for her husband's fleet of Snipe boats which are kept on a lake near their home.

Along with her home, her family, her work as a Medical Assistant, and the various activities in connection with being President of the Michi-

(Continued on Page 748)



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthīne.

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

". . . our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. . . .

"Prompt relief of ulcer pain by ganglionic blocking agents . . . coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine Bromide (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain, or in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

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SEARLE

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

HEARING AID PROJECT

Hearing aids for children whose parents are unable to buy them are purchased by the Michigan Department of Health. Instruments are purchased for children with permanent hearing losses who cannot hear speech adequately but who, with a hearing aid, would be able to attend classes with normal hearing children. Needy children under sixteen years of age, where otological examination has established the fact that the child has a hearing defect which is permanent, are eligible for help providing that the child's parents are interested and co-operative and the child can use a hearing aid adequately.

Instruments are selected by standard audiological methods at non-commercial centers, such as the University of Michigan, Ann Arbor; Michigan State College, East Lansing; Michigan School for the Deaf, Flint; Detroit Hearing Center, and the Constance Brown Society for Better Hearing in Kalamazoo.

The children may be trained in the use and care of the hearing aid by teachers of the deaf and hard of hearing in their own communities. For children living where local facilities are not available, short training programs have been established at the Michigan School for the Deaf in Flint and the Bay Cliff Health Camp in the Upper Peninsula. Here children with new hearing aids learn how to use and care for the instruments properly and are given short intensive work in auditory training, language development and understanding, lip reading and speech correction.

Over 200 children have been helped in the project and are competing successfully with normal hearing children in our public schools.

FIRST COMMUNITY MULTIPLE SCREENING PROJECT POPULAR

Michigan's first multiple screening study on a community-wide basis opened April 25 in Livingston County, to continue through May 20. During the first week, in one of the three centers in the county, 1,001 persons were screened, taxing both laboratory facilities and examining staff. The project is under the sponsorship of the Livingston County Medical Society, the Livingston County Chapter of the Michigan Division of the American Cancer Society and the Michigan Department of Health.

PROPHYLACTICS OTHER THAN SILVER NITRATE

Physicians frequently raise questions regarding the Michigan laws and regulations governing the use of prophylactic agents in the prevention of ophthalmia neonatorum.

According to Act 328, Public Acts of 1931—"It shall be the duty of the state health commissioner to officially name and approve a prophylaxis to be used in treating the eyes of newly born infants, and it shall be the duty of the commissioner to publish instructions for using the same."

The Commissioner of Health has compiled with the law by naming 1% silver nitrate, in solution, as the prophylactic which must be used by any physician, nurse or midwife who assists or is in charge at the birth of any infant.

However, as there seemed to be so much interest in the use of prophylactics other than silver nitrate, in October, 1953, the Commissioner of Health and the Council of Health approved a modification to the regulation requiring the use of silver nitrate, stating that other prophylactics under controlled research conditions might be used if requests for such research studies had been previously approved by the state health commissioner.

SUMMER TOPICAL FLUORIDE PROGRAM CONTINUES

The increasingly popular summer program of topical application of fluoride to children's teeth is well started on its fifth year. Schedules are being set up in 170 different locations in forty-two Michigan counties and some 30,000 boys and girls from three to thirteen years of age are expected to receive the fluoride treatments.

The treatments will be given by fifty-five dental students from the University of Michigan and the University of Detroit—junior dentists and dental hygienists. After an intensive training period, they will work in close co-operation with local dentists, health departments and school and civic groups in the localities included in the program. A nominal fee charged each child who can pay reimburses the students for living expenses. This makes the program practically self-supporting.

Treatment consists of a series of four applications of fluoride which prevent about 40 per cent of new dental decay.

Programs of topical application of fluoride are especially indicated for areas not served by a municipal water supply. They are also advised for about six years after water fluoridation has been initiated in a community, to provide protection for children whose teeth have wholly or partially developed on non-fluoridated water.

The place for examination of persons with cancer symptoms is the private physician's office or a cancer diagnostic clinic rather than a detection center.

* * *

More perspiration and less publicity should be expended on cancer research.

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MICHIGAN AUTHORS

Isodore Lampe, M.D., Ann Arbor, is the author of an article entitled "Results from Radiation Treatment in Cancer of the Buccal Mucosa and Lower Gingiva," published in *American Journal of Rentgenology, Radium Therapy, and Nuclear Medicine,* April, 1955.

Thomas Francis, Jr., M.D., Ann Arbor, is the author of an article entitled "Approach to Control of Poliomyelitis by Immunological Methods," published in the *Bulletin of the New York Academy of Medicine,* April, 1955.

H. E. Carnes, M.D., J. E. Gajewski, M.D., J. H. Conlin, M.D., Detroit, and **P. N. Brown, M.D.,** Northville, are the authors of an article entitled "Experimental Treatment of Typhoid Carriers," published in *Henry Ford Hospital Medical Bulletin,* March, 1955.

Gordon A. Eadie, M.D., Detroit, is the author of an article entitled "Lessons Learned from the Detroit Transmission Division Fire of August 12, 1953," published in *Henry Ford Hospital Bulletin,* March, 1955.

James Clark Moloney, M.D., Detroit, is the author of an article entitled "Etiology of Mental Health," published in *Henry Ford Hospital Bulletin,* March, 1955.

Harry M. Nelson, M.D., Detroit, is the author of an article entitled "Cancer Detection," published in the *Henry Ford Hospital Bulletin,* March, 1955.

E. Osborne Coates, Jr., M.D., Detroit, is the author of an article entitled "Some Practical Applications of Pulmonary Function Studies in Chest Disease," published in *Henry Ford Hospital Bulletin,* March, 1955.

Robert L. Weiner, M.D., Eloise, and **Harold F. Falls, M.D.,** Ann Arbor, are the authors of an article entitled "Intermediate Sex-Linked Retinitis Pigmentosa" published in AMA *Archives of Ophthalmology,* April, 1955.

R. K. Ratliff, M.D., F.A.C.S., and **W. B. Crenshaw, M.D.,** Ann Arbor, are the authors of an article entitled "Ureteral Obstruction From Endometriosis" published in *Surgery, Gynecology and Obstetrics,* April, 1955.

Robert T. Crowley, M.D., F.A.C.S., New York, N. Y., and **Warren O. Nickel, M.D.,** Detroit, are the authors of an article entitled "Definitive Treatment of Decubitus Ulcers in Paraplegic Patients by Coverage with Transposition Bilobed Flap Grafts," published in *Surgery, Gynecology and Obstetrics,* April, 1955.

Harry M. Nelson, M.D., Detroit, is the author of an article entitled "Progress in Cancer Control," published in *American Practitioner and Digest of Treatment,* February, 1955.

G. C. Brown, M.D., A. S. Babson, M.D., J. H. Schieble, M.D., Ann Arbor, are the authors of an article entitled "The Effect of Gamma Globulin on Subclinical Infection in Familial Associates of Poliomyelitis Cases. II. Serological Studies and Virus Isolations from Pharyngeal Secretions" published in the *Journal of Immunology,* January, 1955.

D. L. Waters, M.D., D. G. Dickinson, M.D., and **J. L. Wilson, M.D.,** Ann Arbor, are the authors of an article entitled "Clinical Evaluation of Pulmonary and Thoracic Elasticity In Chronic Poliomyelitis Patients," published in AMA *American Journal of Diseases of Children,* January, 1955.

William S. Reveno, M.D., Detroit, is the author of an article entitled "Periodic Health Appraisals—a Boon for Patients," published in the *Journal of the Student American Medical Association,* May, 1955.

Norman F. Miller, M.D., Ann Arbor, is the author of an article entitled "Terminal Care for the Gynecologic Cancer Patient," published in the *Journal of the Indiana State Medical Association,* April, 1955.

H. D. Ireland, M.D., F.A.C.P., Grand Rapids, is the author of an article entitled "Emotional Problems of Tuberculosis Hospital Patients" published in THE JOURNAL of the Michigan State Medical Society, a condensation of which is published in the *American Practitioner and Digest of Treatment,* April, 1955.

George H. Koepke, M.D., Alma J. Murphy, Ph.D., James W. Rae, Jr., M.D., and **David G. Dickinson, M.D.,** Ann Arbor, are the authors of an article entitled "An Electromyographic Study of Some of the Muscles Used in Respiration," read at the Thirty-second Annual Session of the American Congress of Physical Medicine and Rehabilitation, Washington, D. C., September 8, 1954, and published in *Archives of Physical Medicine and Rehabilitation,* April, 1955.

Donald R. Hagge, M.D., Detroit, is the author of an article entitled "Anatomy of the Recurrent Laryngeal Nerves in Thirty-Five Dissected Specimens," published in *Harper Hospital Bulletin,* January-February, 1955.

Harold Henderson, M.D., Detroit, is the author of an article entitled "Uterine Cancer—Salient Points from the 1954 International Congress of Obstetrics and

(Continued on Page 734)

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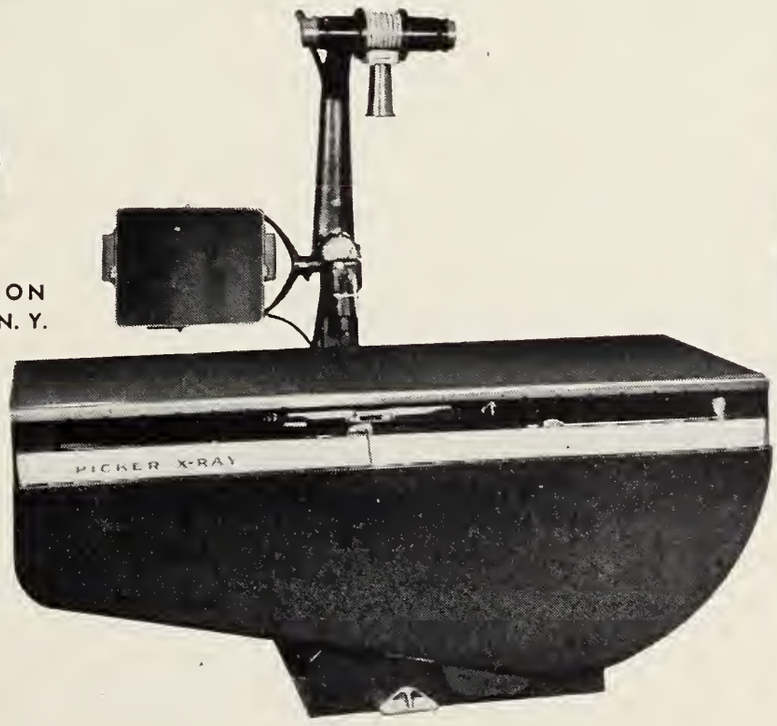
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(Continued from Page 732)

Gynecology, Geneva," published in *Harper Hospital Bulletin,* January-February, 1955.

Aran S. Johnson, M.D., Detroit, is the author of an article entitled "Small Bowel Obstruction By a Vegetable Bezoar—Case Report," published in *Harper Hospital Bulletin,* January-February, 1955.

John M. Hammer, M.D., Albert DeGroat, M.D., and John R. MacGregor, M.D., Kalamazoo, are the authors of an article entitled "Atabrin in the Treatment of Trichomonas Infestation of the Prostate," published in *Clinical Medicine,* April, 1955.

Milton J. Steinhardt, M.D., F.A.C.A., Detroit, is the author of an article entitled "Urticaria and Angioedema, Statistical Survey of Five Hundred Cases" published in *Annals of Allergy,* November-December, 1954.

E. S. Gurdjian, M.D., J. E. Webster, M.D., F. R. Latimer, M.D., S. P. Klein, M.D., and J. E. Lofstrom, M.D., Detroit, are authors of an original article "Recent Advances in Surgical Management of Chromophobe Tumor of Pituitary" which appeared in *JAMA* of May 7, 1955.

B. I. Hirschowitz, M.D., D. H. P. Streeten, Dh.Phil., H. M. Pollard, M.D., and H. A. Boldt, Jr., M.D., Ann Arbor, are authors of an original article "Role of Gastric Secretions in Activation of Peptic Ulcers by Corticotropin (ACTH)" which appeared in *JAMA* of May 7, 1955.

B. E. Brush, M.D., and T. J. Heldt, M.D., Detroit, are authors of an article under Clinical Notes, *The Journal of the American Medical Association,* May 7, 1955 number, entitled "A Device for Relief of Lymphedema."

Coleman Mopper, M.D., Herman Pinkus, M.D., and Peter Jacobell, M.D., Detroit, are authors of an original article "Multiple Sweat Gland Abscesses of Infants" which appeared in *Archives of Dermatology,* February, 1955.

Kenneth A. Wood, M.D., and Laurence A. Pratt, M.D., Detroit, are authors of an original article "Alveolar Cell Tumor of Lung" which was published in the Grace Hospital *Bulletin,* Detroit.

* * *

Report on Problem of Fee Splitting.—*JAMA,* May 7 issue (pages 49-50 of the Organization Section) publishes the report of the Committee on Medical Practices, appointed in 1954, to study the problem of fee splitting. The report, presented to the AMA House of Delegates in Atlantic City on June 6, recommends that:

1. A Subcommittee be created to work on a relative value scale such as that produced by the thoracic surgeons. This scale, based on points and not dollars, would apply to the whole of the practice of medicine and surgery. It would indicate the proper relation between fees for various medical and surgical specialties.
2. A program of public education by the AMA Department of Public Relations on the value of diagnostic and medical work be fostered to increase the public's appreciation of non-surgical work.

(Continued on Page 736)

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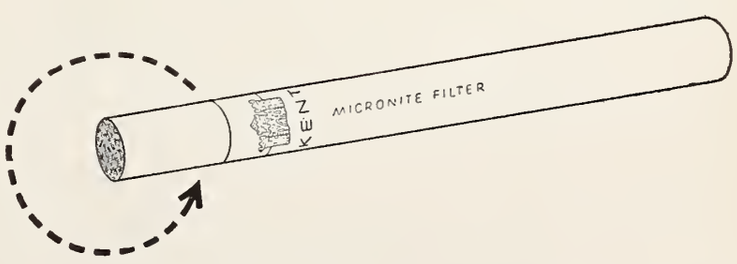
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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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(Continued from Page 734)

3. The American Medical Association encourage the various specialty boards in medicine to reappraise the value of their regulations restricting the practice of those seeking or holding board certificates.

4. The American Medical Association continue to discourage arbitrary restrictions by hospitals against general practitioners.

* * *



Beaumont Hospital Displays Cornwell Painting.—The William Beaumont Hospital of Royal Oak displayed in its waiting room, over a two months' period, the famous Dean Cornwell painting "William Beaumont and Alexis St. Martin," property of the Michigan State Medical Society, through the courtesy of Wyeth, Inc., of Philadelphia who commissioned Dean Cornwell to make this famous painting some fifteen years ago.

The portrait, depicting the historical and revolutionary experiments of Beaumont in stomach physiology, has now been moved to the Beaumont Memorial on Mackinac Island, for public view during the summer months.

* * *

Arizona physicians (488 out of 722) expressed their sentiments on social security in a recent survey conducted by the Arizona Medical Association. While only sixteen physicians favored compulsory social security for doctors, a total of 252 favored a voluntary system of social security for M.D.'s (171 were against a voluntary plan). A voluntary pension plan for the self-employed was favored by 416 (fifty voted in the negative). Only sixty-eight voted in favor of the waiver of premium provisions (for total and permanent disability) while 364 were against.

* * *

Michigan Industrial Medical Association.—The following are officers this year of the MIMA:

President: Paul J. Ochsner, M.D.
President-Elect: Earl E. Weston, M.D.
Vice President: Millard W. Shellman, M.D.
Secretary-Treasurer: S. D. Steiner, M.D.

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(Continued on Page 738)

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(Continued from Page 736)

The American Public Health Association will hold its 83rd Annual Meeting in Kansas City, Missouri (Municipal Auditorium), November 14-18, 1955. For program and information, write Herman E. Hilleboe, M.D., Health Commissioner, State of New York, in care of 1790 Broadway, New York 19.

* * *

Harry Nelson, M. D., Detroit, spoke to the Saginaw County Medical Society on March 15. His subject was "Cancer Detection."

* * *

Edward F. Domino, M.D., of Ann Arbor, was presented with a research award of $250 by the Michigan Society of Neurology and Psychiatry for "Original research in fields related to Neurology and Psychiatry." Dr. Domino's award was based on his manuscript "Differential Drug Effects on the Brain Stem Activating and Diffuse Thalamic Projection Systems."

A graduate of the University of Illinois Medical School, 1951, Dr. Domino is now assistant professor in pharmacology at the University of Michigan Medical School.

* * *

Michigan Heart Association Officers.—L. Paul Ralph, M.D., Grand Rapids, is President; Earl A. Irvin, M.D., Detroit, is President Elect; L. Fernald Foster, M.D., Bay City, Secretary; and Mr. Charles T. Fisher, Jr., Detroit, Treasurer.

Medical men re-elected to the Board were: Carleton Dean, M.D., Lansing, J. D. Littig, M.D., Kalamazoo, Muir Clapper, M.D., Detroit, Henry L. Smith, M.D., Detroit, Franklin T. Johnston, M.D., Ann Arbor, H. H. Riecker, M.D., Ann Arbor, Frank Van Schoick, M.D., Jackson, Milton Shaw, M.D., Lansing, F. Janney Smith, M.D., Birmingham.

The new headquarters of the Michigan Heart Association are located in the Doctors Building, 3919 John R Street, Detroit (opposite Harper Hospital).

* * *

Michigan United Fund.—The United Health and Welfare Fund of Michigan, Inc., has changed its name —for purposes of brevity—to "Michigan United Fund."

* * *

Doctor Locations.—The Michigan Health Council placed, through April 30, 1955, two additional doctors of medicine: William J. Cameron, M.D., from Denver to Petoskey, Michigan; Walter C. Peltason, M.D., from California to Paw Paw, Michigan.

* * *

The St. Clair County Medical Society's Eleventh Annual Clinic Day, held in Port Huron, May 20, presented the following guest speakers: Oscar D. Ratnoff, M.D., Cleveland, George J. Gabuzda, M.D., Cleveland, Phillip

(Continued on Page 740)

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(Continued from Page 738)

D. Partington, M.D., Cleveland, Lawrence William Gardner, M.D., Detroit, and James C. Wolter, M.D., Detroit. The meeting was presided over by L. F. McCoy, M.D., under the presidency of James Lauridsen, M.D.

* * *

Your Choice of AMA Journals: Dues-paying members of the American Medical Association receive their choice of either *The Journal of the AMA* or one of the nine special journals as a benefit of paid membership. The Special journals include:

Archives of Internal Medicine
American Journal of Diseases of Children
Archives of Dermatology
Archives of Neurology and Psychiatry
Archives of Pathology
Archives of Surgery
Archives of Otolaryngology
Archives of Ophthalmology
Archives of Industrial Health

The same publication will be mailed from year to year, unless the doctor of medicine requests a change. No part of AMA dues can be applied as a partial payment on any other publications of the AMA.

DR. BEAUMONT PERSONAL RELIC TO MSMS

Through the generosity of the St. Louis Medical Society, a magnificent rosewood bed once owned by William Beaumont, M.D., has been donated to the Michigan State Medical Society for the permanent exhibit of the Beaumont Memorial on Mackinac Island.

The relic has been in the Beaumont Collection of the St. Louis Medical Society since 1947, the gift of Mrs. George K. Conant. The bed was first acquired by a daughter of Dr. Beaumont, Mrs. Sarah Keim, who years later sold it to a close friend (who was Mrs. Conant's aunt) when she moved into an apartment in 1914. Mrs. Conant received the heirloom as a gift from her aunt.

The bed is reported to be in excellent condition, and will be placed on display at the Beaumont Memorial for the 1955 summer season.

WHEN IS YOUR BIRTHDAY, DOCTOR?

From a small beginning, leaders of the Michigan Foundation for Medical and Health Education, Inc., have hopes that the "birthday contribution" movement, which started in Muskegon, will snowball to the point where it will play a significant part in building the Foundation's Student Loan Revolving Fund.

Early participants were William M. LeFevre, M.D., of Muskegon, Otto Van der Velde, M.D., of Holland, E. L. Carr, M.D., of Lansing, and B. R. Corbus, M.D., Grand Rapids, each of whom sent a check to the Foundation on his birthday.

With each birthday as a reminder, donors will get

(Continued on Page 742)

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(Continued from Page 740)

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When is your birthday, Doctor? Your contribution—small or large—will be a great help in the effort to assist young medical students who need a boost to complete their education and serve the rural communities of Michigan.

* * *



One of Michigan's finest speakers and best-known citizens, Charles L. Anspach, Ph.D., will present the traditional Biddle Lecture, highlight of Officers Night on Wednesday, September 28, at the MSMS 90th Annual Session in Grand Rapids.

Dr. Anspach is President of Central Michigan College of Education, Mount Pleasant, and a leader in educational affairs and social service. Before becoming head of Central Michigan in 1939 he was Chairman of the Department of Education at Michigan State Normal College, Ypsilanti, and Dean and President of Ashland College, Ashland, Ohio.

Michigan's largest county has now joined the growing list of forward-looking counties which have scrapped the antiquated coroner system in favor of an up-to-date medical examiner's office. So far eight counties have taken advantage of new law passed by the 1953 Legislature under sponsorship of MSMS, three in the April election and five last November.

According to information received by MSMS, during the past year, voters in these counties have acted to replace coroners with M.D. medical examiners: Wayne, Mecosta, Van Buren, Ottawa, Wexford, Allegan, St. Joseph, and Hillsdale.

Oakland, Kent, and Genesee counties already had set up the medical examiner system under special legislation adopted prior to the 1953 act.

In almost every county, the County Medical Society has been a major factor in establishing the medical examiner system.

Plea to Force Health Setup Use Denied.—A circuit judge Tuesday refused to issue a temporary injunction which would have required five medical agencies to permit Dr. William A. Kopprasch, Allegan physician, to use the Allegan County Health Center for his practice.

Judge Raymond L. Smith said he based his decision on Dr. Kopprasch's failure to comply with the hospital's by-laws in not filling out an application blank for permission to use hospital facilities.

The doctor "should not try to get in the back door when the front door has not been legally barred," Smith declared.

* * *

Dr. Kopprasch has filed a $250,000 suit against the Health Center and its board of directors as well as the

Allegan County Medical Society, the Michigan State Medical Society and the Michigan Hospital Association. He contends the defendants are conspiring against him in forbidding him to practice at the Health Center, a community hospital.

The suit also charged that other Allegan physicians are unhappy because he gave testimony contrary to theirs in civil and insurance court cases.

* * *

"G-Day" in Glendale.—On March 9, 1955, a glaucoma-day study was made in Glendale. With a population of 114,400 people, everyone over forty years of age was invited to attend a study conducted by the Lions Club and eight ophthalmologists and their office staffs.

The suggestion came from Mrs. Harry Gradle, widow of the famed Chicago ophthalmologist and glaucoma specialist who was trained at the University of Michigan. Seven hundred and two persons were examined that day, having vision tests, tension, fundus examination, and where indicated, field of vision. Fourteen unsuspected glaucoma cases were discovered, 2 per cent of those examined. This is a striking evidence of the incidence of glaucoma.

* * *

Jerome W. Conn, M.D., Ann Arbor, has been named the new editorial specialty advisor for endocrinology, for *Current Medical Digest*. Dr. Conn has to his credit more than 110 publications in the fields of metabolism and endocrinology. He served as Council President for the Central Society for Clinical Research in 1954, and since 1947 has been consultant to the Surgeon General of the U. S. Army; member of the Fellowship Board National Research Council; member of Committee on Metabolism in Trauma of the Armed Services Epidemiological Board.

* * *

LeMoyne Snyder, M.D., Lansing, presented a paper entitled "Medicolegal Investigations of Suspected Crimes" at the 163rd Annual Meeting of the Connecticut State Medical Society, held in Stratford, Connecticut, April 26, 27 and 28, 1955.

* * *

The State Bar of Michigan, in co-operation with the University of Michigan Medical School and Wayne University College of Medicine together with the State Bar Committee on Medical Jurisprudence and the Michigan Law Institute, presented the Second Medicolegal Institute, April 21 and 22, 1955, at the Sheraton-Cadillac Hotel in Detroit.

* * *

Otto Tod Mallery, Jr., M.D., Director of the Institute of Industrial Health, University of Michigan, has been appointed to the Medical Advisory Council for the American Association of Industrial Nurses.

* * *

Enzyme Symposium.—A three-day International Symposium on Enzymes: Units of Biological Structure and Function, sponsored by the Henry Ford Hospital and The Edsel B. Ford Institute for Medical Research will be held in the auditorium of Henry Ford Hospital, November 1, 2, and 3, 1955.

Interrelationships between enzymology and other fields.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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notably genetics, physiology, biochemistry, and pharmacology, will constitute the general theme of the Symposium. The specific topics for the six sessions will be: Origin of Enzymes, Status of the Gene-Enzyme Relationship, Enzymes and Cell Structure, Enzymatic Basis of Some Physiological Functions, Cellular Energy Sources, and Regulation of Enzyme Activity. More than thirty internationally known scientists have accepted invitations to participate.

Interested persons may secure a copy of the Preliminary Announcement by writing to Dr. Clarence E. Rupe, Henry Ford Hospital, Detroit 2, Michigan.

Invitations will be sent to as many as can be accommodated.

* * *

Eight University of Michigan medical students made their first public presentations of scientific papers, Thursday, May 12, 1955.

A new educational device in the training of undergraduate medical students, the public presentation took place in the Main Amphitheater of the University Hospital sponsored by Alpha Omega Alpha, the medical equivalent of Phi Beta Kappa.

Called "The First Annual Student Night," the event included papers on various subjects in clinical and experimental medicine, including the use of Cobalt in sterilizing tissue culture, alcoholism, metabolism, and enzyme studies.

The U-M undergraduate research program is considered unique in that it provides carefully organized clinical research training for students working toward an M.D. degree. Customarily such medical research is reserved for graduate students working toward an advanced degree.

Dean Albert C. Furstenberg of the Medical School who initiated the program, declared, "The modern medical school curriculum is already demanding. Try as we have, there seems no way to include training in scientific method."

He added, "Therefore, we are excited that as an extracurricular device, made possible through the financial support of pharmaceutical houses and foundations, our students are receiving valuable training in laboratory investigation."

The U-M Medical School makes a limited number of $500 research grants available to top undergraduate students. Each student develops an interest in a special area of medical research, and he is assigned a faculty sponsor.

In the past the student submitted a technical paper to the dean and his committee at the end of the research. This year for the first time the student will get actual practice in presenting his findings publicily.

Each student was permitted ten minutes in which to

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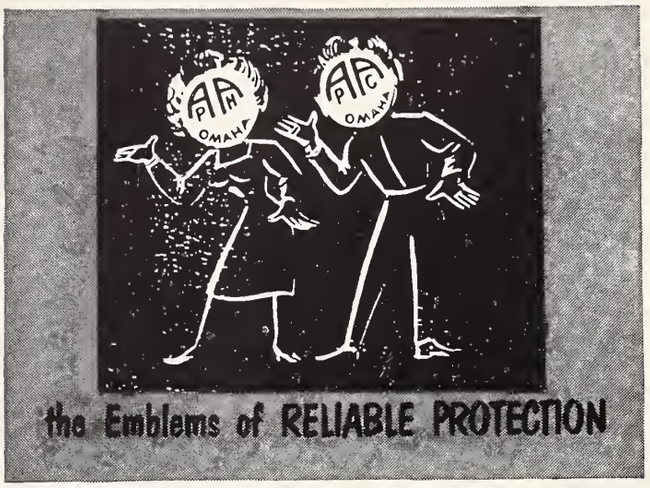
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(Continued from Page 744)

read his paper and present his findings. Dr. Holbrooke S. Seltzer, assistant professor of internal medicine, will preside, and Dr. Burton L. Baker, professor of anatomy, made the closing critique.

Students presenting papers were: W. Ford Keitzer, physiology, 293 Castle Blvd., Akron, Ohio; Charles L. Votaw, anatomy, 1417 E. Hile, Muskegon; Gerald J. Gleich, biochemistry, 912 S. Second Ave., Escanaba; Nancy F. Thomas, anatomy, 987 S. Shore Dr., Holland; John L. London, internal medicine, 408 Cottage, Olivet; Victor Bloom, pharmacology, 1445 University Terrace, Ann Arbor; Richard D. Stewart, bacteriology, 1448 University Terrace, Ann Arbor, and Gerald D. Abrams, anatomy, 18475 Northlawn, Detroit.

Research projects conducted by these students were variously financed by the National Foundation for Infantile Paralysis, the U-M Michigan Memorial-Phoenix Project, the Difco Laboratories, Lederle Pharmaceutical Company, and the U-M Undergraduate Medical Research Fellowships.

* * *

Dr. Louis J. Hirschman was honored at Wayne University's 87th annual alumni reunion Saturday, May 14, 1955, in Detroit's Sheraton-Cadillac Hotel by being presented the University's Alumni Award.

Dr. Hirschman, who was graduated from the Wayne University College of Medicine in 1899, was honored along with Walter F. Carey, president of Automobile Carriers, Inc., Vernon L. DeTar, nationally known organist and choirmaster; Dr. Joseph J. Katz, senior chemist at Chicago's Argonne National Laboratory, and Florence E. Kuhn, assistant superintendent of the Detroit public schools.

The author of several textbooks in his professional field of proctology and chapters in the Yearbook of Anesthesia, Dr. Hirschman is currently associate editor of the *American Journal of Surgery* and of the *American Journal of Digestive Diseases.*

In addition to teaching on the Wayne faculty from 1904 until 1946, he has also served as president of the Michigan State Medical Society, Wayne County Medical Society, American Proctological Society, Wayne University College of Medicine Alumni Association, Detroit Academy of Medicine, and the Detroit Medical Club of which he was a founder. In 1952, he was awarded the Distinguished Service Citation of the Wayne University College of Medicine Alumni Association.

President Clarence B. Hilberry of Wayne, who presented the alumni award, praised Hirschman for his "driving search for greater scientific knowledge and improved surgical procedures, and their quick dissemination through conferences and symposia. Wayne," said President Hilberry, "is proud to be the spokesman of a grateful community to this great surgeon trained among us and returning to us the full gift of his talents."

Dr. Hirschman now makes his home in Traverse City, Michigan.

(Continued on Page 748)

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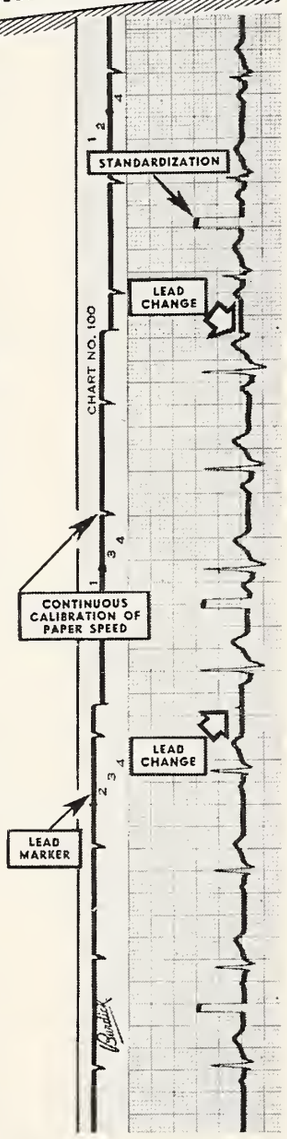
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(Continued from Page 746)

The Tenth Rheumatism Review, a comprehensive review of the American and English literature of recent years, is being made available for the first time to the medical profession at cost by the Arthritis and Rheumatism Foundation.

Physicians may obtain their copies of the *Review* by sending $1.00 to the Arthritis and Rheumatism Foundation, 23 West 45th Street, New York 36, New York.

The 418-page *Review* is based on material culled from 2,250 medical and scientific papers published in the field of arthritis and the rheumatic diseases over a five-year period. Written in straight prose and marked for reference, it was prepared by the Editorial Committee of the American Rheumatism Association, the professional society in the field. The book comes complete with index and bibliography.

* * *

The 1955 AMA Clinical Session will be held in Boston, November 29 through December 2, 1955. All doctors of medicine who desire a place on the Program should communicate immediately with the Chairman of the Program Committee, Theodore L. Badger, M.D., c/o Massachusetts Medical Society, 22 The Fenway, Boston 15. Applications for space in the scientific exhibit should be made now to Council on Scientific Assembly, AMA, 535 North Dearborn Street, Chicago 10, Illinois.

* * *

Coleman Mopper, M.D., Detroit, on April 12, at Savannah, Georgia, addressed the Georgia Medical Society on the subject, "Some Dermatological Manifestations of Internal Conditions."

* * *

At the Student American Medical Association's Fifth Convention in Chicago, May 6-7-8, 1955, a record total of 1,182 was registered—an increase of 226 over the previous record made in 1954. The convention was conducted by Executive Director Russell F. Staudacher, formerly associated with the Michigan State Medical Society Executive Office.

MRS. CHARLOTTE ASH

(Continued from Page 728)

gan State Medical Assistants Society, Charlotte has still found time to spend with her old friends and with many new. She is not at all disappointed about the fact that unforeseen events changed the hopes and plans she had made as a high school student, for she has found happiness in the career of Medical Assistant which she so capably fills.

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Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

PUBLIC RELATIONS IN MEDICAL PRACTICE. By James E. Bryan, Administrator, Medical-Surgical Plan of New Jersey. Formerly Executive Secretary, Westchester County Medical Society; Executive Secretary, New York County Medical Society; Executive Officer, The Medical Society of New Jersey; Chairman, Medical Society Executives Conference. Foreword by Louis H. Bauer, M.D., F.A.C.P., Secretary-General, The World Medical Association; Chairman of the Board, United Medical Services of New York; President, American Medical Education Foundation; Past President, American Medical Association. Baltimore: The Williams & Wilkins Company, 1955. Price, $5.00.

The physician, as a public servant, must constantly strive to do things which meet with public approval. The man of medicine is more than a healer. He is a member of a community, his County Society, his neighborhood. He cannot seek seclusion or try to avoid social contacts which are implements through which he must sell the public that he is interested in their needs and problems, and thereby motivated to do mankind a service that is sincere and unselfish.

The author of this text is not a physician, but has worked in close alliance with the medical profession for many years. He, therefore, can give a much more unbiased expression to the problem of public relations.

The physician is no longer a "tin god" on a pedestal. He must project himself into various social strata, community functions and government, as he represents himself he represents the entire profession. He must sense public needs, sentiments and then sincerly approach these needs to a solution.

This text should be found in every physician's office and is required reading. We must face what the public thinks of the profession and then correct what is wrong.

The author has covered the entire field of public relations, as it applies to medicine, in an exhaustive manner. The text is extremely well written and is easy to read.

V.B.L.

THE MEDICAL CARE OF THE AGED AND CHRONICALLY ILL. With Particular Emphasis on Degenerative Disorders, Advanced Cancer and Other as yet Incurable Diseases. By Freddy Homburger, M.D., Research Professor of Medicine, Tufts College Medical School. Boston and Toronto: Little, Brown and Company, 1955. Price, $5.75.

With the advancement of better living conditions and medical care, we are adding to the longevity of the human race. With all advancements, problems arise. The problem of geriatrics is, indeed, a foremost problem which is going to become even more important in the next few years. The problems of the aged and the chronically ill are crucial problems that must be met.

(Continued on Page 752)



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(Continued from Page 750)

The text is well written and will be of great value to nurses, relatives and physicians alike. The text offers to the physician readily accessible knowledge in the care of the chronically ill.

The indexing is well done. The book in its entirety is exceedingly well done and can be recommended for nurses, practitioners and medical students. V.B.L.

HEMATOLOGY. By Cyrus C. Sturgis, M.D., Professor of Internal Medicine, Chairman of the Department of Internal Medicine, University of Michigan Medical School and Director of the Thomas Henry Simpson Memorial Institute for Medical Research, University of Michigan, Ann Arbor, Michigan. 2nd ed. Springfield, Illinois: Charles C Thomas, 1954. Price, $19.50.

This is the second edition of a text that is becoming the bible of hematology. Many revisions have occurred since the first edition which makes this voluminous text on hematology a "must" for every clinician's library. The author's clear, concise style of writing reflects a tremendous wealth of knowledge, research and experience which is placed in print with a clarity that makes the text very easy reading.

The author's approach to the field of hematology is the clinical-morphologic approach which makes the text even more valuable. Many texts on hematology approach the problem from the morphologic standpoint, which appeals to the microscopists and pathologists but loses the clinician. This text makes it possible for the clinician to assimilate both the clinical and morphologic aspects of hematology.

The photomicrographs found throughout the text are excellent. The tables and graphs are well done and easily interpreted. The author's extensive experience, study and contributions to the field of hematology have been tremendous, and as the author of a difficult text subject such as hematology this text meets the most rigid standards as an outstanding contribution to medical libraries.

On the subject of pernicious anemia and macrocytic anemias, the author is unexcelled. The subject is covered in an exhaustive manner and embraces the recent contribution to the subject. The subjects of aplastic anemia and agranulocytosis are exceedingly well done. The entire text embraces the field of hematology in a clear-cut exhaustive manner.

The most recent advances in the field of hematology are included within the confines of the covers of this text.

The indexing is excellent. The bibliography is exhaustive, recent and replete.

This text cannot be recommended too highly as a "must" for hematologists, clinicians and medical students.

V.B.L.

THE CARE OF YOUR SKIN. By Herbert Lawrence, M.D. Illus. Boston-Toronto: Little, Brown and Company, 1955. Price, $2.50.

This is a small book of ninety-five pages, written for

(Continued on Page 754)

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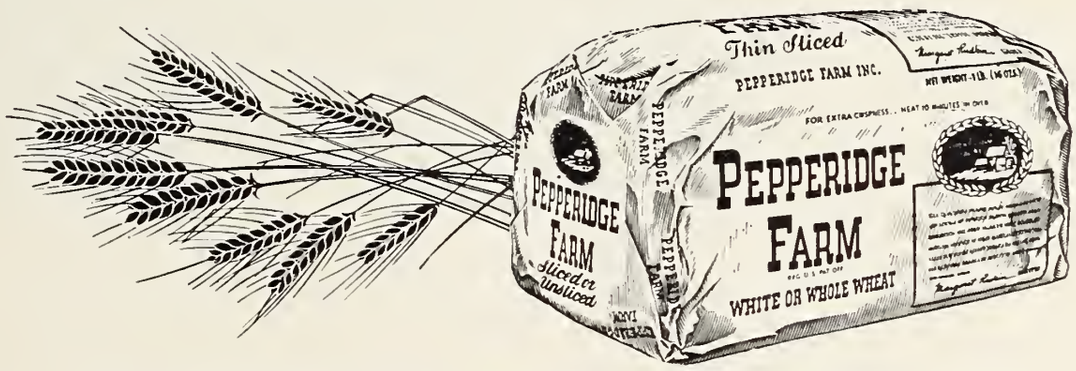
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(Continued from Page 752)

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H.E.A.

THE PRINCIPLES AND PRACTICE OF MEDICINE. A Textbook for Students and Doctors. By L. S. P. Davidson, B.A. Contab., M.D., P.R.C.P.Ed., F.R.C.P.-Lond., M.D. Oslo Physician to H.M. the Queen in Scotland, Professor of Medicine and Clinical Medicine, University of Edinburgh, Physician-in-Charge, Royal Infirmary, Edinburgh, and The Staff of the Department of Medicine, University of Edinburgh, and Associated Clinical Units. Second Edition. Edinburgh & London: E. & S. Livingstone, Ltd., 1954. Price, $7.00.

This text does not approach standard American texts on medicine. It is written in a didactic manner, not exhaustive. The electrocardiography is limited to standard leads. Reference to drugs is sometimes in Edinburgh nomenclature.

This text was born from necessity. It is a compilation of a series of lectures given by the authors to medical students over a period of years. The bibliography is minute.

The index is adequate. The text can be recommended as a quick reference and as a text for medical students and nurses.

V.B.L.

CIBA FOUNDATION SYMPOSIUM ON THE KIDNEY. Arranged jointly with the Renal Association. Editor for the Renal Association, A. A. G. Lewis, B.Sc., M.D., M.R.C.P. Editor for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch. Assisted by Joan Etherington. 125 illustrations. Boston: Little, Brown and Company, 1954. Price, $6.75.

The Ciba Foundation was organized in London in 1947 as an educational and scientific charity. It provides an international center where workers, active in medical and chemical research, meet and exchange ideas. The membership is small, so the reports are published. The kidney study is the ninth.

The book of 333 pages has five parts: (1) Structural and Functional Relationships in the Kidney, (2) Tubular Functions Other than the Regulation of Acid-Base Balance, (3) Renal Share in the Regulation of Acid-Base Balance, (4) General Problems of Electrolyte Excretion, (5) Renal Share in Volume Control of Body Fluid.

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DOCTORS IN THE SKY. The Story of the Aero Medical Association. By Robert J. Benford, M.D., Colonel, Medical Corps, United States Air Force. Springfield, Illinois: Charles C Thomas, 1955. Price, $8.75.

This text is a historical compilation of aviation medicine from 1929 to 1954. The text records the vast amount of knowledge and research that has gone into the development of aviation and the memorable contributions to the field.

The text also records the annual Aero Medical Association meetings. Of special interest to the Michigan group will be the important role played by Dr. F. C. Warnshuis of Grand Rapids in the development of aviation medicine.

The text is very pleasant reading and informative. The text can be highly recommended to all who have any interest in aviation, physicians and laymen alike.

V.B.L.

PUBLIC HEALTH SERVICE EXPANDS FOR CIVIL DEFENSE

The Public Health Service has been assigned extensive new defense responsibilities as the result of a delegation by the Federal Civil Defense Administration to the Department of Health, Education and Welfare recently approved by the President. A major expansion and reorganization of the Commissioned Reserve of the PHS as a national defense measure has been announced by Surgeon General Leonard A. Scheele. The Service expects to commission an additional 2,000 reserve officers by June 30, 1955, and present plans call for the commissioning of another 3,000 officers during the 1955-56 fiscal year.

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We are enclosing an up-to-date list of the Abbott trade-marks for your reference, and would greatly appreciate it if your proofreader could, whenever any of these names is used in future issues of THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY, capitalize the word, quote it, or otherwise distinguish it from the rest of the type. We thank you for any assistance you can give us in helping us preserve our trade-marks.

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General Surgery, two weeks, October 3
Gallbladder Surgery, ten hours, June 27, October 24
Thoracic Surgery, one week, October 3
Esophageal Surgery, one week, October 10
Fractures and Traumatic Surgery, two weeks, June 20, October 17

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Dermatology, two weeks, October 17

RADIOLOGY—Clinical Diagnostic Course, two weeks, by appointment
Clinical Uses of Radioisotopes, two weeks, October 10

PEDIATRICS—Neuromuscular Diseases, two weeks, June 20
Pediatric Cardiology, one week, October 10 and 17

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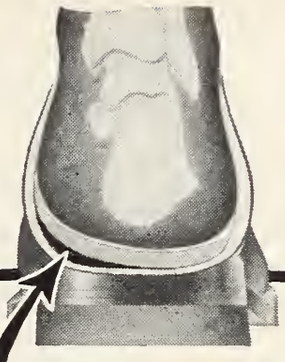
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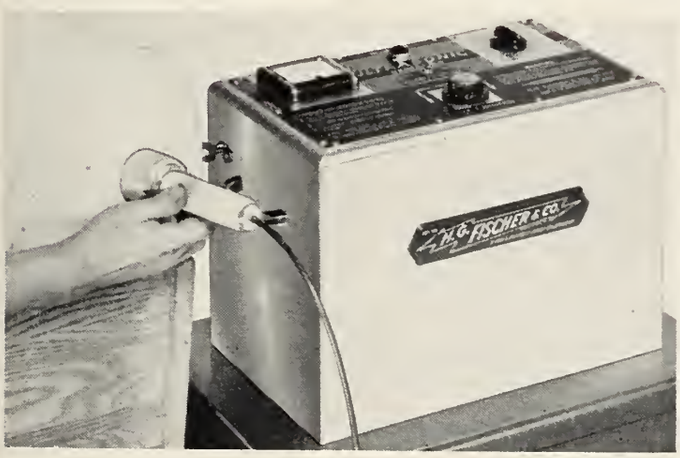
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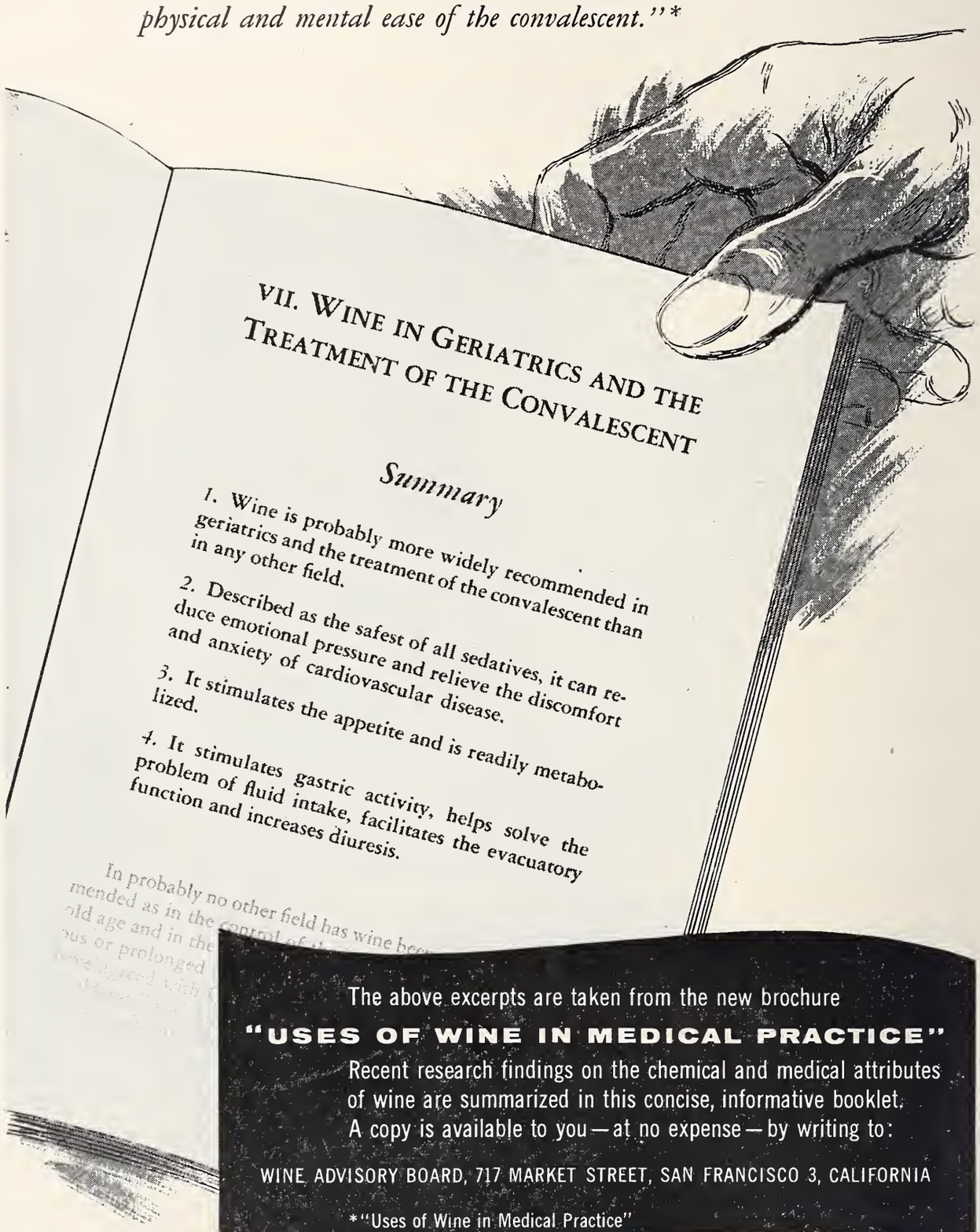
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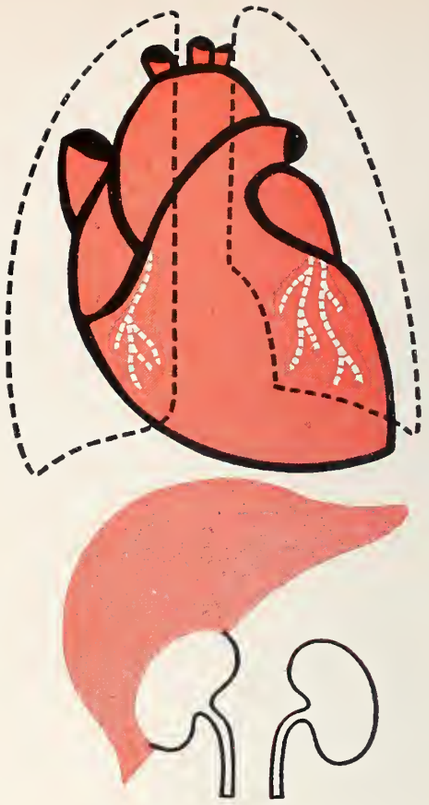
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The Michigan Bell Telephone Company, Detroit, recently interviewed 500 families to determine whether people knew what the letter combinations following doctors' names meant, and whether they knew where to look in the yellow pages to find the doctor of medicine desired by the family.

Results of the survey showed that 498 knew what "M.D." meant, but that one out of ten were confused by their various classification listings for members of the healing arts and did not know where to find the listings for physicians.

In answer to inquiry as to whether it would be helpful if the specialties of physicians were indicated in the telephone directory, 465 replied "yes." The majority also stated that if the specialties were noted, they would only call general practitioners for home visits.

HIGHLIGHTS OF THE EXECUTIVE COMMITTEE OF THE COUNCIL
Meeting of May 18, 1955

Eighty-four items were presented to the Executive Committee of The Council at its May 18 meeting in Detroit. Items of chief importance were:

● **W. D. Barrett, M.D.,** Detroit, Councilor of the 16th District, offered his resignation from The Council, due to pressure of other duties. His resignation was accepted with deep regret.

President Robert H. Baker, M.D., appointed G. Thomas McKean, M.D., Detroit, to serve for the unexpired term as Councilor.

● **Co-operation of MSMS** with Michigan Diabetes Association in proposed State Fair exhibit, Detroit, September 1955, was approved.

● **President Baker reported on Blue Shield** (Michigan Medical Service) coverage of members of Rubber Workers Association; the Executive Committee of The Council requested R. L. Novy, M.D., Detroit, President of Michigan Medical Service, to present details of the proposed coverage.

● **L. A. Drolett, M.D.,** Lansing, Chairman of the MSMS Legislative Committee, and Public Relations Counsel H. W. Brenneman were authorized to attend, as MSMS representatives, the AMA Regional Conference, Chicago, October 6.

GENERAL PRACTICE DAY
1955 MSMS ANNUAL SESSION

Wednesday, September 28, will be "General Practice Day" at the Grand Rapids Session of the Michigan State Medical Society.

The Assembly subjects on the first day of the 90th Annual Convention are especially dedicated to the interest of general practitioners.

The General Practice Section also will meet on Wednesday at the Pantlind Hotel, Grand Rapids.

● **Committee Reports.** The following Committee reports were presented:

(a) Periodic Health Appraisal Committee, meeting of May 12;
(b) Prevention of Highway Accidents, May 12;
(c) Advisory Committee to Michigan State Medical Assistants Society, May 15;
(d) Mental Health Committee, April 15;
(e) Blood Banks Committee, May 7;
(f) Basic Science Study Committee, May 6;
(g) Awards Committee, May 18.

● **American Cancer Society** Board of Directors meeting in Detroit, 1956. The Executive Committee offered its hospitality to ACS and agreed to join with the Wayne County Medical Society, Michigan Cancer Coordinating Committee, and the two divisions in Michigan of the American Cancer Society, to help make the 1956 ACS meeting in Detroit successful.

● **The Executive Committee of The Council** reaffirmed its October 20, 1954 objections to the multiphasic screening program of the Michigan Department of Health for the following reasons:

(a) It is not in the best interests of the public because it gives the patient a false feeling of security;
(b) It leaves the public to expect physical examinations, etc., through a public health agency;
(c) It represents the entry of the Michigan Department of Health into the practice of medicine;

(Continued on Page 768)

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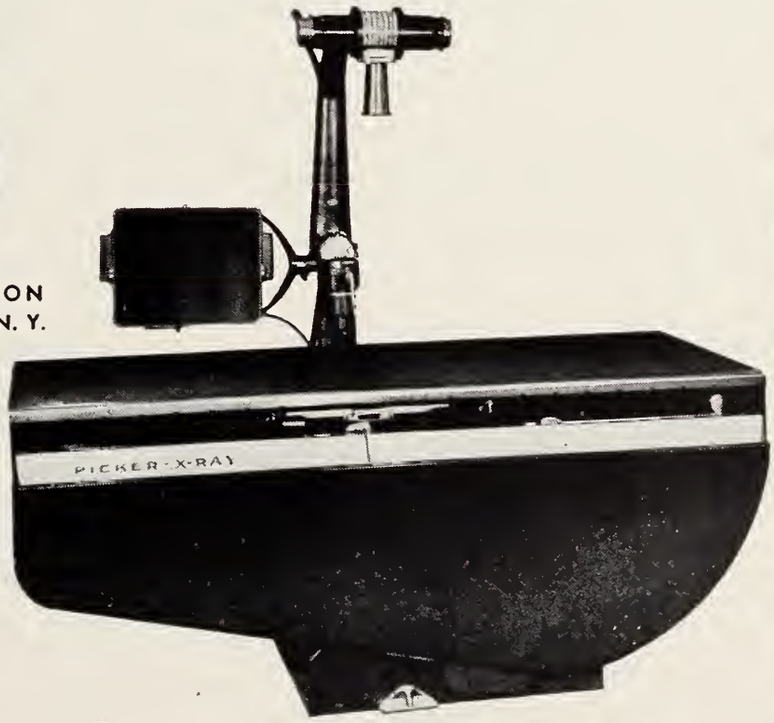
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HIGHLIGHTS OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

(Continued from Page 766)

(d) It relegates the practitioner of medicine to a therapist or "treater," rather than a diagnostician for which he has been trained.

The text of the Michigan Department of Health's card sent to individuals examined under its multiphasic screening program confirms this objection of MSMS.

● **Press Relations Committees for the MSMS Annual Session House of Delegates.** The following personnel was appointed to its Press Relations Committee:

K. H. Johnson, M.D., Lansing, *Chairman*
L. C. Carpenter, M.D., Grand Rapids
L. Fernald Foster, M.D., Bay City
R. A. Johnson, M.D., Detroit
J. E. Livesay, M.D., Flint
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C. A. Payne, M.D., Grand Rapids
L. Paul Ralph, M.D., Grand Rapids

● (a) **Co-sponsorship of the Midwest Conference on Arthritis,** to be held in Detroit, October 15, was authorized.

(b) **Co-sponsorship of Conference on Alcoholism,** to be held by the State Board of Alcoholism in Kalamazoo (Western Michigan College) July 27-29, was approved.

● **K. W. Toothaker, M.D.,** Lansing, was appointed as MSMS representative to the Committee on Patient Care of the Michigan League for Nursing.

● **1956 Michigan Clinical Institute:** L. W. Hull, M.D., Detroit, was appointed General Chairman of Arrangements and William S. Reveno, M. D., Detroit, was appointed Chairman of the Program Committee.

● **TV Program on Rheumatic Fever Control,** Bay City Station WNEM-TV May 15: Official thanks were accorded James Gerity, Jr., owner of the station, and to the nineteen doctors of medicine and others who made successful this worthy presentation.

● **Leave of absence** was granted Leon DeVel, M.D., Grand Rapids, Rheumatic Fever Medical Coordinator, May 1 through September 30, for a convalescence following recent illness.

● **John W. Castellucci,** now Executive Director of the Blue Shield Commission in Chicago, was complimented on his work in behalf of two MSMS committees on which he served while associated with Michigan Medical Service in Detroit.

● **The names** of B. M. Harris, M.D., Ypsilanti, and K. H. Johnson, M.D., Lansing, were approved for submission to the Governor in connection with appointment of an Advisory Committee on Salk Vaccine Distribution in Michigan.

● **Legal Counsel's report.** J. Joseph Herbert reported on opinion of Circuit Judge Raymond L. Smith, dated May 10, 1955, denying application of William A. Kopprasch, M.D., for a temporary injunction restraining defendant (Michigan State Medical Society, Michigan Hospital Association, Allegan County Medical Society, et al.) from denying Dr. Kopprasch the right to membership to the Allegan Health Center staff and for practicing in the Allegan Health Center.

● **Monthly report of Public Relations Counsel** included information on pending legislation in Washington and in Lansing; development of a pamphlet "You Are Eligible" for the Michigan State Medical Assistants Society; development of a film on epilepsy; distribution of "In Planning Your Career" brochure—1,488 copies of third reprinting already having been requested.

● **Joint meeting with AMA Delegates and Alternates** presented numerous items including (a) ruling on eye glasses by AMA, (b) physicians owning drug stores, (c) resolutions referred from delegates in Wisconsin, Tennessee, Louisiana, et al. (d) inclusion of M.D.'s under Social Security on a *voluntary* basis. Harold F. Falls, M.D., Ann Arbor, was present to give background information to the Executive Committee on the matter of the AMA ruling on eye glasses which he stated rendered it most difficult to encourage young doctors to enter the ophthalmological field.

LIVE IN THE PRESENT

Today is the most important day in the history of the world, the only day of its kind that shall never dawn again. . .

This day shall never come around again; its reception must be royal and the works in its twenty-four hours must be performed with serious consideration and with responsibility.

Your smile today will be worth the millions in the tomorrow; your efforts, deeds, courtesies, words, thoughts, your all, will count for more today than all your mapped-out plans for twenty years to come.

Whether or not you shall be the great man or woman ten years from today, shall depend on what manner of acting man you are today. There are no accidents of Destiny. The big thing to be is the little thing to do today. There is no tomorrow—today. —From *Information.*

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broad-spectrum
antibiotic
for intramuscular use

Terramycin®

Brand of oxytetracycline hydrochloride HCl

INTRAMUSCULAR

- Rapidly attained therapeutic levels
- Proved broad-spectrum action
- For use when oral therapy is not practical or is contraindicated
- Just 100 mg. (one single-dose vial) every 8 to 12 hours is adequate for most infections in adults
- Usually well tolerated on **DEEP** intramuscular injection *(Contains procaine to minimize local tissue reaction)*
- When reconstituted, forms a *clear* solution

Supplied: In dry powder form, in single-dose vials. When reconstituted by addition of 2.1 cc. of sterile aqueous diluent, each single dose (2 cc.) contains:

Crystalline Terramycin hydrochloride	100 mg.
Magnesium chloride	5%
Procaine hydrochloride	2%

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PR Report

ONE OF THE MOST AMBITIOUS TELEVISION PROJECTS ever undertaken by the medical profession in Michigan was staged May 15, under sponsorship of the MSMS Rheumatic Fever Control Committee. At the invitation of James Gerity, Jr., owner of WNEM-TV in Bay City, seventeen MSMS members appeared on an hour-long television program with a panel presentation on rheumatic fever, entitled "The Valiant Heart."

The program was similar to a one-hour public service program on cancer presented over the same station earlier this year.

Preliminary preparation for the rheumatic fever TV show started weeks in advance. R. E. Fisher, M.D., of Bay City was chairman of the subcommittee which developed the program. L. Fernald Foster, M.D., of Bay City, pediatrician and MSMS Secretary, served as moderator of the discussion. Films from Michigan Heart Association were interspersed with question-and-answer dialogue to round out the hour-long show.

MEMBERS OF THE TELEVISION panel were invited from each of the several county medical societies within the viewing area of WNEM-TV.

Those who participated in the program were: L. Fernald Foster, M.D., M. S. Chambers, M.D., Theodore Finkelstein, M.D., F. D. Johnson, M.D., and L. O. Shantz, M.D., all of Flint; B. M. Bullington, M.D., Saginaw; L. F. Chess, M.D., Reed City, H. Theron Donahue, M.D., Cass City; S. T. Harris, M.D., Ypsilanti; John E. Harroun, M.D., Owosso; W. L. Howland, M.D., Pinconning; H. B. Knobloch, M.D., Bay City; Bernard O'Hora, M.D., Midland; Glenn L. Smith, M.D., Imlay City; Charles F. Wible, M.D., Sebewaing; L. R. Wickert, M.D., Mt. Pleasant; and R. J. Winfield, M.D., of Marlette.

BERRIEN AND CASS COUNTY PHYSICIANS VISIT RESEARCH LABORATORIES

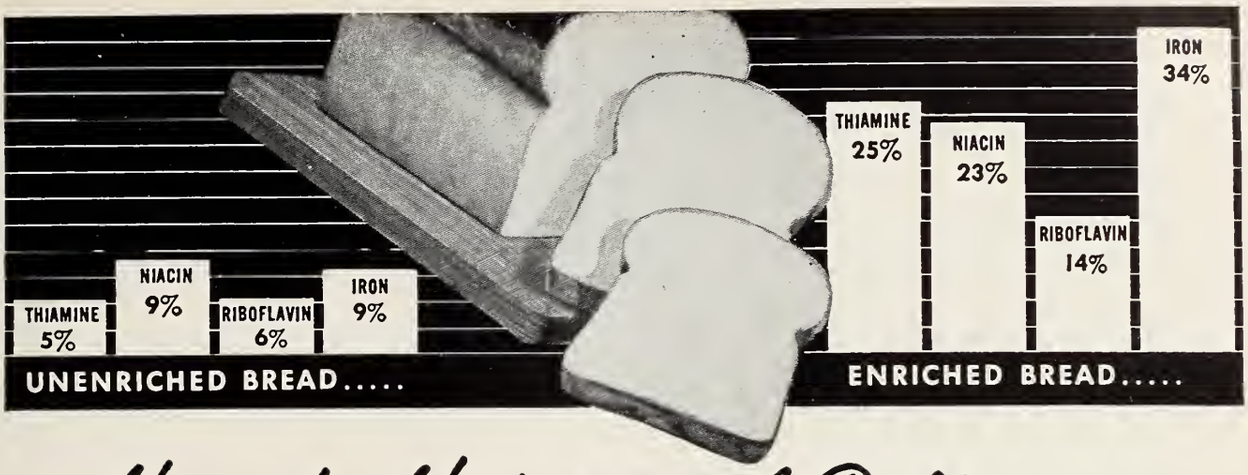


Physicians representing the Berrien County (Mich.) Medical Society and physicians from Cass County, Michigan, and Elkhart County, Indiana, visited Eli Lilly and Company, May 22-24. While guests of Lilly's, they inspected the Lilly Research Laboratories and toured pharmaceutical, biological, and antibiotic production facilities.

First Row: Dr. and Mrs. A. J. Swingle, Benton Harbor, Michigan; Dr. and Mrs. J. K. Hickman, Dowagiac, Michigan; Mrs. Irving Mihskin and Dr. Mishkin, Elkhart, Indiana; Mrs. W. H. Johnston and Dr. Johnston, St. Joseph, Michigan; Mrs. J. S. Lay and Mr. Lay, Lilly representative in Benton Harbor, who accompanied the group to Indianapolis; and Dr. L. M. Rutz, Marcellus, Michigan.

Second Row: Dr. and Mrs. George Bloom, Elkhart; Dr. and Mrs. Galen Miller, Elkhart; Mrs. R. E. Lininger and Dr. Lininger, Benton Harbor, co-chairmen of travel arrangements for the Berrien County Medical Society; Mrs. Dean Richmond and Dr. Richmond, St. Joseph, and Dr. P. G. Hanna, St. Joseph, member of the Michigan State Medical Board.

Third Row: Dr. and Mrs. G. B. Gattman, Elkhart; Dr. and Mrs. C. O. Sonneman, St. Joseph, and Mrs. J. Bronfenbrenner and Dr. Bronfenbrenner, Benton Harbor.



Note the Nutritional Difference

THE superior nutritive value of enriched bread over unenriched bread is emphasized by analytical data recently published by the United States Department of Agriculture.[1] Comparison of the two kinds of bread indicates how much more effectively enriched bread contributes to nutritional needs.

Since enriched breads represent an estimated 85 per cent of all commercially produced bread, the evidence shows that bread enrichment has notably increased the B vitamin and iron intake of our population. For this reason enriched bread, since 1941 (when it was first marketed), has been a valuable aid in reducing the incidence of attributable deficiency diseases.[3,4]

But enriched bread contributes to good nutrition in other ways, too. The 13 grams of protein supplied by 5½ ounces (estimated average daily consumption) aids notably in the satisfaction of the daily protein requirement. Since virtually all enriched bread today contains substantial amounts of nonfat milk solids, its protein —consisting of flour and milk proteins—is biologically effective for growth as well as tissue maintenance.

Because of its high nutrient value, its easy and almost complete digestibility, and its universally accepted pleasant, bland taste, enriched bread merits a prominent place not only in the general diet, but in special diets as well. In many reducing diets 3 or more slices daily are included. The average slice of machine-sliced enriched bread supplies only 63 calories.

At notably low cost, enriched bread is making a valuable contribution to the nutritional health of the American people.

1. Watt, B.K., and Merrill, A.L.: Composition of Foods—Raw, Processed, Prepared, United States Department of Agriculture, Agricultural Handbook no. 8, 1950.
2. Data furnished by the Laboratories of The American Institute of Baking, Chicago, Illinois.
3. Sebrell, W.H., Jr.: Trends and Needs in Nutrition, J.A.M.A. *152*:42 (May 2) 1953.
4. Flour and Bread Enrichment, 1949-50, The Committee on Cereals, Food and Nutrition Board, National Research Council, 1950.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

B VITAMIN AND IRON CONTRIBUTION OF 5½ OUNCES* OF ENRICHED AND UNENRICHED BREADS AND PERCENTAGES OF RECOMMENDED DAILY ALLOWANCES**

	ENRICHED BREAD		UNENRICHED BREAD (of farmer years)	
	Amounts	Percentoges of Recommended Doily Allowonces	Amounts	Percentoges of Recommended Doily Allowances
THIAMINE	0.37 mg.	25%	0.08 mg.	5%
NIACIN	3.40 mg.	23%	1.40 mg.	9%
RIBOFLAVIN	0.23 mg.	14%	0.09 mg.	6%
IRON	4.10 mg.	34%	1.10 mg.	9%

*An estimated amount of bread consumed daily by the average person.
**Doily dietory allowonces (1953) recommended by the National Research Council for o fairly active man 45 years of age, 67 inches in height, ond weighing 143 pounds.

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Licentiates in Michigan

The Michigan State Board of Registration in Medicine announce the following licenses issued by examination or certification from August 3, 1954, to December 20, 1954, beginning with number 20921 and ending with number 21056.

Dickes, Richard E. .....Univ. of Mich. '53
Koehler, Elmer G. .....University of Illinois '27
Hulick, Archie G. .....Tufts College '51
Moses, John W. .....Boston University '46
Smillie, John W. .....Cornell University '43
Stokes, George E. .....Johns Hopkins U. '47
Goldsmith, Robert .....Univ. of Michigan '51
Slater, Dwight M. .....Wayne Univ. '53
Klooster, Gerald .....Indiana Univ. '53
Wickliffe, Chas. D. .....Univ. of Louisville '53
Goldstein, Herbert .....New York Univ. '49
Kemp, Wm. Lloyd .....Univ. of Michigan '53
Krohn, Sidney .....Ohio State Univ. '44
Whitcomb, John G. .....U. of Cincinnati '51
Weeks, Vernon L. .....West. Reserve U. '42
Ruggy, Geo. H. .....U. of Chicago '40
Hackleman, Gene .....C. of Med. Evan. '45
Rogers, Robert P. .....U. of St. Louis '53
Buslepp, Robert C. .....Univ. of Michigan '53
Branson, Donald E. .....C. of Med. Evan. '53
Hirsch, Lore .....Heidelberg U. '37
Wilt, Edward F. .....U. of Chicago '53
Krecke, Chas. F. .....U. of Michigan '53
Barry, John W. .....Syracuse U. '50
Anderson, Roland G. .....U. of Illinois '52
Link, Gustave S. .....Northwestern U. '39
Cutler, Wm. M. .....Univ. of Michigan '53
Berden, Eleanor A. .....Women's Med. C. '53
Gladstone, W. S. .....U. of Iowa '47
Brier, Robert L. .....Univ. of Tennessee '47
Clark, Orlando L. .....Howard Univ. '52
Cookinham, Franklin .....U. of Penn. '51
Graves, James H. .....Northwestern U. '50
Kirsten, Walter T. .....Univ. of Michigan '53
Barr, Wm. Baker .....Univ. of Michigan '51
Caverly, Wm. H. .....Tufts College '53
Chapper, Barbara .....Wayne University '53
Chown, Marion C. .....Women's Med. Col. '53
Colville, James M. .....Cornell Univ. '48
Porter, Bruce M. .....Univ. of Colorado '42
Hardin, Marvin S. .....Temple Univ. '52
Meier, Maurice D. .....Northwestern U. '53
D'Sena, Dorothy .....Calcutta Med. C. '48
Bartels, Kenneth G. .....Yale University '52
Wayne, John C. .....Geo. Washington U. '52
Schreiber, John O. .....Georgetown U. '39
Grishkoff, Michael .....U. of Belgrade '49
Hayes, Dean M. .....Geo. Wash. U. '40
Martin, Marion T. .....Univ. of Tenn. '39
Cohn, Stuart L. .....Chicago Med. S. '52
LaMont, Richard L. .....Wayne Univ. '53
Megrzyn, George C. .....Stritch, Loyola '53
Novack, Alvin J. .....Univ. of Washington '52
Galla, Stephen J. .....Johns Hopkins '53
Leverich, Ed. B. .....Tulane Univ. '52
Gilbertson, Robert .....Univ. of Tennessee '51
Hague, F. Howard .....Univ. of Neb. '53
Grady, Joseph A. .....Georgetown U. '46
Hiscock, Roy Burnett .....Univ. of Michigan '53
Hiscock, Florence .....Univ. of Michigan '53
Carter, Edward R. .....Univ. of Michigan '53
DeBusk, Roger W. .....Univ. of Oregon '33
Lowe, Ernest W. .....Boston Univ. '53
Rosenthal, Albert .....U. of W. Ontario '51
Fennessey, John F. .....Tufts College '50
Melnick, Perry J. .....Univ. of Illinois '30
Westman, Jack C. .....Univ. of Michigan '52
Salmon, Louis R. .....Univ. of N. Y. '53
Dietrich, Alfred M. .....Univ. of Penn. '28
Power, Robert E. .....Univ. of Okla. '53
Howarth, Thomas W. .....Hahnemann Med. '54
Small, John Thomas .....McGill Med. '40
Schneider, Helene .....U. of Vienna '37
Hofstra, Raymond .....U. of Illinois '39
Mann, Joseph D. .....Univ. of Minn. '48
Swinyer, Emory J. .....Univ. of Vermont '36
Alt, William Jacob .....Univ. of Michigan '53
Lamb, Francis O. .....Univ. of Chicago '38
Harten, James N. .....Yale University '46
Breiner, Sander J. .....Chicago Med. '53
Campbell, Thomas D. .....Tulane Univ. '51
Morris, Alvin N. .....Univ. of Roch. '47
Skowronski, Marian .....U. of Jagiellonian '27
Cammack, Kirk V. .....Univ. of Colorado '53
Ebert, Wm. B. .....Columbia Univ. '40
Regan, Timothy J. .....Boston Univ. '52
Pullman, R. A. W. .....Cornell Univ. '48
Lees, Irving B. .....Long Island College '44
Aronoff, Arthur E. .....Columbia Univ. '53
Weldon, Harvey W. .....Temple Univ. '51
Willard, Robert H. .....Univ. of Neb. '49
Cadwell, Howard P. .....Univ. of Buffalo '46
Schorr, Robert T. .....Univ. of Penn. '51
Krevsky, Seymour .....Jefferson Med. '46
Sherman, Marvin .....Long Island C. '51
Farrell, Mark P. .....Univ. of N. Y. '53
Siegel, David .....N. Y. Med. Col. '48
Maldiner, Alfred, Jr. .....N. Y. Med. Col. '53
Ellison, Alfred, Jr. .....Univ. of Texas '44
Fishbein, Herbert .....Chicago Med. S. '50
Bender, Leonard F. .....Jefferson Med. '48
Harris, Leroy D. .....Southwestern Med. '47
Nelson, Richard C. .....Univ. of Neb. '53
Longe, Wm. G. .....Marquette Univ. '51
Landers, James W. .....Univ. of Neb. '53
Mesirow, Stanley .....Univ. of Iowa '49
Seymour, George D. .....Wayne Univ. '52
McHugh, James M. .....Marquette Univ. '48
Morrow, James W. .....University of Neb. '52
Peeke, Edwin S. .....Stanford Univ. '37
Landick, Robert E. .....Tufts College '50
Seltzer, Gerard .....N. Y. Univ. '52
Kelly, Alexander .....Univ. of Md. '45
Elghammer, Rich. .....Univ. of Chicago '48
Ling, Ji-toong .....St. John's (China) '42
Kelly, Wm. T. .....Cornell University '53
Onderak, Ed. P. .....Marquette Univ. '53
Darnall, Carl R. .....Jefferson Med. C. '32
Brooks, Philip D. .....Northwestern U. '52
Edwalds, Robert M. .....Univ. of Chicago '53
Williams, H. L. .....Univ. of Oregon '31
Lindquist, Max F. .....Marquette Univ. '53
Fetz, Robert J. .....Long Island C. '51
Day, Francis T. .....Wayne Univ. '52
Payne, Fitz-Melvin .....Meharry Med. Col. '18
Starkman, Morris .....Univ. of Toronto '51
Theuerle, Walter .....Univ. of Graz '46
McNeil, Maurice .....Northwestern U. '53
Foster, Maynard V. .....Meharry Med. Col. '51
Gilreath, James L. .....Howard Univ. '54
Disney, Charles T. .....Emory Univ. '50
Grahek, Anthony S. .....Univ. of Minn. '50
Lee, Lyndon E. .....Duke University '37
Dusckas, James J. .....Univ. of Pittsburg '37
Raths, Otto N. .....St. Louis Univ. '42
Hamill, Peter V. .....Univ. of Michigan '53

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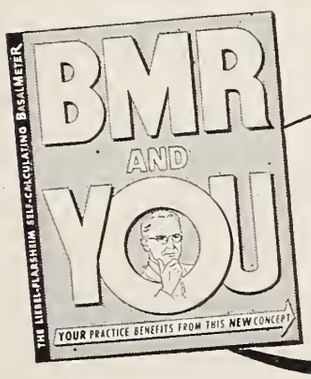


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AMA Washington Letter

THE MONTH IN WASHINGTON

This Congress appears to have established a record for the introduction of medical legislation—but unless something unusual happens and happens fast, there will be no record set for laws passed.

With the summer well along, and tentative adjournment just a few weeks off, Congress had not yet revived its interest in medical bills. Most of the measures that were offered in January and February, to the accompaniment of hopeful speeches by their sponsors, have been allowed to lie undisturbed in committee files. In some cases hearings were held, where persons and organizations vitally interested could give enthusiastic testimony. Very few bills indeed got farther than that in the first six months of the session.

One reason is the close balance in Congress, and the reluctance of either party to get behind bills offered by the other, and which might have appeal to the public in the 1956 election year. Another is worry over putting the federal government still deeper into the red in a year of prosperity, if not of boom.

Also, key committees for weeks were preoccupied with various bills on Salk vaccine, its control and its cost—weeks when the committees otherwise might have worked on, and possibly reported out, other less controversial health bills. A specific example is the Senate Labor and Welfare Committee. This committee was about ready to report out a House-passed bill for a national survey of mental health problems when it found itself deeply mired in the Salk situation. The mental health bill still is likely to be enacted, but the long delay didn't help much.

Another bill, early in the session regarded as about certain of enactment, calls for the establishment of a voluntary, contributory system of health insurance for federal civilian employes. After a year's study of the complications involved, a special task force prepared and made public the administration's program in January. The expectation was that a bill to carry out the plan would be offered in a few weeks at the most, and would be passed in a few months.

But it didn't work out that way. The administration decided that it couldn't press for these medical benefits (U. S. would pay about one-third of insurance premiums) until the extent of a general U. S. pay raise had been fixed by Congress. So it was June before this U. S. employe health insurance bill was even sent to Conrgess, and then the administration was in no rush to have it passed.

Troubles also beset the Defense Department's bill to extend the doctor draft act another two years. Although the extension was strongly opposed by both the American Medical Association and the American Dental Association, the House Armed Services Committee accepted the Defense Department's arguments and voted out the bill, 24 to 0.

Ordinarily such a committee vote would have sent the bill sailing on through the House and to Senate. But not this time. Chairman Howard Smith (D., Va.) of the House Rules Committee lectured the Armed Services Committee and the Defense Department for not making an effort to solve the doctor problem by some other means. There was consequently a delay before floor action—not fatal, but a delay.

Some bills, once considered important, were effectively ignored by Congress. One was the Eisenhower-Hobby plan for reinsurance of health insurance groups, defeated last year. The administration tenaciously defended it, but the committees weren't enough impressed to schedule hearings during the first six months of the session.

The administration bill for federal guarantee of construction loans for hospitals and clinics stirred some Capitol Hill interest but no hearings have been held. Then came all the bills on polio vaccine, and this measure also was put on the shelf.

A bi-partisan bill for U. S. grants for constructing and equipping medical research facilities travelled about the same course: hearings, a high degree of enthusiasm from medical researchers, confidence that the plan would go through—then no more action.

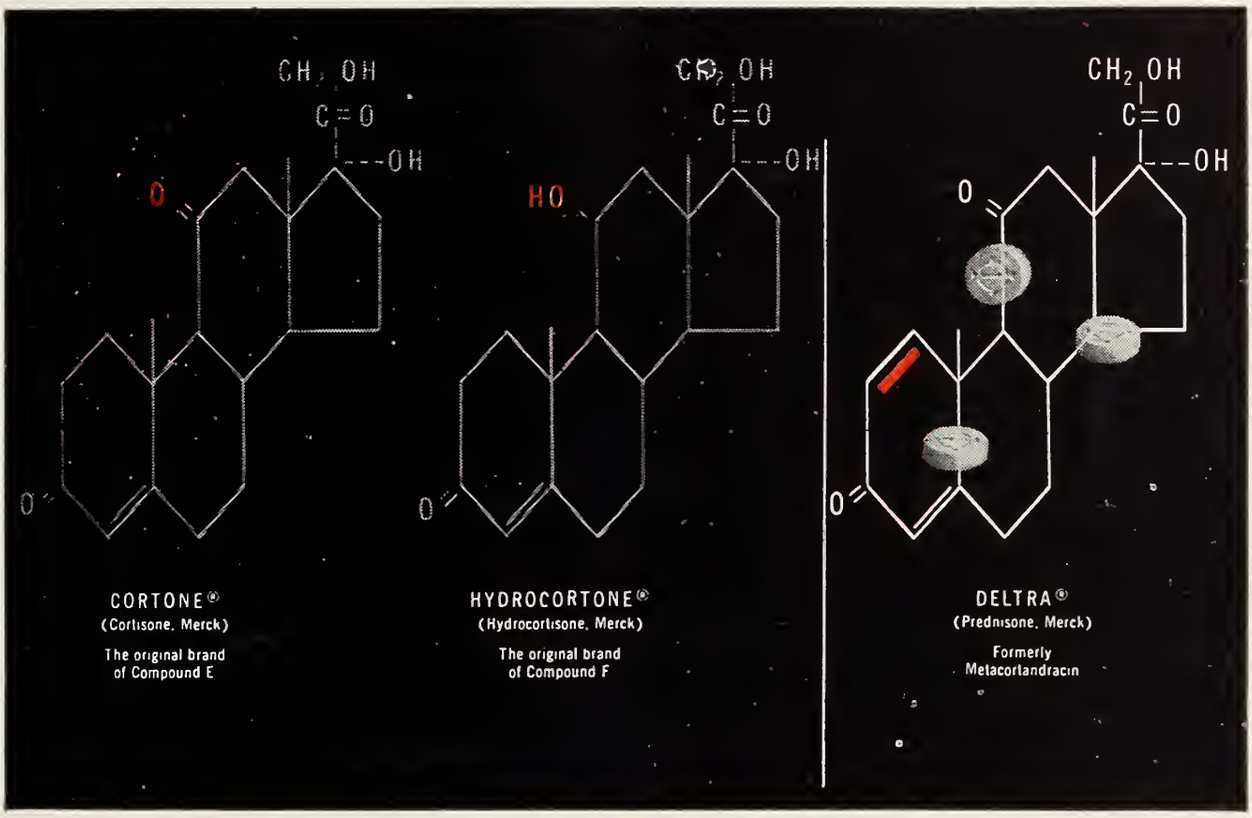
For a time Senator Hill (D., Ala.), the key Senator on health bills, was determined to put through his bill for federal aid for building medical schools. When hearings were held the bill did not appear to arouse opposition from any quarter, yet it was pushed farther and farther to the rear.

Because this is only the first session of the 84th Congress, none of these bills will be irretrievably lost even if not passed before adjournment. They hold whatever progress they have made, and many of them are certain to be important issues next year.

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DELTRA is the Merck brand of the new steroid, prednisone

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DELTRA is a new synthetic analogue of cortisone. DELTRA produces anti-inflammatory effects similar to cortisone, but therapeutic response has been observed with considerably lower dosage. With DELTRA, favorable results have been reported in rheumatoid arthritis with an initial daily dosage of 20 to 30 mg. and a daily maintenance dose range between 5 and 20 mg.

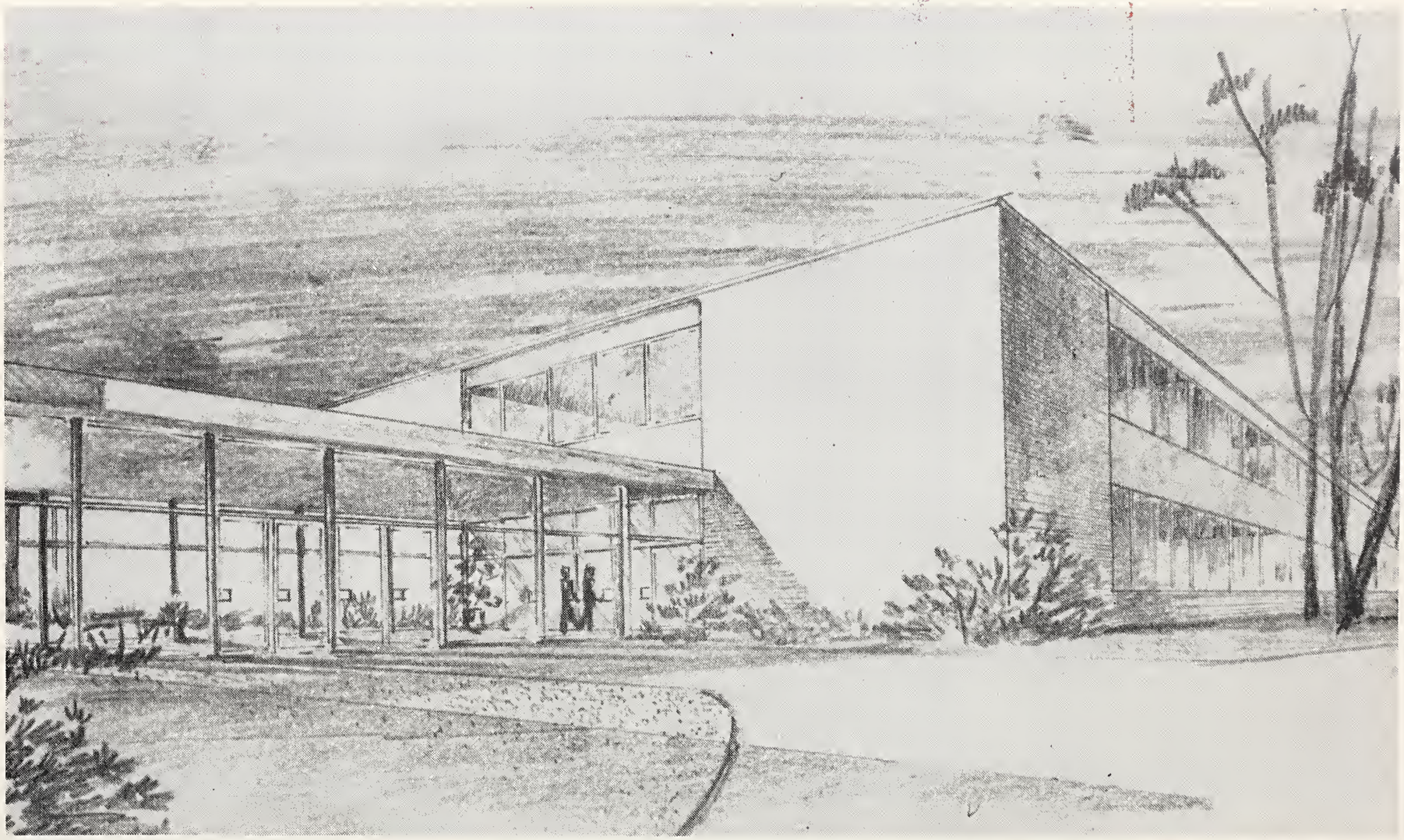
Salt and water retention are less likely with recommended doses of DELTRA than with the higher doses of cortisone required for comparable therapeutic effect.

Indications for DELTRA: Rheumatoid arthritis, bronchial asthma, inflammatory skin conditions.

SUPPLIED: DELTRA is supplied as 5 mg. tablets (scored) in bottles of 30.

SHARP & DOHME

Philadelphia 1, Pa.
DIVISION OF MERCK & CO., INC.



Architect's drawing of proposed Wayne County Medical Society headquarters building in downtown Detroit.

A New David Whitney House

Wayne County Society Visualizes Modern Headquarters

Leaders of Wayne County Medical Society are hard at work trying to give reality to the dream of a new and modern headquarters building situated in Detroit's gradually expanding hub of medical educational facilities. Great strides have been made since members of WCMS, the fourth largest county medical society in the United States, overwhelmingly approved the plan for a new building in a mail ballot on May 2, 1955.

The plan for a new headquarters building was formulated under the leadership of the trustees, Council, and Building Committee of WCMS after several years of exploratory work.

Recognizing that the present headquarters was rapidly becoming inadequate, and that the need for expanded and modernized facilities was becoming increasingly apparent, it was decided that the problem could best be met with a centrally located, spacious, new building.

The site for the building was granted to WCMS by the Detroit Board of Education. It would be located in the immediate area where some $15,000,000 in new medical units have been built in the past five years, including Lafayette Clinic, the Farwell Building of Receiving Hospital and the new Medical Science Building of Wayne University College of Medicine. The proposed WCMS headquarters building would be situated on land adjacent to the Medical Science Building and between the Medical Library, which will be started this coming year, and a new auditorium, contemplated for 1956. The site, which faces Rivard, would be leased by WCMS at a nominal sum, and would be under direct control of the Society.

The proposed building would be a two-story structure with a basement, and with foundations strong enough for two additional stories if future expansion was desired. Its architecture would harmonize with that of the new library. It would be completely air-conditioned.

Sale of the present land and headquarters building at 4421 Woodward Avenue would pay for a large portion of the cost of a new David Whitney House, the name which the proposed structure would continue using. WCMS leaders believe that the site of the proposed building is ideal. It lies within thirty minutes of every Doctor of Medicine in Wayne County and is easily accessible by the new expressway and superhighway system being developed in Detroit. A ninety-car parking lot would be set aside for the exclusive use of the Medical Society and in addition there would be, in the evening, parking facilities for approximately 400 cars within a radius of 600 feet.

Beyond this, the splendid facilities of Wayne University College of Medicine and the wealth of clinical material at Receiving Hospital would be directly adjacent for use in postgraduate teaching.

The David Whitney estate consented to the sale of the present headquarters—the former David Whitney mansion—and the use of the funds to build a new headquarters.

Warren Babcock, M.D., is chairman of the Building Committee which made the preliminary studies and spearheaded the educational campaign which preceded the favorable vote on the new building proposal in May.

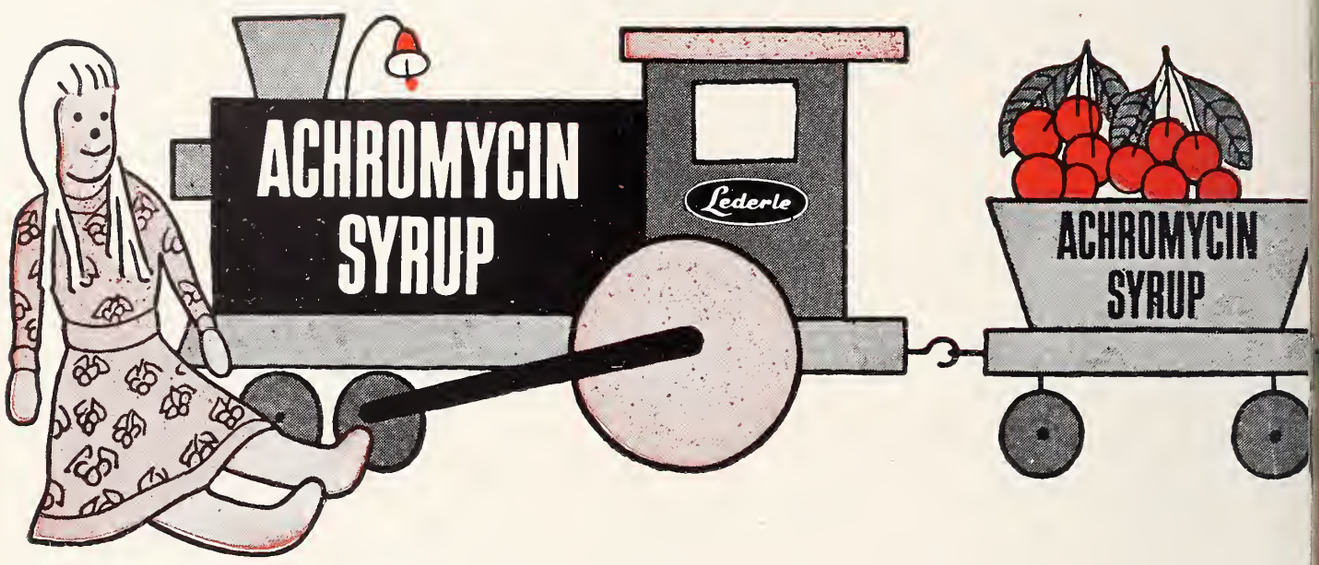
"FEDERAL AID" VARIES GREATLY

Data just released on 1954 internal revenue collections and federal grants-in-aid and payments to individuals show that Michigan's share of so-called "federal aid" was 2.04 per cent of the state's contribution to federal revenues. Total internal revenue collections in Michigan were $6,123,942,540. Federal grants-in-aid and payments to individuals in the state totaled $124,938,004.

The national average of federal revenue returned to the states in this manner was 6.09 per cent. Highest per cent of return occurred in Mississippi which received 53.23 per cent of its revenues in "federal aid."

These are facts worth keeping in mind when we are told of the benefits derived from this form of alleged aid from the federal government.—AUGUST E. JOHANSEN, M.C. 3rd Dist.

PLEASANT CHERRY FLAVOR!
125 MG. PER 5 CC. TEASPOONFUL! NO REFRIGERATION
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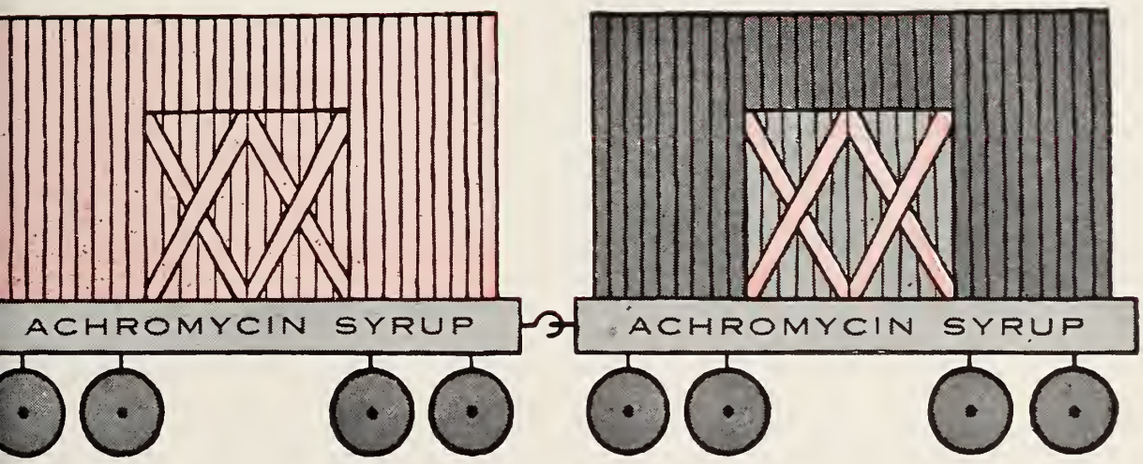
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TETRACYCLINE HCl *Lederl*

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PEDIATRIC DROPS (Cherry Flavor): 100 mg. per cc. (approx. 5 mg. per drop)
ORAL SUSPENSION (Cherry Flavor): 250 mg. per teaspoonful (5 cc.)
SPERSOIDS* Dispersible Powder (Chocolate Flavor): 50 mg. per rounded teaspoonful (3 Gm.)

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AMERICAN Cyanamid COMPANY **Pearl River, New York**

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American Medical Association

Report of Annual Meeting

The 104th Annual Meeting of the American Medical Association, held in Atlantic City, June 6-10, 1955, wrote history in many divisions. The House of Delegates took official action on more than eighty resolutions, many officers' and committee reports, some of which are outlined herewith. Osteopathy, medical ethics, medical practices, intern training, hospital accreditation and polio vaccine were among the major topics of discussion.

Elected unanimously as president-elect for the coming year was Dr. Dwight H. Murray, general practitioner of Napa, California, who has been a member of the AMA Board of Trustees for ten years and its chairman for the past four years. Dr. Murray will become president of the American Medical Association at the June, 1956, meeting in Chicago, succeeding Dr. Elmer Hess of Erie, Pennsylvania. Dr. Hess took office at the Tuesday evening inaugural program in Atlantic City's Convention Hall.

The House of Delegates voted the 1955 Distinguished Service Award of the American Medical Association to Dr. Donald G. Balfour, surgeon, author and researcher of Rochester, Minnesota, for his outstanding contributions to medicine and humanity. Dr. Balfour has been with the Mayo Clinic since 1907 and he also has been associate director and then director of the Mayo Foundation for Medical Education and Research. His son, Dr. William Balfour, accepted the award for his father at the Tuesday inaugural program.

The Osteopathic Issue

The Reference Committee on Medical Education and Hospitals submitted two reports after considering the recommendations of the Committee for the Study of Relations Between Osteopathy and Medicine. The minority report, which was adopted by the House of Delegates, said:

"One member of the Reference Committee was completely satisfied that an appreciable portion of current education in colleges of osteopathy definitely does constitute the teaching of 'cultist' healing, and is an index that the 'osteopathic concept' still persists in current osteopathic practice. Since he cannot with good conscience approve the recommendation that doctors of medicine teach in osteopathic colleges where 'cultism' is part of the curriculum, he respectfully makes the following recommendations to the House of Delegates:

"(1) That the report of the Committee for the Study of Relations Between Osteopathy and Medicine be received and filed; and that the Committee be thanked for its diligent work, and be discontinued.

"(2) That if and when the House of Delegates of the American Osteopathic Association, their official policy-making body, may voluntarily abandon the commonly so-called 'osteopathic concept,' with proper deletion of said 'osteopathic concept' from catalogs of their colleges; and may approach the Trustees of the American Medical Association with a request for further discussion of the relations of Osteopathy and Medicine, then the said Trustees shall appoint another special committee for such discussion."

The majority report of the reference committee, which was rejected by the House, made the following recommendations:

"Your Reference Committee after a study of the report of the Committee for the Study of Relations Between Osteopathy and Medicine and the study of other evidence submitted is not completely satisfied that the current education in colleges of osteopathy is free of the teaching of 'cultist' healing.

"In view of the desire to elevate the standards of teaching in colleges of osteopathy, your Reference Committee recommends approval of the recommendation of the Committee that doctors of medicine may accept invitations to assist in osteopathic undergraduate and postgraduate medical educational programs in those states in which such participation is not contrary to the announced policy of the respective county and state medical associations. Such teaching services would be ethical.

"Your Reference Committee approves the recommendation of the Committee that the House of Delegates request state medical associations to assume the responsibility of determining the relationship of doctors of medicine to doctors of osteopathy within their respective states or request their component county societies to do so.

"Your Reference Committee recommends that a committee be appointed at the discretion of the Board of Trustees to confer with representatives of the American Osteopathic Association concerning common or interprofessional problems on the national level."

Change in Medical Ethics

The Reference Committee on Miscellaneous Business dealt with ten resolutions concerning the dispensing of drugs and appliances by physicians. The following committee report was adopted by the House:

"A great many individuals appeared before your committee in the interest of several resolutions submitted to it requesting amendment to or deletion of Chapter I, Section 8, of the Principles of Medical Ethics, and the bulk of your committee's time was spent on this very important and complex matter.

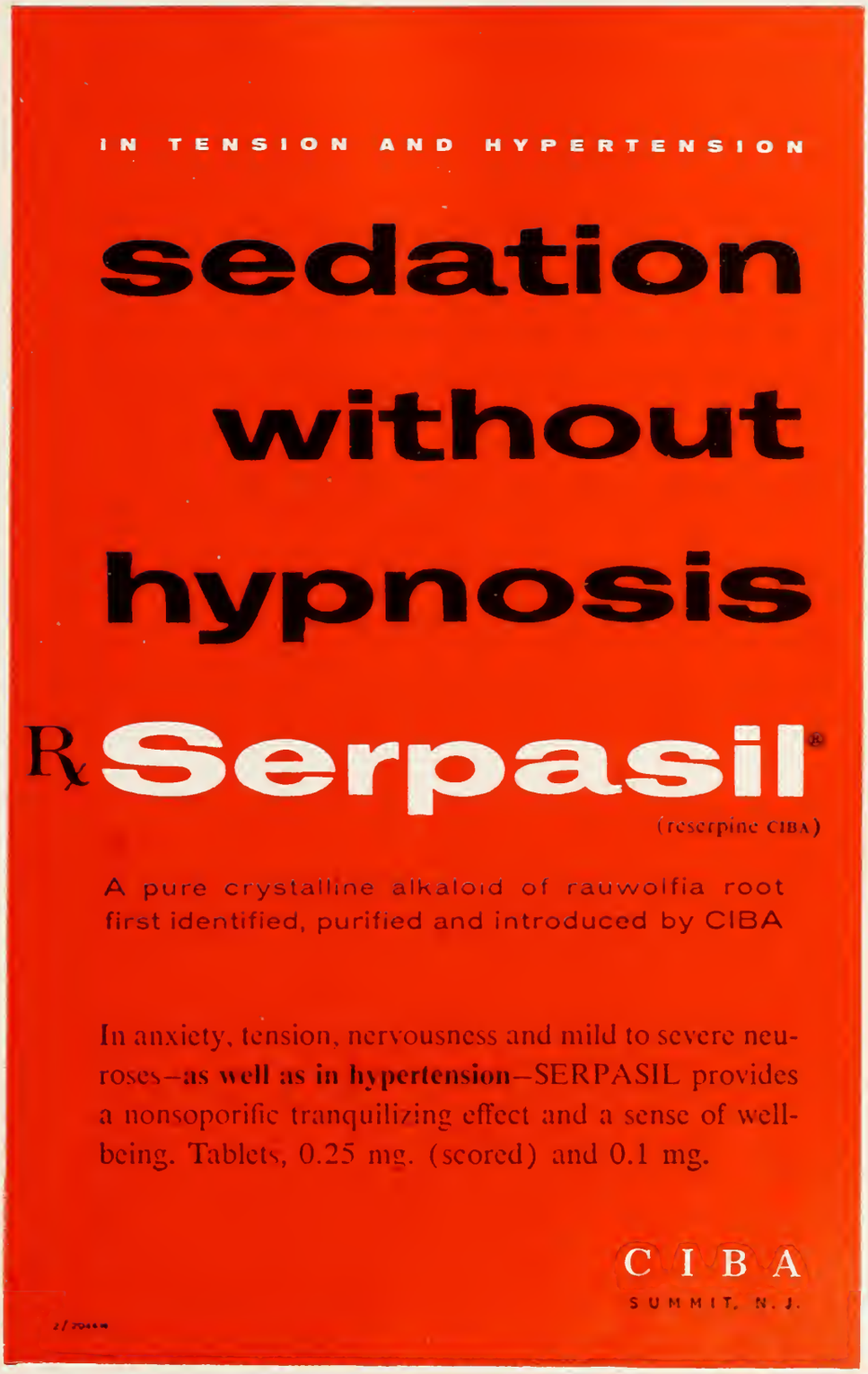
"With reference to this problem, the following resolutions were considered: Nos. 7, 12, 16, 18, 22, 35, 39, 58, 62 and 73.

"Your committee recommends that no one of these resolutions be adopted as submitted but does recommend deletion of Section 8, Chapter I, of the Principles of Medical Ethics which now reads:

OWNERSHIP OF DRUG STORES AND DISPENSING OF DRUGS AND APPLIANCES BY PHYSICIANS

Sec. 8.—It is unethical for a physician to participate in the ownership of a drug store in his medical practice area unless adequate drug store facilities are otherwise unavailable. This inadequacy must be confirmed by his component medical society. The same principle applies to physicians who dispense drugs or appliances. In both instances, the practice is unethical if secrecy and coercion

(Continued on Page 782)



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(Continued from Page 780)

are employed or if financial interest is placed above the quality of medical care. On the other hand, sometimes it may be advisable and even necessary for physicians to provide certain appliances or remedies without profit which patients cannot procure from other sources.

"Your committee recommends that the following be substituted in lieu thereof:

DISPENSING OF DRUGS AND APPLIANCES BY PHYSICIANS

Sec. 8.—It is not unethical for a physician to prescribe or supply drugs, remedies, or appliances as long as there is no exploitation of the patient.

In reporting to the House, the chairman of the Reference Committee explained that in the opinion of the Committee the Code of Ethics should be stated in broad principles rather than attempt to interpret principles in detail. In recommending the change in Section 8 the Committee emphasized that this section should be interpreted in line with Chapter I, Section 6, which reads:

"The ethical physician, engaged in the practice of medicine, limits the sources of his income received from professional activities to service rendered the patient. . ."

The Reference Committee on Miscellaneous Business also considered several resolutions by the Delegates of States, and one ordered by the Section at a special meeting of over 1200, June 7, about the dispensing of glasses being unethical. This grew out of the Judicial Council's report transmitting what purported to be rules of conduct developed by representatives of the Section on Ophthalmology, the American Academy of Ophthalmology and Otolaryngology, and the American Ophthalmological Society and accepted by the House of Delegates December, 1954. It reads in part:

". . . Ophthalmologists cannot ethically provide glasses for their patients unless the service is unavailable without hardship or inconvenience to the patient.

"It is unethical for ophthalmologists to profit from the sale of glasses.

"Ophthalmologists cannot derive income from merchandising and still be considered on a professional level.

"Ophthalmologists may not accept rebates from optical houses.

"It is unethical for an ophthalmologist to profit from the services of an optician, working either in his office or on a referral basis . . ."

These resolutions called for the revocation and disavowal of the above-quoted regulations. This action was approved by the committee and, with one dissenting voice, was passed by the House of Delegates.

Medical Practices Committee Report

The Reference Committee on Insurance and Medical Service, which considered two Board of Trustees reports on the Report of the Committee on Medical Practices, recommended endorsement of the Board's principal conclusions and recommendations. The House of Delegates, however, adopted a substitute motion postponing action until next December. The motion also called for distribution of the entire report of the Committee on Medical Practices to all delegates, so that they can study it carefully before the 1955 Clinical Meeting in Boston.

Internship Approval Programs

The House adopted the following statement presented by the Reference Committee on Medical Education and Hospitals:

"Your Committee has reviewed the report of the Council on Medical Education and Hospitals which includes a summary of the reports previously made to the House of Delegates by the Ad Hoc Committee on Internships and are in agreement with the Council that these conclusions and recommendations are eminently sound and that they should be incorporated into the principles and policies employed by the Council in the conduct of its internship approval programs including subsequent revisions of the Essentials of an Approved Internship.

"Your Committee wishes specifically to reaffirm the following recommendations of the Ad Hoc Committee on Internships:

"1. That a continuing study be made as to what should be the content of an internship; what constitutes sound clinical experience during the internship year.

"2. That the 'one-fourth rule' be adopted: Any internship program that in two successive years does not obtain one-fourth of its stated complement be disapproved for intern training. It was pointed out to your Committee in the hearings that statistical data compiled for a period of two years indicated that enforcement of this rule would have displaced only a few interns."

Hospital Accreditation

The same reference committee considered six resolutions on hospital accreditation and presented the following statement which was adopted by the House:

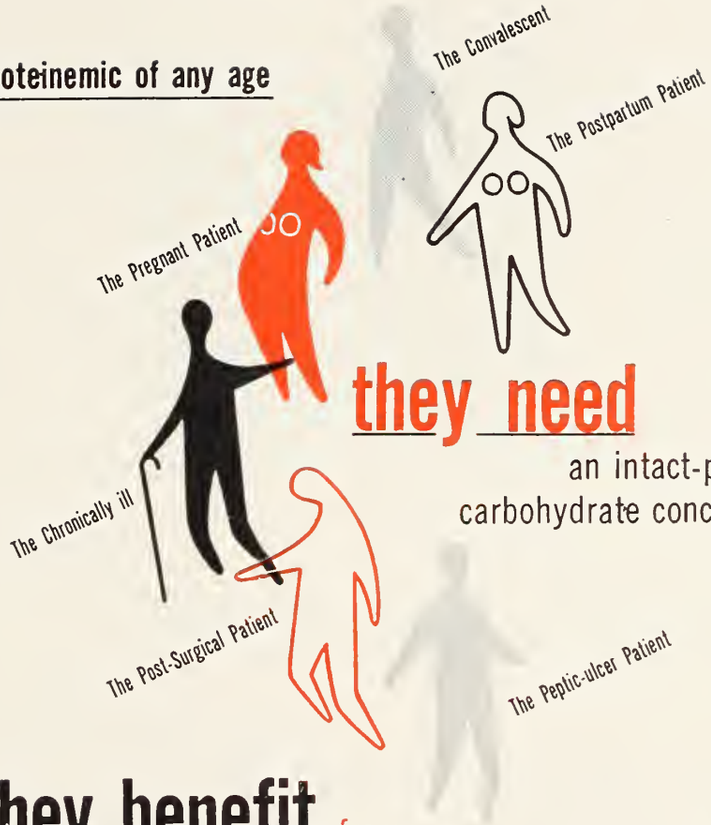
"Your reference committee has reviewed all these resolutions which in principle are similar and apparently reflect a widespread dissatisfaction with the present functioning of the Joint Commission on the Accreditation of Hospitals, possibly from bilateral misunderstandings. Therefore, your reference committee recommends that the Speaker of the House of Delegates be requested to appoint a special committee to review the functions of the Joint Commission on the Accreditation of Hospitals to consist of seven members, none of whom shall be members of the Council on Medical Education and Hospitals or the Joint Commission on the Accreditation of Hospitals. This special committee should be instructed to make an independent study or survey and report its findings and recommendations to the House of Delegates at the next annual meeting. All physicians and hospitals are urged to pass on to this special committee any observations or suggestions concerning the functioning of the Joint Commission on the Accreditation of Hospitals."

Polio Vaccine

The House passed three resolutions suggested by the Reference Committee on Hygiene, Public Health and Industrial Health in connection with discussion of the Salk polio vaccine and the in-

(Continued on Page 784)

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Micropulverized casein powder (61.25%), Carbohydrate (30%)
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(Continued from Page 782)

troduction of new methods in the treatment or prevention of disease.

The first resolution reaffirmed "confidence in the established methods of announcing new and possibly beneficial methods in the treatment and prevention of disease" and also reaffirmed "the need for the presentation of reports on medical research before established scientific groups, allowing free discussion and criticism, and the publication of such reports, including methods employed and data acquired on which the results and conclusions are based, in recognized scientific publications."

The second resolution included the following policy statements:

"RESOLVED, That the American Medical Association go on record as disapproving the purchase and distribution of the Salk polio vaccine by any agency of the federal government except for those unable to procure it for themselves and that such necessary federal funds therefor be allocated to the various proper state agencies for such purpose; and be it further

"RESOLVED, That the American Medical Association urge the Congress of the United States to allow the Salk polio vaccine to be produced, distributed and administered in accordance with past procedures on any new drug or vaccine."

The third resolution commended Dr. Salk as follows:

"WHEREAS, The physicians of this country recognize the great scientific achievement in isolating and perfecting a vaccine for the prevention of poliomyelitis by Dr. Jonas Salk; and

"WHEREAS, This vaccine is now being used to prevent poliomyelitis among many of our children; therefore be it

"RESOLVED, That the House of Delegates express its profound gratitude to Dr. Salk and its admiration for his monumental contribution to medical science."

Miscellaneous Actions

Among a large number of actions on a wide variety of subjects, the House of Delegates also:

Commended the "Medic" television program;

Reaffirmed its previous recommendation that the United States withdraw from the International Labor Organization;

Approved the Headquarters Survey Report, which included the statement that "the only public relations program of any permanent value is the private and public relations of the individual doctor";

Expressed regret that the Hoover Commission saw fit to alter or eliminate some of the recommendations of its Medical Task Force;

Reaffirmed its opposition to extension of the Doctor Draft Law;

Recommended the creation of an AMA Committee on Geriatrics;

Warned against the danger embodied in state legislative proposals designed to restrict the entire field of visual care to the profession of optometry.

Opening Session

Principal addresses at the Monday opening session of the House of Delegates were given by Dr. Walter B. Martin of Norfolk, Virginia, retiring AMA president, and Dr. Elmer Hess of Erie, Pennsylvania, then president-elect. Dr. Martin declared that the basic philosophy of medicine has not changed and "our obligation is to bring the best that medicine can offer to the individual patient." Dr. Hess said that the nation's physicians must become leaders in a campaign to "overcome the ravages of mental illness" as well as in an "intensive campaign to eliminate the needless bloodshed" of traffic accidents.

Inaugural Program

"Medicine's Proclamation of Faith" was the theme of the Tuesday evening inaugural program, which was broadcast nationwide by the ABC Radio Network. Dr. Hess, in his inaugural address, said that "unless we are willing to give of ourselves and our faith, our science will avail us little." Dr. Norman Vincent Peale, eminent clergyman who was guest speaker on the inaugural program, pointed out that "the drawing together of medicine and religion is a step in helping man toward proper use of his God-given potentials and qualifications."

Election of Officers

The following officers were elected at the closing session, in addition to Dr. Murray, the new president-elect:

Dr. Millard D. Hill, Raleigh, N. C., vice president; Dr. George F. Lull, Chicago, secretary; Dr. J. J. Moore, Chicago, treasurer; Dr. E. Vincent Askey, Los Angeles, speaker of the House of Delegates, and Dr. Louis M. Orr, Orlando, Florida, vice speaker.

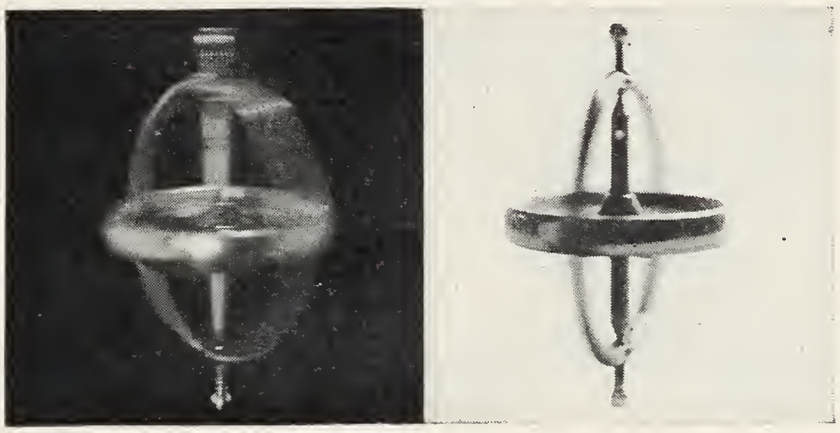
Dr. Gunnar Gundersen, La Crosse, Wisconsin, was named chairman of the Board of Trustees to succeed Dr. Murray. Dr. James R. Reuling, Bayside, New York, was elected to fill Dr. Murray's term on the Board. Re-elected as trustees were Dr. L. W. Larson, Bismarck, North Dakota, and Dr. T. P. Murdock, Meriden, Connecticut.

Dr. Louis A. Buie, Rochester, Minnesota, was named by Dr. Hess to succeed himself on the Judicial Council. Elected to the Council on Medical Education and Hospitals were Dr. Harlan English, Danville, Illinois, and Dr. James M. Faulkner, Boston, the latter succeeding himself. Re-elected to the Council on Medical Service was Dr. H. B. Mulholland, Charlottesville, Virginia. Elected to the same Council were Dr. A. C. Scott, Temple, Texas, and Dr. R. B. Chrisman, Jr., replacing Dr. Orr.

Dr. B. E. Pickett, Sr., Carrizo Springs, Texas, was re-elected to the Council on Constitution and By-laws, and Dr. Warren Furey was named to the same Council to replace Dr. James Stevenson, Tulsa, Oklahoma.

(Continued on Page 786)

a non-barbiturate, non–habit-forming, tranquilizing and stabilizing agent



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Rau-sed may be employed to achieve a calming, tranquilizing effect. Rau-sed may be found useful in situations accompanied by stress and anxiety and has been reported helpful in a number of physical disorders with associated emotional overlay (such as headache, dermatologic disorders, gynecologic disorders, enuresis, etc.).

Oral Dosage for Office Practice: The usual daily dose may range from 0.25 mg. to 1.5 mg. Dosage may start with 0.25 mg. t.i.d., and may be adjusted upward or downward. It is important, in adjusting Rau-sed dosage, to consider that results may not appear for one to two weeks after therapy is instituted. When a maintenance level is achieved, Rau-sed may be given as a single daily dose or in divided doses, as the patient prefers. Some patients may need and tolerate higher dosage; in such patients, Rau-sed has proved most effective in conjunction with psychotherapy. *Note:* Patients receiving large doses, or those who receive the drug over a long period, should be watched for signs of depression; this can be alleviated by reducing the dosage or withdrawing the drug.

Supply: 0.1 mg. and 0.25 mg. tablets, bottles of 100 and 1000; 0.5 mg. tablets (scored), bottles of 50 and 500; 1.0 mg. tablets (scored), bottles of 30, 100, and 500; 4.0 mg. tablets (scored), bottles of 100 and 1000 (for psychiatric use). RAU-SED Parenteral, for the treatment of hospitalized psychiatric patients, 5.0 mg. and 10.0 mg. ampuls.

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(Continued from Page 784)

Conference of Presidents

The Eleventh Conference of Presidents and Other Officers of State Medical Societies was held on Sunday, June 5, 1955, at the Hotel Treymore, with more than 300 physicians in attendance. Besides officers' reports and regular proceedings, the group were pleased with three specially interesting talks.

Speaking on "The Backdoor to Socialized Medicine," United States Senator John W. Bricker of Ohio presented his arguments in favor of the so-called Bricker Amendment pending in congress. Dr. James R. Fox of Minneapolis, an American physician who practiced for two years in England, described his experiences under Britain's plan of socialized medicine.

Herbert Philbrick of New York, author of the book, "I Led Three Lives," and the television series of the same name, recounted his activities as a member of the Communist Party while serving as a special undercover agent for the FBI.

Scientific Sessions

The scientific paper program was as complete and of just as high standard as ever. There were 1,218 scientific exhibits. Michigan was well represented in both. Among those reading papers or leading discussions were (we do not pretend this list is complete): Maurice H. Seevers, Ann Arbor; Franklin D. Johnston, Ann Arbor; J. E. Berk, Detroit; Conrad R. Lam, Detroit; Henry R. Ransom, Ann Arbor; John M. Sheldon, Ann Arbor; Robert H. Durham, Detroit; Cyrus C. Sturgis, Ann Arbor; E. S. Gurdjian, Detroit; Leo H. Bartemeier, Detroit; H. L. Fachnie, Detroit; John Woodworth Henderson, Ann Arbor; Robert A. Schimek, Detroit; John W. Smillie, Ann Arbor; U. Reimer Wolter, Ann Arbor; Gerard Cavanaugh, Margarette Constant and Daniel A. McGinty, Detroit; V. Everett Kinsey, Carl Wachtl, Margarette Constant and Enrigueta Cmacho, Detroit; Hira E. Branch, Flint; Sylvester J. O'Connor and Albert E. Jacknow, Ann Arbor; Thomas Francis, Jr., Ann Arbor; James W. Rae, Jr., Ann Arbor; Robert J. Bolt, Charles J. Tupper, O. T. Mallory, Jr., and H. M. Pollard, Ann Arbor; Traian Leucutia, Detroit; Horace J. Jones, Grand Rapids; William R. Eyler and Howard P. Doub, Detroit; Grover Penberthy, Detroit; Lawrence Reynolds and Harold Fulton, Detroit; Carl C. Birkelo, Detroit; Fred J. Hodges, Ann Arbor; William C. Baum and Jerome Conn, Ann Arbor; D. Emerick Szilagyi, Paul R. Overhulse, and Frank Zeller, Jr., Detroit.

Of the 1,218 scientific exhibits, thirteen were from Michigan: D. H. Kaump, Detroit; Wyman C. C. Cole, Detroit; Dwight C. Ensign and John W. Sigler, Detroit; Hermann Pinkus and Catherine Heise Steele, Detroit; Conrad R. Lam, Robert F. Ziegler, John W. Keyes, and Leo F. Kenney, Detroit; Brock E. Brush, William L. Lowrie, W. Earl Redfern and F. Wayne Hollinger, Detroit; A. D. Ruedeman, Detroit; Robert J. Bolt, O. T. Mallery, Jr., and C. J. Tupper, Ann Arbor; Lawrence Reynolds, George F. Boone and Harold E. Fulton, Jr., Detroit; Robert W. Gillespie, Merle M. Musselman and Wayne W. Glas, Eloise; D. Emerick Szilagyi, Roger F. Smith, Nicholas P. D. Smyth, Claibourne P. Shonnard, and Gerald A. LoGrippo, Detroit; Virgil N. Slee, Hastings; Robert G. Hoffman, Ann Arbor; John M. Whitney, Battle Creek.

Total attendance was 11,564 physicians, 15,912 guests, 2,504 exhibitors with 1,095 guests. There were 237 from foreign countries including sixty-three from Canada, nineteen from Cuba, fourteen from England, ten from the Phillipine Islands, nine from India, six from Brazil, five from Australia, four from France, seven from Germany, four from Africa and one each from Portugal, Scotland, Iceland and Yugoslavia—in all a total of 31,057.

MEDICAL MEETINGS AND CLINIC DAYS

A list of known medical meetings and clinic days, sponsored by county medical societies and other physician groups in Michigan, follows:

1955		
August 25-26	Coller-Penberthy Clinic	Traverse City
September 26-27	Annual Session of the House of Delegates (MSMS)	Grand Rapids
September 28-30	MSMS Annual Session	Grand Rapids
October	Clara Elizabeth Fund for Maternal Health and Genesee County Medical Society	Flint
October 14	Michigan Cancer Conference	East Lansing
October 17-19	Eighth Annual Scientific Meeting—Detroit Institute of Cancer Research.	Detroit
Autumn	MSMS Postgraduate Extramural Courses	State-wide
November 1-3	International Symposium: Units of Biological Structure and Function. Henry Ford Hospital.	Detroit
November 9-10	Mich. Academy of General Practice Ninth Annual Fall Post-Graduate Clinic.	Detroit
1956		
March 7-9	Michigan Clinical Institute	Detroit
April 11	Tenth Annual Cancer Day	Flint



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For the convalescent or the invalid traveling for his health, BONAMINE helps to avoid the strain imposed by vertigo, nausea and vomiting. Also indicated for control of nausea, vomiting and vertigo associated with labyrinthine and vestibular disturbances, Menière's syndrome and radiation therapy.

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Heart Beats

MICHIGAN HEART ASSOCIATION MOVES TO NEW AND LARGER QUARTERS

In order to handle the increase in its activities and in order to better serve the Doctors of Medicine and the people of this state, the Michigan Heart Association moved to new and larger quarters on March 1, 1955. The Association's offices are now located in the Doctors' Building, 3919 John R., Detroit 1, directly across the street from Harper Hospital.

AHA ANNUAL MEETING AND SCIENTIFIC SESSIONS IN NEW ORLEANS, OCTOBER 22-26, 1955

The 31st Annual Meeting and the 28th Scientific Sessions of the American Heart Association will be held at the Jung Hotel in New Orleans from October 22 through October 26. The 1955 gathering will be the first held independently of any other major medical meeting.

Leaders in every aspect of the cardiovascular field are expected to attend the New Orleans meeting along with representatives of the fifty-six Heart Association affiliates and more than 350 chapters throughout the United States, Alaska, Hawaii and Puerto Rico.

The Scientific Sessions will occupy three days, Saturday, Sunday and Monday, October 22 through October 24. Programs will be presented by the various divisions of the Association's Scientific Council, including the Sections on Basic Science, Circulation, Clinical Cardiology and Cardiovascular Surgery and the Council for High Blood Pressure Research, and by the Council on Rheumatic Fever and Congenital Heart Disease and the Council on Community Service and Education. The Community Service program will include discussions on nutrition and rehabilitation.

Other features of the New Orleans meeting will include a film program and exhibits for the medical profession. A post-meeting tour to Mexico City, with arrangements for side trips and for a scientific program at the Cardiological Institute, is being planned.

APPLICATIONS FOR AHA RESEARCH SUPPORT NOW BEING ACCEPTED

Applications by scientific investigators for support of research to be undertaken during the year beginning July 1, 1956, are now being accepted by the American Heart Association.

The application deadline for research fellowships and established investigatorships is September 15, 1955, *a month earlier than in previous years.*

Funds to support Heart Association research projects in the cardiovascular field are provided from public contributions to the Heart Fund.

Applications may be made for awards in the following categories:

Established Investigatorships: Awarded for periods of up to five years, subject to annual review, in amounts ranging from $6,000 to $9,000, to scientists of proven ability who have developed in their research careers to the point where they are independent investigators.

Research Fellowships: Awarded to young men and women with doctoral degrees for periods of one to two years to enable them to train as investigators under experienced supervision. Annual stipends range from $3,500 to $5,600.

Grants-in-Aid: Made to experienced investigators to provide support for specific projects. Grants are made in varying amounts, not to exceed $10,000.

The American Heart Association also maintains another and unique form of research support, the Career Investigatorship. This is given to a limited number of investigative scientists of unusual capacity and accomplishment to assure them of financial support throughout their productive lives. Career investigators are selected on the initiative of the Research Committee, rather than by application.

Further information and application blanks may be obtained from The Medical Director, American Heart Association, 44 E. 23 Street, New York 10, New York.

HEART MODELS AMONG NEW PROFESSIONAL EDUCATION AIDS OF MHA

A new functional life-size heart model which shows the great vessels of the normal heart in diastole has been developed by the American Heart Association. It is cast in latex and lucite, with the transparent anterior surface on a hinged door to allow close examination of the valves, atria and ventricles. Important structured landmarks, both internal and external, are clearly numbered in correlation with a reference key mounted on the plastic base.

Lucite pegs projecting from the base into the descending aorta and the inferior vena cava hold the model in its anatomical position, and allow it to be readily removed for examination and dem-

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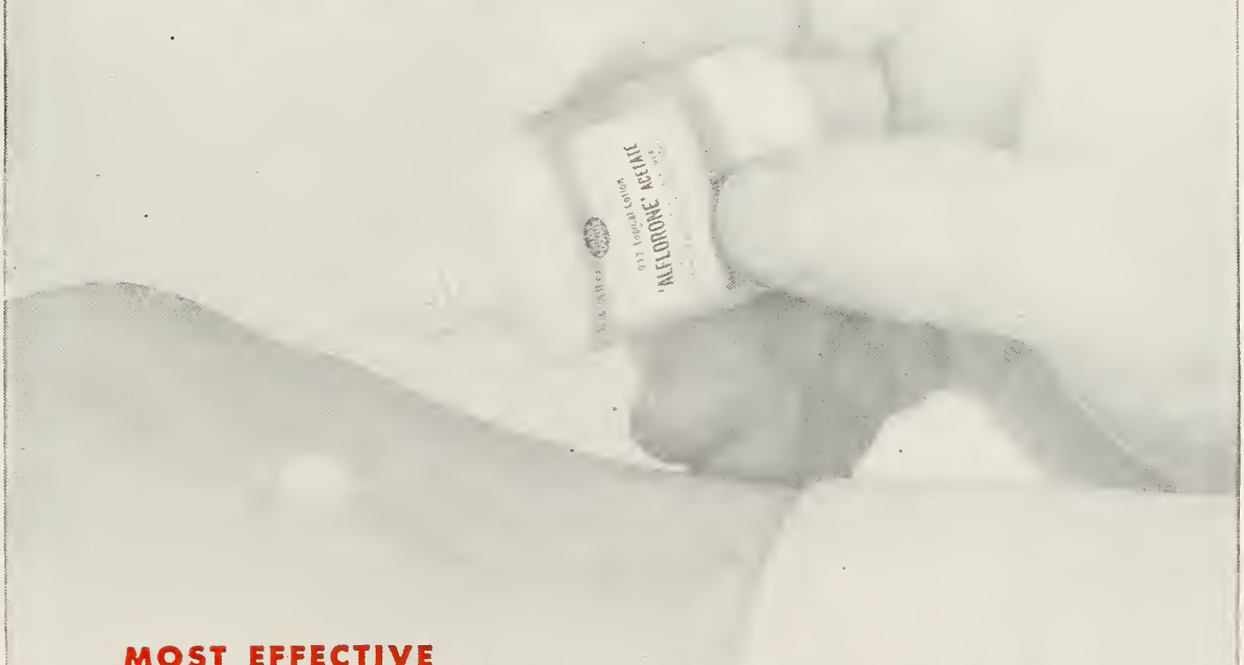
NEW- IN THE TOPICAL TREATMENT OF ALLERGIC SKIN CONDITIONS

TOPICAL LOTION

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MOST EFFECTIVE
Therapeutically active in 1/10th the concentration of hydrocortisone (Compound F).

MOST ECONOMICAL
Superior spreading qualities—a small quantity covers a wide area.

MOST ACCEPTABLE
Most patients prefer the cosmetic advantages of this easy-to-apply, smooth spreading lotion.

Supplied in a cosmetically elegant base in two concentrations: 0.25% and 0.1% in 15 cc. plastic squeeze bottles.
Also available: Alflorone Topical Ointment in 5 gm. tubes—two concentrations—0.25% and 0.1%.

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DIVISION OF MERCK & CO., INC.

WEIGHT FOR WEIGHT, THE MOST EFFECTIVE ANTI-INFLAMMATORY AGENT YET DEVELOPED FOR TOPICAL USE

Say you saw it in the Journal of the Michigan State Medical Society

Meat...

and the Problem of Senile Osteoporosis

Perhaps under the still-persisting influence of the mistaken "health legends" of former days, many older people tend to eat less meat and other nutritionally valuable protein foods than they should; thus, the osteoporosis that occurs naturally in the aging body may be unduly augmented.[1]

A balanced diet supplying optimal amounts of protein is essential, and appears to be useful in preventing and in slowing the progress of osteoporosis in senile persons. Adequate protein intake is instrumental in supporting osteoblastic activity so necessary for production of osseous matrix. "When osteoporosis is present, the prime objective is an adequate, high protein diet (a gram or more [of protein] per kilogram of body weight), to aid in building bony matrix for osteoblastic activity."[1]

Meat constitutes one of the most important sources of protein in the nutrition of the aged. Meat offers biologically effective protein—effective in the maintenance as well as the reconstruction of wasted or damaged tissue. Its natural content of B vitamins and of essential minerals not only helps to supply the daily needs for these nutrients, but is necessary for the proper utilization of amino acids.[2]

The appealing taste of meat, its appetite-stimulating quality, and its almost complete digestibility also are important in geriatric nutrition.

---

1. Rechtman, A. M., and Yarrow, M. W.: Osteoporosis, Am. Pract. & Digest Treat. 5:691 (Sept.) 1954.
2. Cannon, P. R.; Frazier, L. E., and Hughes, R. H.: Factors Influencing Amino Acid Utilization in Tissue Protein Synthesis, in Symposium on Protein Metabolism, New York, The National Vitamin Foundation, Inc., 1954, pp. 55-90.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute
Main Office, Chicago . . . Members Throughout the United States

Wayne Alumni Reunion

The 69th Annual Session of the Wayne University College of Medicine Clinical Session and Alumni Reunion occurred May 10 and 11, 1955.

The first day there were demonstration clinics, with all participants from the Wayne University College of Medicine.

ANESTHESIOLOGY

Moderator: Ferdinand E. Greifenstein, M.D., Detroit

1. **"Demonstration of Local and Regional Anesthesia"**
   Ferdinand E. Greifenstein, M.D., Detroit
   Professor and Chairman, Department of Anesthesiology, Wayne University College of Medicine.
2. **"Nerve Blocks of the Upper Extremity"**
   John C. Parry, M.D., Detroit
   Assistant Instructor in Anesthesiology, Wayne University College of Medicine.
3. **"Nerve Blocks of the Lower Extremity"**
   Marion L. De Vault, M.D., Detroit
   Assistant Instructor in Anesthesiology, Wayne University College of Medicine.
4. **"Spinal and Epidural Anesthesia"**
   Leroy C. Harris, Jr., M.D., Detroit
   Instructor in Anesthesiology, Wayne University College of Medicine.

LOW BACK PAIN

Moderator: Arthur J. Vorwald, M.D., Detroit

Professor and Chairman, Department of Industrial Medicine and Hygiene, Wayne University College of Medicine.

1. **"Gynecology"**
   Charles S. Stevenson, M.D., Detroit
   Professor and Chairman, Division of Obstetrics and Gynecology, Wayne University College of Medicine.
2. **"Neurosurgery"**
   E. S. Gurdjian, M.D., Detroit
   Clinical Professor of Neurosurgery, Wayne University College of Medicine.
3. **"Orthopedics"**
   Angus G. Goetz, M.D., Detroit
   Clinical Associate Professor of Orthopedic Surgery, Wayne University College of Medicine.

CARDIOVASCULAR SURGERY

Moderator: Charles G. Johnston, M.D., Detroit

1. **"Lesions Amenable to Surgery"**
   Charles G. Johnston, M.D., Detroit
   Professor and Chairman, Department of Surgery, Wayne University College of Medicine.
2. **"Diagnostic Procedures and Indications for Surgery"**
   Harper K. Hellems, M.D., Detroit
   Assistant Professor of Medicine, Wayne University College of Medicine.
3. **"Aortic Insufficiency and Mitral Stenosis"**
   Prescott Jordan, Jr., M.D., Detroit
   Clinical Assistant Professor of Surgery, Wayne University College of Medicine.
4. **"The Aorta and Large Arteries"**
   Lyle F. Jacobson, M.D., Detroit
   Assistant Instructor in Surgery, Wayne University College of Medicine.

PROCTOLOGY

Moderator: Don W. McLean, M.D., Detroit
Clinical Assistant Professor of Surgery, Wayne University College of Medicine.

1. **"Examination of the Patient"**
   Norman D. Nigro, M.D., Detroit
   Clinical Senior Instructor in Surgery, Wayne University College of Medicine.
2. **"Treatment of Hemorrhoids"**
   Jacob F. Wenzel, M.D., Detroit
   Clinical Senior Instructor in Surgery, Wayne University College of Medicine.
3. **"Diagnosis and Treatment of Polyps of the Colon"**
   Thomas C. Arminski, M.D., Detroit
   Instructor in Surgery, Wayne University College of Medicine.



Wayne University Vice President Arthur Neef presents Dr. Louis J. Hirschman with the Wayne University Alumni Award.

The May 11 program was held at the Fort Shelby Hotel with the following program:

Symposium on Peptic Ulcer

Moderator: Solomon G. Meyers, M.D., Detroit, Michigan
Clinical Professor of Medicine, Wayne University College of Medicine.

"The Physiology of the Ulcer Patient"
J. Earl Thomas, M.D., Philadelphia, Pennsylvania
Professor of Physiology, Jefferson Medical College.

"The Medical Management of Peptic Ulcer"
Julian M. Ruffin, M.D., Durham, North Carolina
Professor of Medicine, Duke University.

"The Surgical Aspects of Peptic Ulcer"
Robert M. Zollinger, M.D., Columbus, Ohio
Professor and, Chairman, Department of Surgery Ohio State University.

"Pharmacology and Anesthesia"
Carl F. Schmidt, M.D., Philadelphia, Pennsylvania
Professor of Pharmacology, University of Pennsylvania.

"Problems in Anticoagulant Therapy"
ROBERT L. MACMILLAN, M.D., Toronto, Ontario
Clinical Instructor, Department of Medicine, University of Toronto.

"Recent Advances in Cardiac Surgery"
DWIGHT E. HARKEN, M.D., Cambridge, Massachusetts
Associate Clinical Professor, Harvard Medical School.

Clark D. Brooks, M.D., Detroit
Eugene S. Browning, M.D., Grand Rapids, Michigan
Guy D. Houghton, M.D., Caledonia, Michigan
Byron H. Jenne, M.D., Detroit, Michigan
Henry A. Luce, M.D., Detroit, Michigan
Ernest G. Bellinger, M.D., Lansing, Michigan



Class of 1905—50th Anniversary—1955 (*left to right*): Clark D. Brooks, M.D.; Guy D. Houghton, M.D.; Eugene S. Browning, M.D.; Henry Luce, M.D.; Byron H. Jenne, M.D.; Ernest G. Bellinger, M.D.

Wayne University Alumni Award Recipients—1955 (*left to right*): John S. DeTar, M.D., receiving for his brother, Vernon L. DeTar; Walter F. Carey; Dr. Joseph J. Katz; Louis J. Hirschman, M.D.; Florence E. Kuhn.

"Alopecia: Diagnosis and Therapeutic Approach"
ALICE E. PALMER, M.D., Detroit, Michigan
Assistant Professor of Dermatology and Syphilology, Wayne University.

"Diagnostic Procedure for Cytologically Suspected Early Carcinoma of the Cervix"
ROGER B. SCOTT, M.D., Cleveland, Ohio
Associate Professor of Obstetrics and Gynecology, Western Reserve University School of Medicine.

A business session of the Alumni group was held with reports of officers. The trustees of the Wayne University Medical Library Fund met in the late afternoon and reported that work on the library will undoubtedly be started this fall.

In the evening, honors were given the members of the 1905 class. Thirteen are still living, and of these the following attended:

Those unable to attend were:

Lewis E. Bracey, M.D., Sheridan, Michigan
Herbert L. Eastman, M.D., Glendale, California
Eugene F. Fontaine, M.D., Covina, California
Robert C. Fraser, M.D., Hollywood, California
George W. Robinson, M.D., Detroit, Michigan
Clarence T. Starker, M.D., Pontiac, Michigan
Hubert H. Johnson, M.D., Detroit, Michigan

Dr. James J. Woods, of Ypsilanti, incoming president of the Wayne University College of Medicine Alumni Association, presented honorary memberships in the Wayne University College of Medicine Alumni Association to Dr. Lawrence Reynolds and Dr. Charles S. Kennedy, members of the Class of 1905 present for their 50th Anniversary Reunion.

Dr. Clark D. Brooks, who was the class speaker



at the commencement banquet fifty years ago, replied for the class.

Distinguished Service Citations for Dr. A. W. Blain and Dr. D. J. McColl were read. Honorary memberships were presented to Dr. Charles S. Kennedy for his long interest in medical education, his membership on the faculty of the medical school, and the fact that he serves as a regent of the University of Michigan. Dr. Lawrence Reynolds was cited also for his interest in medical education, his service on the faculty of the College of Medicine, his membership on the Detroit Library Commission and his contribution to the field of Radiology.

Recipients of Wayne University Alumni Award Citations were: Walter F. Carey, Vernon L. DeTar, Louis J. Hirschman, M.D., Joseph J. Katz and Florence E. Kuhn.

GERONTOLOGY

At a one-day symposium on "Constructive Medicine in Aging; Predictable Stresses in Middle Life" in Cincinnati, December 14, 1954, the following pertinent remarks were made:

Edward J. Steiglitz, M.D., of Washington, D. C., in his introductory address, pointed out: "Anticipatory medicine is applied foresight. Its application requires the conscientious and mutual concern of the physician and the patient. If it is sensible for a child to prepare to be an adult, so is it sensible for the 'young' person (40) to prepare for age."

"There is no male climacteric. Men don't go through the change physiologically or psychologically in anything comparable to woman's experience," the AMA's president-elect Elmer Hess, M.D., said.

Lloyd J. Thompson, M.D., of Winston-Salem, N. C., urged that life be looked forward to as a whole, that even from childhood the individual be trained to develop in social-emotional maturity, not expecting sharp transitions, but progressing evenly with acceptance of the difficulties advancing age may entail and also with realization of the richness which years can confer.

"Patients with healed myocardial infarction should work. It is better that the patient fill out his life with rewarding work rather than worried rest," was the contribution of William D. Stroud, M.D., Professor of Cardiology, Philadelphia.

Editorial Comment

BLAH-H-H

Father: "Why did you ring the doorbell?"
Suitor: "My horn isn't working."

About a year ago, we purchased a new car and decided to note how far it could be driven without using the horn. We were getting a little fed up with the current mode in auto horn usage and began to develop the opinion that this instrument no longer served a useful purpose—that it was becoming, in fact, a source of actual danger.

Now, that which conserves life and limb is of medical interest, and as the year wore on and the mileage mounted, we noted with satisfaction that it had not been necessary to use the horn at all. True, we signaled a driver who was entering a one-way street the wrong way, but this was the sole use to which the horn was put.

Even so, our one experience did not make a case, and this editorial probably would not have been written had it not been for a news item some weeks ago in which it was reported that a physician—seems it was a Duane Carr of Memphis, Tennessee—reported to some group on the west coast that the automobile horn had become a menace. The report said that a ban on the sounding of horns in Memphis was credited with the reduction in the accident rate which followed.

It is really quite obvious. Originally, the horn was installed to warn innocent pedestrians of the approach of a machine infrequently encountered. Today, it is an instrument used to announce the arrival of the pickup car at the home or apartment —oh, especially the apartment and at 3:00 a.m.! Its note is used as a peremptory command not to complete that left turn—we're coming through; it is used as a perfectly senseless reminder to start up on green, or as a presumptuous protest to which nobody pays the least attention, or should.

Formerly, it was used to warn of the approach of a vehicle at corners. This was never a good device and is far outmoded.

Without it, the driver who drives with his horn instead of his head would have to think—and that might be a very good thing, even though difficult. There is no situation which the mind can conjure up in which the horn is a satisfactory substitute for thought. Twelve months and 18,000 miles of driving attest it. More power to the Memphis experiment. The horn is a blatant, obstreperous, obnoxious and unnecessary appendage to the modern automobile.—Louis J. Bailey in *Detroit Medical News,* June 6, 1955.

WANTED—MORE MEDICAL STUDENTS

An excerpt from an editorial in the April 21 issue of the Louisville, Kentucky, *Courier Journal* caught our eye. "A call is out to all young Kentuckians who want to be doctors. The Medical School of the University of Louisville has twenty-six places in next year's freshman class which are still unfilled. All qualified Kentuckians who have applied have already been accepted. Now there are places going begging."

Contrast this situation with that of a few years ago, both prior to and following World War II, when there were several eligible applicants for every available medical school opening. It is widely known that there were some 15,000 less applicants for medical school throughout the country last year.

Why this reversal in trend? There are probably multiple factors responsible for this state of affairs. But the main etiology seems plain to us—severe and often unwarranted lay criticism of our profession. The medical profession has been attacked time after time as a strong and monopolistic "union." Lurid articles entitled "Some Doctors Should Be in Prison" are eagerly gobbled up by the public. Our fees, which in the main are certainly fair, are bombarded by sensationalists, who happily expose the exorbitant charges of a small minority of our colleagues and imply that these fees are typical of all doctors. Add to these facts the increasingly longer and more expensive education needed to place a doctor in practice, the pyramiding number of malpractice suits, and you have in essence the picture facing the young college student contemplating medical school. The practice of medicine no longer attracts the intelligentsia. It has become a hazardous occupation full of pitfalls and with no vestige of the esteem formerly accorded the physician.—*The Bulletin,* Muskegon County Medical Society, May, 1955.

HEART MODELS AMONG NEW PROFESSIONAL EDUCATION AIDS OF MHA

(Continued from Page 788)

onstration. The model was designed by Leon Schlossberg, medical illustrator at Johns Hopkins Hospital, Baltimore, and is intended for use in medical schools, nursing schools and graduate courses for physicians. The cost of the heart model is $50.00 and can be ordered from the Michigan Heart Association, Doctors' Building, 3919 John R., Detroit 1, Michigan.



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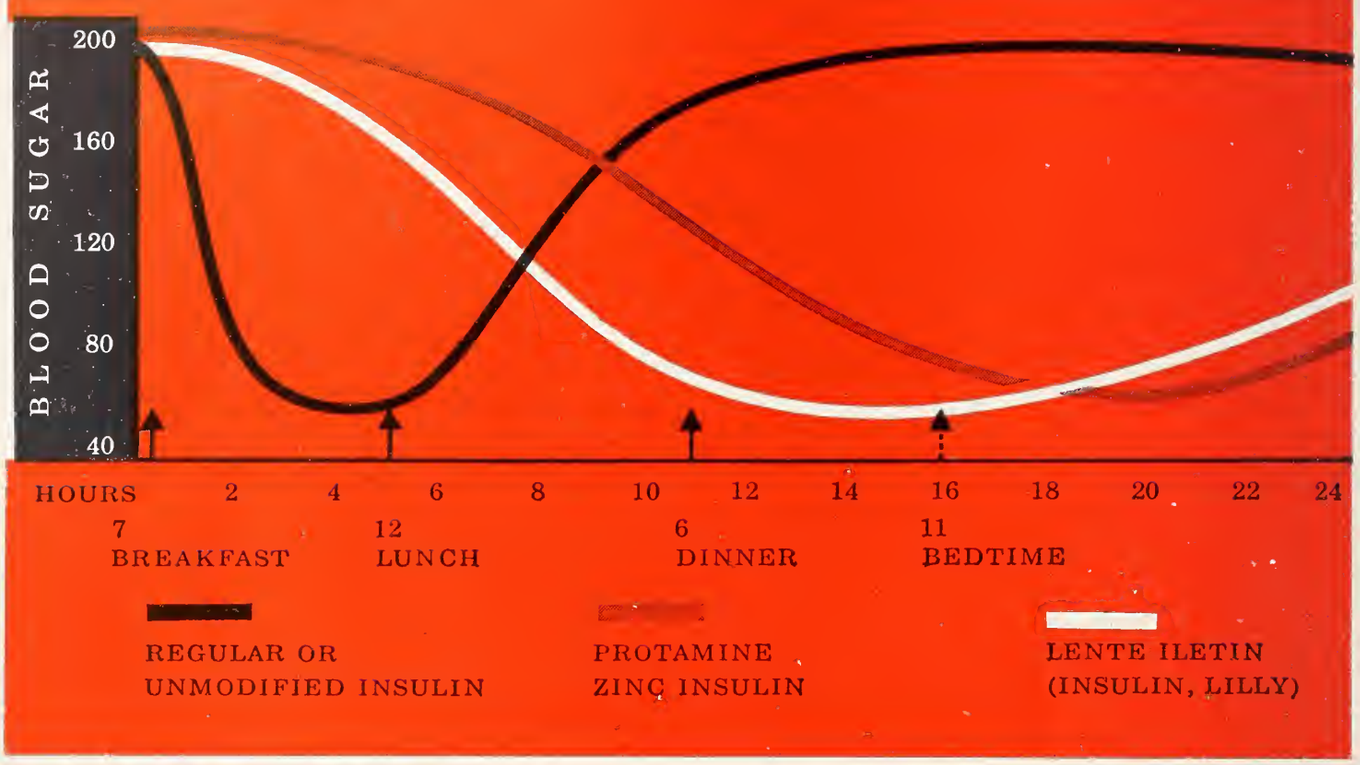
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The JOURNAL
of the Michigan State Medical Society
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Nature of the Blood Clotting Mechanisms in Hemophilia

By Shirley A. Johnson, Ph.D., Robert I. McClaughry, M.D., and Walter H. Seegers, Ph.D., Sc.D.
Detroit, Michigan

FROM THE WORK of Rosenthal, Dreskin, and Rosenthal[8] it is known that there is a type of hemophilia in which the blood clotting mechanisms do not correspond to what is found in classical hemophilia (hemophilia A) or in PTC deficiency (Christmas disease, plasma thromboplastin component deficiency). They clearly established the existence of a previously unrecognized clinical entity with simple experiments consisting of mixing the blood from their patients with blood representing classical hemophilia and also of PTC deficiency. In both mixing experiments the combinations gave approximately normal clotting times. Others have since found this same type of bleeding tendency and affirmed the viewpoint that this disease does not have the characteristics of any previously recognized. Consequently there is renewed interest in the old question: What is the nature of the chemical mechanisms in hemophilia? Even more precisely, how many different types of hemophilia can be characterized in terms of the chemical mechanisms of blood coagulation?

The view is expressed by Rosenthal, Dreskin and Rosenthal[8] that a previously unrecognized plasma factor, which they propose to call plasma thromboplastin antecedent (PTA), is absent from the plasma of their patients. This is naturally the first possibility to be considered and it is important to have an exact analysis of the abnormal blood clotting mechanisms with which they were dealing. Owing to the detailed knowledge of techniques and equipment required for a comprehensive study appropriate to the many requirements of such an analysis, it is difficult to achieve this in any one laboratory today. Consequently we were fortunate to have the co-operation of Dr. Rosenthal in supplying plasma and serum from their patient for applying the techniques used in our laboratory for the study of blood coagulation. Our approach to the work was with the use of purified prothrombin and quantitative methods for the measurement of prothrombin and thrombin activities.[9-11,14] Our techniques for the quantitative measurement of platelet cofactor I (antihemophilia factor) and platelet cofactor II (Christmas factor,[2] plasma thromboplastin component or PTC[1]) were also used.

Perspective

Platelet cofactor I is normally found in plasma and from that source it has been obtained in concentrated form by purification procedures.[6] In order to function in the activation of prothrombin it requires one of the factors normally found in platelets, namely, platelet factor 3. The latter has also been obtained in purified form recently. In the activation of prothrombin it is believed that platelet cofactor I and platelet factor 3 function simultaneously, for it has not been possible to obtain activity from platelet cofactor I alone or from platelet factor 3 alone, or from either one of the two after they have previously been in the same solution and subsequently separated again.[5] This is thus not a circumstance in which either

From the Department of Physiology and Pharmacology, Wayne University, College of Medicine. This investigation was supported by a research grant from the Michigan Heart Association.

one of the two functions as a substrate for the other. The combination or combined action of platelet cofactor I and platelet factor 3 is referred to as threone activity[7] and may be expressed by the following equation:

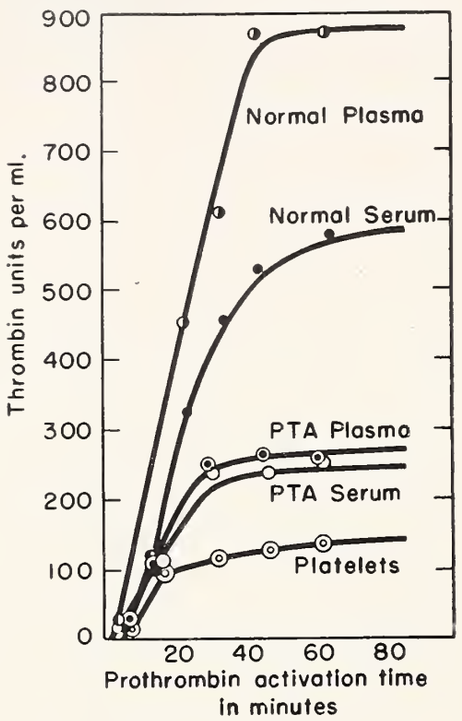


Fig. 1. The curves show the production of thrombin in a standard reaction mixture with normal serum and plasma and with PTA serum and plasma.

Platelet cofactor I + Platelet Factor 3 = Threone

In contrast to *plasma,* platelet cofactor I activity is normally not found in *serum.* Consequently threone activity is also not found in serum. Apparently by the mechanism in which an inhibitor combines with the cofactor the platelet cofactor I activity becomes neutralized during the clotting of blood. This inhibitor is a lipid-like material and presumably corresponds to the antithromboplastin studied for many years by Tocantins and associates. It has been shown that thrombin and calcium ions are the two requirements for neutralizing the platelet cofactor I activity of plasma, and it is believed that these two substances normally function to catalyze a combination between platelet cofactor I and inhibitor. This may be represented by the following equation:

Platelet Cofactor I + Inhibitor $\leftarrow$ Cofactor Inhibitor
$\rightarrow$ Conjugate

This combination between lipid inhibitor and platelet cofactor I may be dissociated by extracting serum thoroughly with ether. Consequently after extraction of the serum with ether, platelet cofactor I activity is again restored to approximately the same value as it is normally found in plasma.

Although platelet cofactor I is not found in serum, the platelet cofactor II (Christmas factor, PTC) concentration is the same in serum as in plasma. Thus a separation of the two activities can quite readily be made.[4] By an analysis of serum for one of the activities and an analysis of plasma for both activities the difference can be figured and one may know how much of each platelet cofactor activity is in plasma. Alternately it is possible to adsorb plasma with barium sulphate. Thereby platelet cofactor II is removed and it is then possible to analyze the adsorbed plasma for platelet cofactor I activity. An example of the data obtained with the use of normal plasma and with normal serum is presented in Figure 1.

In the actual analysis for platelet cofactors[3] the prothrombin reaction mixture is arranged as follows:

1. Purified prothrombin (about 3000 units per ml.) 1.00 ml.
2. Platelet extract 0.50 ml.
3. $CaCl_2$ (0.153M) (in imidazole buffer) 0.50 ml.
4. The unknown (diluted plasma or serum) 1.00 ml.

From time to time samples are taken from the reaction mixture for the quantitative determination of thrombin concentrations. It is then possible to record the thrombin concentration and to see how rapidly prothrombin changed to thrombin.

Experimental Results

With either the serum or plasma of the PTA patient,* combined with platelet materials as in the reaction mixture described above, only a little more thrombin was obtained than with platelets alone (Fig. 1). This small yield of thrombin could be eliminated by first adsorbing the plasma or the serum with barium carbonate. Since this adsorbant removes platelet cofactor II it is possible that the small yield of thrombin obtained with

*For the PTA plasma we are indebted to Dr. R. L. Rosenthal for his kind co-operation. Blood was drawn by venipuncture into 1.85 per cent potassium oxalate in the proportion of 9:1. This was centrifuged, and the plasma was frozen. Blood was also obtained in a flask and allowed to clot for two hours. The serum was obtained by centrifugation and frozen. The frozen samples were then placed in dry ice and carried from New York City to Detroit where they were placed in a deep freeze until used.

unadsorbed plasma or serum may be ascribed to platelet cofactor II. The amount of platelet cofactor II is thus greatly reduced from the normal in the PTA patient. There is practically no free platelet cofactor I activity, and to see whether any might be combined with inhibitor, we extracted the PTA serum thoroughly with ether but were unable to recover any platelet cofactor I activity. It is believed that the platelet cofactor I activity of hemophilic plasma is combined with an inhibitor in much the same way as in normal serum. Thus when hemophilic plasma is extracted with ether, its platelet cofactor I activity is made essentially equivalent to that of normal plasma. To test this possibility with PTA plasma we extracted the plasma with ether, just as was done with the serum, but it was not possible to develop platelet cofactor I activity. We thus see the further indications that the PTA plasma not only seems to be devoid of platelet cofactor I activity but also does not have it in an abnormal form such as a combination with an inhibitor that can be removed by ether extraction. It is interesting that one of the popular theories advanced to account for the blood coagulation abnormalities in hemophilia proposed that a plasma factor was absent from hemophilia. This theory would seem to apply to PTA. More specifically the missing factor is platelet cofactor I. However, that does not cover all of the observations. We find that PTA represents another partial deficiency namely, that of the PTC factor (Christmas factor, or plasma thromboplastin component).

Discussion

The abnormally low concentrations of platelet cofactor I and II may be considered to adequately account for the bleeding tendency observed in PTA patients. Quite possibly PTA may also include the deficiency of a previously unrecognized clotting factor which might be called plasma thromboplastin antecedent as proposed by Rosenthal, and there is no experimental evidence from our work which could be interpreted to rule out that suggestion. Difficult questions arise when we consider why PTA blood, so deficient in both platelet cofactor I and II, can be mixed with blood from classical hemophilia (hemophilia A) or with blood from plasma thromboplastin component deficiency and correct the clotting time. The hypothetical substance, PTA, might be *present* in PTA plasma rather than absent and thus supply the needs of the two plasmas with which it may be mixed to correct the deficiency. That view would imply a revision of our concepts of classical hemophilia and of PTC.

TABLE I. GROUPINGS OF PLASMA FACTORS CONCERNED WITH HEMOPHILIA A, AND THEIR CONCENTRATION IN PLASMA IS ARBITRARILY CONSIDERED TO BE IN THREE RANGES.

Platelet Cofactor I	Inhibitor of Platelet Cofactor I	Platelet Cofactor I Inhibitor Conjugate
1. High	4. High	7. High
2. Average	5. Average	8. Average
3. Low	6. Low	9. Low

It is helpful to consider how the composition of the plasma may vary enormously in terms of substances already known to exist. Three are prominent in classical hemophilia, namely, platelet cofactor I, lipid inhibitor of platelet cofactor I, and a conjugate between platelet cofactor I and the lipid inhibitor. Without doing an analysis of the plasma, we may draw upon our repeated experience in biology and see that either of these may be found in the plasma in high, average or low concentrations. Then a table can be arranged and one sees the possibility of twenty-seven individual kinds of plasmas. Suppose we select the combination 2, 4, 7 from Table I. This would represent the combination most likely to correspond with the circumstances known to exist in classical hemophilia, where the platelet cofactor I concentration is probably equal to the average. The latter is, however, highly conjugated with its inhibitor thus the net effect is that the platelet cofactor I concentration of plasma is ineffective. In addition the inhibitor of platelet cofactor I is present in high concentration. It may very well be that this inhibitor interferes in important interactions in the physiology of hemostasis. Perhaps as the work of Tocantins[12,13] indicates the severe bleeding tendency in classical hemophilia is largely on the basis of the high inhibitor concentration rather than on the basis of the high concentration of platelet cofactor I inhibitor conjugate. To test that hypothesis one would need to discover the combination represented by Table I as 2, 4, 8. Then the bleeding tendency would have to be entirely on the basis of free inhibitor.

In the study of the blood coagulation mechanisms one is constantly aware of the implications for diseases related to thrombosis as well as to the hemorrhagic diseases. The term "hypercoagulable" blood is often used; however, no one has been able to give a detailed description of exactly what is meant in terms of chemical mechanisms. From

Table I it is possible to speculate about several combinations of the components concerned with hemophilia A and see how these combinations might contribute to hypercoagulability of the blood. For example, combination 1, 6, 9 represents a high concentration of platelet cofactor I, a low concentration of inhibitor of platelet cofactor I, and a low concentration of platelet cofactor I inhibitor conjugate. This may be the most favorable combination we can imagine to favor blood coagulation. These considerations make it possible to realize that the factors concerned with hemophilia might be rearranged in concentrations to contribute to thrombosis.

To take the view that the combinations suggested by Table I only represent twenty-seven variations is rather more restrictive than expansive. All those likely variations are fully dependent upon platelet factor 3 concentration and it is well known that the platelet concentration may be high, low and average. Consequently our variables are at once raised to 81. In addition, platelet cofactor II must be considered and its inhibitor too. Certainly platelet cofactor II is a substance quite different from platelet cofactor I, and perhaps the respective inhibitors are also different. This use of the imagination presents a spectacular realization and cannot be discounted by simply assuming that the necessary experiments are first needed. If techniques could be developed for a reliable and exact quantitative analysis of the plasma for these several factors, the information would certainly prove to be most useful. We would not only understand more clearly the nature of the hemorrhagic diseases and the normal clotting mechanisms, but also those states associated with thrombosis.

Summary

In the hemophilia-like disease, first described by Rosenthal, Dreskin, Rosenthal and designated PTA deficiency, there is practically no platelet cofactor I in the plasma. The platelet cofactor II concentration is very low.

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WHAT THE COW CAN DO

Consumption of feeds grown on depleted soils apparently does not affect the nutritive value of a cow's milk, according to the recently announced results of a ten-year study at Michigan State College. Two dairy herds were fed hay and grain grown on comparable soils, one which received no minerals, and the other generously fertilized. The milks from both herds were analyzed and fed to experimental animals. The tests revealed no differences in the nutrient content of the milks from these herds, which could be related to the fertility of the soil.

Clotting of Blood with Russell's Viper Venom

By Chen-Yuan Lee, M.D., Shirley A. Johnson, Ph.D., and Walter H. Seegers, Ph.D., Sc.D.
Detroit, Michigan

IT HAS BEEN known for many years that the venom of Russell's viper has powerful coagulant properties.[1] Moreover, it has been suggested by several investigators, that the venom can be used as a substitute for tissue thromboplastin in the determination of the prothrombin time.[6,13,16-19,33] However, experience has shown that the results obtained with the use of the venom may not be reliable. For example, Wilson[32] used venom for measuring the prothrombin time and found that a bleeding tendency was induced with the use of dicumarol when it was believed that the prothrombin concentration was within the therapeutic range. Apparently the venom interacted with materials in the plasma to accelerate the prothrombin time in a manner which does not occur with the use of thromboplastin. Presumably the alterations occuring in the plasma in association with dicumarol therapy involved changes in the concentration of coagulant factors that do not act in conjunction with tissue thromboplastin in the same way as with the snake venom. This implies that the venom cannot simply be regarded as a powerful thromboplastin, and that it has properties which are as yet not understood in terms of our present knowledge of the blood coagulation mechanisms.

Most of the literature on the subject was written before it was realized that there are many mechanisms whereby prothrombin may become activated, and the main questions were concerned with the following: (1) is the venom like thromboplastin of tissue extracts. (2) is the venom lysing platelets or acting in conjunction with platelet products, (3) does it act directly to activate fibrinogen in a manner analogous to thrombin? Among the earlier investigators, Arthus[1] described the thromboplastin-like action of the venom. Houssay and Sordelli[9] stated that the venom has neither the activities of cytozyme nor of serozyme but enormously accelerates the formation of thrombin. In a series of toxicological studies on the venom, Lee (formerly Ri)[21,22] demonstrated that the Formosan daboia venom has a potent coagulant action *in vivo* as well as *in vitro* and that its action resembles that of thromboplastin but not that of thrombin. Ganguly[7] concluded that the venom accelerates prothrombin conversion in the presence of platelets but not in their absence. He believed that the venom is a cytolytic agent enhancing the process of platelet disruption and thereby liberating what was considered to be thromboplastin. Hobson and Witts[8] emphasized the dependence on calcium, and the importance of platelets. Although Edsall[5] considered the coagulant action of Daboia venom to be independent of the presence of formed platelets and distinctly different from that of thromboplastin, he really did not rule out the importance of materials derived from platelets because his technique included conditions favorable for platelet lysis. Biggs[2] cites the work of Trevan and Macfarlane, who showed that snake venom is most effective together with lecithin. Later Leathes and Mellanby[14] observed that lecithin augments the thromboplastic activity of the venom, but that of brain extract to a lesser degree. Macfarlane, Trevan and Attwood[15] removed lipoidal components of horse plasma by prolonged centrifugation at high speed. When subsequently recalcified, the plasma could no longer be coagulated by addition of Daboia venom unless lecthin was also added. Quick[20] also showed that the prothrombin time of human plasma, normally twelve seconds, may be reduced to three seconds if lecithin and venom are used concurrently. He also remarked that tissue extracts are not affected by lecithin, and that the venom, in contrast to tissue extracts, will clot avian plasma as readily as mammalian plasma.

Eagle[4] states that Daboia venom does not clot oxalated plasma and hence does not activate fibrinogen.

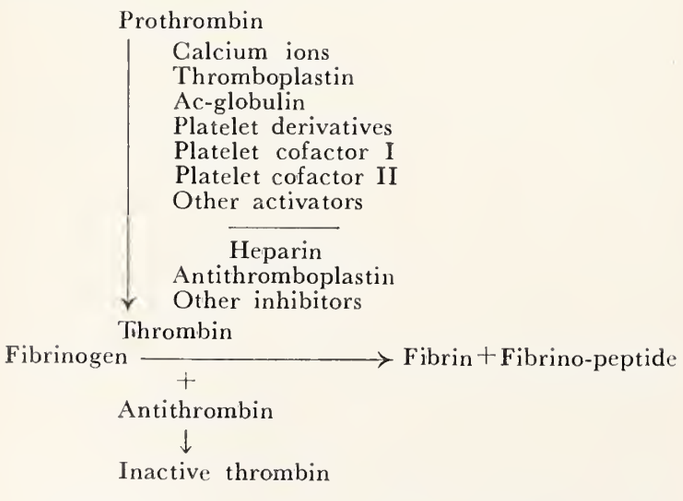
It is evident that previous investigators worked in terms of concepts from which knowledge of the many clotting factors concerned with prothrombin activation evolved. Moreover, they did not use quantitative techniques for the determination of prothrombin and thrombin concentration. Consequently many opportunities remain to gain a more advanced perspective on the nature of snake venom. Furthermore, our work has made purified prothrombin available, and it is a key

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substance which can be used in a manner quite different from the prothrombin of plasma, wherein it is associated with many other substances, some of which are recognized and possibly some that are not. Our work shows that the platelets and venom function synergistically in the activation of prothrombin in much the same way as the combination of lung extract thromboplastin and platelets. However, there is also a distinct difference between lung extract thromboplastin and venom, because materials in serum can be combined successfully with lung extract thromboplastin, whereas that is apparently not possible with the venom. Purified platelet factor 3 alone is not adequate for the venom, and it is quite possible that an unidentified platelet component is required.

Perspective

Without the transformation of prothrombin to thrombin the fibrin clot is not obtained, and one may state the rule of blood coagulation in terms of prothrombin as follows: The fibrin clot is derived from the fibrinogen of the blood by means of the enzyme thrombin, which is derived from prothrombin following interactions with activators, provided these are not inhibited; and thrombin is inactivated by antithrombin mechanisms. This succinct statement can be elaborated very briefly as by the diagram given below without scattering of thoughts in myriads of detail. The "activators" of prothrombin are there listed as calcium ions, thromboplastin, Ac-globulin, platelet derivatives, platelet cofactor I, platelet cofactor II, and other activators. The inhibitors considered are heparin, antithromboplastin and others.



In this work we were concerned with the activation of prothrombin and a useful concept relates to the anatomic distribution of the activators. It has been pointed out that these are distributed to three compartments, namely, (1) the plasma compartment, (2) the fixed tissue compartment and (3) the platelet compartment. One may obtain materials originating from any one of these compartments, and when combined with purified prothrombin, rapid activation does *not* occur. No single anatomic compartment by itself contains adequate materials for the activation of prothrombin. It does, however, seem likely that materials from any two of the compartments can be paired to achieve rapid activation and to obtain a full yield of thrombin.

There are certain substances that have the property of interacting with prothrombin in such a way that the prothrombin becomes inactivated. For instance, when purified prothrombin, calcium and platelet extracts are mixed, a small amount of thrombin does indeed form, but most of the prothrombin activity disappears within a period of about two hours. Likewise, if thromboplastin, which is derived from the fixed tissue compartment, is mixed with purified prothrombin and calcium, a small thrombin titre develops but the greater portion of the prothrombin activity disappears. Evidently the prothrombin transforms to a derivative which is not thrombin. The plasma compartment has many substances that are concerned with the activation of prothrombin but apparently prothrombin does not form a derivative in association with these substances.

Technical Procedures

Purified prothrombin was prepared from bovine plasma as described by Seegers and associates,[23,25,29] and the preparations used were not freed of Ac-globulin. Platelet suspensions were prepared by methods previously devised in this laboratory.[27] The quantitative analyses for prothrombin and thrombin were also done by procedures previously described.[26,30] Dried venom of Vipera russellii formosensis Maki was dissolved in physiological saline just before actual use to provide a 0.01 per cent solution.

To follow the activation of purified prothrombin it was mixed with substances under standard conditions.[10] The mixture, called the reaction mixture, also contained calcium and imidazole buffer. The temperature was kept at 28° C. Samples were repeatedly taken from the reaction mixture to measure the thrombin concentration. The data

obtained were plotted on charts, and it was easily possible to see how rapidly thrombin was derived from prothrombin and also to see how much thrombin was formed. The composition of the reaction mixture was varied with respect to activators (or inhibitors) but the standard procedure was as follows:

Purified prothrombin (3000 units per ml.)	1.0 ml.
Thromboplastin or venom (0.01% in saline)	0.5 ml.
Platelet suspensions or serum	0.5 ml.
$CaCl_2$ in imidazole buffer (pH 7.25)	0.5 ml.
Physiological saline solution	0.5 ml.

Experimental Results

When the Daboia venom was combined with platelet materials, the activation of prothrombin was rapid and, in terms of added prothrombin, the yield was high (Fig. 1). The venom can take the place of lung extract thromboplastin to function synergistically with platelet materials. In that sense one might regard the venom as having thromboplastin properties just as has been done in the literature reviewed above. This is, however, as far as one can carry the analogy, for one finds that lung extract may be combined with serum to give full activation of prothrombin whereas that was not possible with the venom. The latter, when combined with serum, gives only a small yield of thrombin. It might incidentally be remarked that the serum was previously treated with ether to destroy most of its antithrombin. We also determined that serum adsorbed with $BaSO_4$ or plasma is not effective when paired with the venom.

It was also found that the Daboia venom, with calcium alone, is not adequate for the activation of purified prothrombin. That, as shown by Ware and Seegers,[29] is also true for lung extract thromboplastin. It was, therefore, of interest that we could combine lung extract thromboplastin and the Daboia venom, and the two together were also inadequate for the activation of purified prothrombin.

Since the venom is very effective with platelets, it was of interest to ascertain which one of the platelet factors now recognized functions with the venom. Among those to be considered is platelet factor 1, which is an accelerator of prothrombin activation and exhibits approximately the same kind of activity as plasma Ac-globulin.[31] Platelet factor 2 is a fibrinoplastic agent in that it catalyzes the interaction of thrombin and fibrinogen.[31] Platelet factor 3 functions with platelet cofactor I of plasma (antihemophilia factor) in the activation of prothrombin.[3,12,28] Platelet factor 4 has powerful antiheparin properties.[12] In addition to these four components of platelets, to which numbers have been assigned, platelets contain an antifibrinolytic agent,[11] are concerned with clot retraction, and contain the vasoconstrictor agent, serotonin.[34] With one exception these several platelet factors are only recognized by the activities exhibited by crude platelet preparations. Platelet factor 3 has recently been obtained in purified form in this laboratory. It was thus possible to ascertain whether this is the factor needed by the Daboia venom to facilitate the activation of purified prothrombin. We combined a powerful concentrate of platelet factor 3, the Daboia venom, calcium and purified prothrombin, and there was no activation of prothrombin.

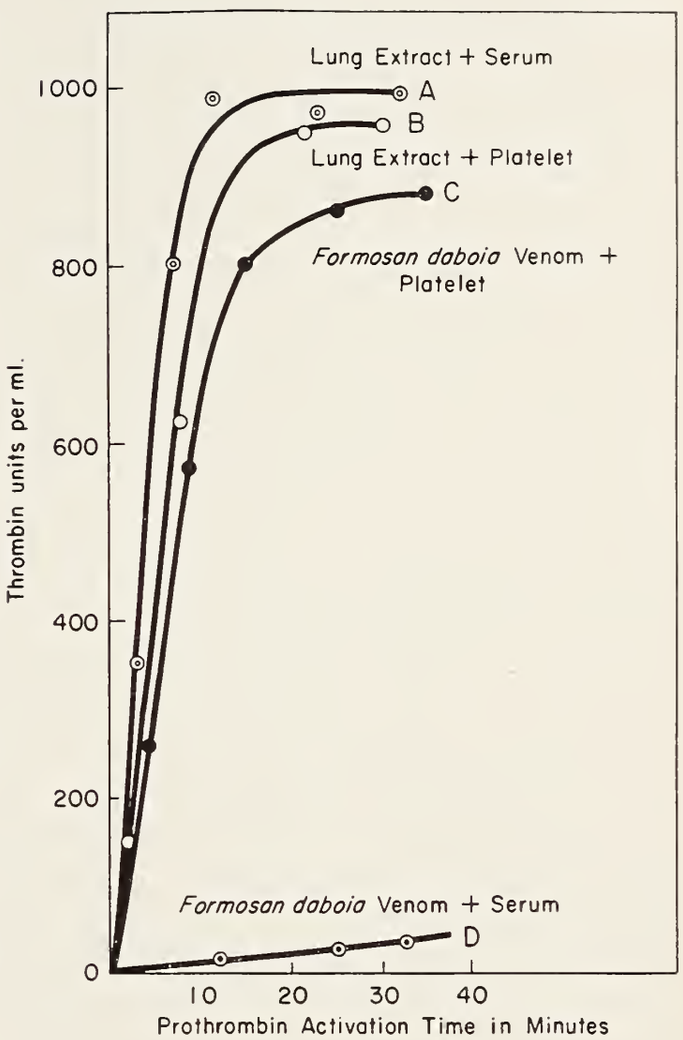


Fig. 1. Activation of purified prothrombin with lung extract thromboplastin, platelet extracts and snake venom. The thrombin concentration refers to its concentration in the reaction mixture at any given time.

Discussion

The outstanding characteristic of Daboia venom is its capacity to function with platelet materials. The inertia seen with a combination of venom and bovine serum, which is rich in Ac-globulin; or with venom and lung extracts may indicate that the venom itself has neither thromboplastin activity in the traditional sense nor Ac-globulin activity. The observations of Ganguly[7] laid great stress on the cytolytic properties of the venom, and he was of the opinion that thromboplastin was liberated from platelets. In our work no attention was paid to the lytic properties because we worked with platelets already disintegrated. When Macfarlane, Trevan and Attwood[15] observed that lipoidal components of plasma are needed for the coagulant action of the venom, they apparently were unaware of the reactions that might arise as a result of platelet materials being in the plasma. On the basis of our work we must consider that platelets played an important role in the erratic results obtained with the use of the viper venom as a substitute for thromboplastin in the prothrombin time determination. In that particular procedure no effort is made to control this variable, and we may presume that the common practice of low-speed centrifugation of the blood would include many platelets and platelet derivatives to a variable extent in the plasma samples. The two variables of lipid materials and platelet materials could, we believe, easily account for such tremendous variations in the prothrombin time as cited by Biggs,[2] where the range is from 8.5 to 27.5 seconds.

Our purified preparations of platelet factor 3 do not combine with the venom to give activation of purified prothrombin. If the venom requires this factor we must assume that an additional factor of the platelets is also required. Whether this additional factor is one of those previously recognized in other studies on blood coagulation remains to be determined. It might be that a distinct and separate entity is involved.

Summary

Russell's viper venom may function in conjunction with platelet materials in the activation of purified prothrombin. By contrast it does not function with thromboplastin or with plasma or serum. Purified platelet factor 3 alone is ineffective in combination with the venom in the activation of purified prothrombin. The rate of prothrombin activation is the same when lung extract is combined with platelets as when the venom is combined with platelets.

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Comparative Efficiency of Furadantin with Antibiotics in Private Practice

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Part One

THE treatment of urinary tract infections has presented many problems for years. These problems have been somewhat reduced with the introduction of antibiotic and chemotherapeutic agents into the physician's armamentarium. However, they remain as ever-present reminders that we need more and better methods of diagnosis and treatment.

In 1951, a new chemical substance was introduced to the medical profession for use in urinary tract infections.[5,7,9,21] This compound, Furadantin,* is a brand of nitrofuration, N (5-nitro-2-furfurylidene)-1-aminohydantoin, an antibacterial nitrofuran compound.[7,9] Furadantin has been studied as to antibacterial efficacy *in vitro* and clinically.[4,15,16]

The plan in the present study involved three steps:

1. The determination of the *in vitro* susceptibility of the organisms isolated from urine specimens to various antibiotics and chemotherapeutic agents.[14]
2. Clinical trials of the therapeutic agent indicated as effective by laboratory tests, and
3. Evaluation of clinical response.

Laboratory Methods

Urine samples were obtained aseptically, submitted to the laboratory and cultured for organisms present. The media used consisted of general non-selective as well as selective and inhibitory broths and agars. The microorganisms present were isolated and identified to the extent of their generic classification.** At the time the urine samples were cultured a portion was inoculated into enriched culture broth to be used for sensitivity studies. The inoculated broth was incubated at 37° C. until gross evidence of growth was manifest by increased turbidity, usually one to two hours. Following incubation, 0.5 cc. of the broth was pipetted onto the surface of each of two blood agar plates. The inoculum was spread by means of sterile glass spreaders so the entire surface of the plate was covered. Using aseptic technique, a disc impregnated with each of the following therapeutic agents was placed upon the surface: Penicillin, Streptomycin, Aureomycin, Polymyxin-B, Chloromycetin, Bacitracin, Neomycin, Terramycin, and Erythromycin. In addition a diagnostic tablet of Furadantin was added to one plate. The plates were incubated at 37° C. under from 8 to 10 per cent carbon dioxide for approximately twenty-three hours. The plates were then read and the results recorded. A ring of inhibition of growth around any disc was interpreted as indicating susceptibility of the microorganism to that particular therapeutic agent.

Laboratory Results

A total of 116 patients' urines was studied.

A total of 276 cultures was made and their sensitivities determined.

There were 359 organisms isolated and identified.

The organisms studied and presented in this paper are undoubtedly not all pathogenic nor the cause of urinary tract infections. For the sake of simplicity it would seem to our benefit to divide the organisms isolated into two groups: (1) those generally regarded as of etiological significance, and (2) those commonly considered as non-pathogenic contaminants of the urinary tract. The organisms we consider to be significant are as follows: *Escherichia* and *Aerobacter, Proteus, Alcaligenes, pseudomonas, klebsiella,* beta hemolytic streptococci, and hemolytic staphylococci. The organisms we consider to be non-pathogenic contaminants of the urinary tract are as follows: Alpha hemolytic streptococci, aerobic spore formers, nonhemolytic staphylococci, nonhemolytic streptococci, diphtheriod bacilli, yeasts and *Neisseria.*

Presented at the Twenty-Eighth Annual Meeting of the North Central Section of the American Urologic Association, October 7 to 9, 1954, Detroit, Michigan, in both manuscript and discussion.

Dr. Holt is from the Michigan Department of Health Laboratories.

*Furadantin for this study was supplied by the Eaton Laboratories, Norwich, New York.

**We wish to express great appreciation to Miss Helen Bilanow, bacteriologist, Michigan State Department of Health Laboratories, for the identification of organisms.

TABLE I.
TOTAL ISOLATIONS BY BACTERIOLOGICAL GROUPS

Escherichia and Aerobacter	88
Alpha Hemolytic Streptococci	51
Aerobic Spore Formers	51
Nonhemolytic Staphylococci	38
Proteus	34
Alcaligenes	29
Pseudomonas	23
Klebsiella	23
Beta Hemolytic Streptococci	8
Nonhemolytic Streptococci	5
Hemolytic Staphylococci	4
Diphtheroids	2
Yeasts	2
Neisseria	1

when based upon *in vitro* studies, as good as any other available drug in one additional group.

Table III presents the indices of susceptibility of the various groups of organisms to the respective therapeutic agents tested. With these values it appears that our agent of choice is effective to a degree much below that which we desire. Of the significant groups of organisms isolated and tested our most successful and highest index was only 56.5. At the best, we can expect to successfully

TABLE II. NUMBER OF INDIVIDUAL ORGANISMS TOTALLY SUSCEPTIBLE ON FIRST ISOLATION

	Furadantin	Penicillin	Streptomycin	Aureomycin	Polymyxin-B	Chloromycetin	Bacitracin	Neomycin	Terramycin	Erythromycin
Escherichia and Aerobacter	(41)	0	10	27	28	28	1	36	27	2
Alpha Hemolytic Streptococci	(30)	9	9	22	7	25	12	20	17	23
Aerobic Spore Formers	(28)	7	10	27	3	23	5	25	22	26
Nonhemolytic Staphylococci	(26)	7	15	19	5	18	10	21	14	21
Proteus	(12)	1	2	0	2	2	0	9	0	0
Alcaligenes	8	1	2	(12)	3	3	4	6	5	4
Pseudomonas	2	0	1	2	(7)	0	0	2	2	1
Klebsiella	(13)	0	1	5	10	4	0	9	4	0
Beta Hemolytic Streptococci	3	0	0	(5)	2	(5)	0	3	2	3
Nonhemolytic Streptococci	(4)	2	2	3	0	(4)	1	2	2	(4)
Hemolytic Staphylococci	(4)	1	1	2	2	(4)	3	3	2	3
Diphtheroids	1	0	(2)	(2)	0	1	1	(2)	(2)	0
Yeasts	0	0	0	0	0	0	0	0	0	0
Neisseria	(1)	0	0	(1)	(1)	(1)	0	(1)	(1)	0

( ) Drug of Choice.

TABLE III. PERCENTAGE OF ORGANISMS IN EACH BACTERIAL GROUP SUSCEPTIBLE TO VARIOUS DRUGS

	Furadantin	Penicillin	Streptomycin	Aureomycin	Polymyxin-B	Chloromycetin	Bacitracin	Neomycin	Terramycin	Erythromycin
Escherichia and Aerobacter	(46.6)	0	12.5	30.7	31.8	31.8	1.25	40.9	30.7	2.3
Proteus	(35.0)	2.9	5.9	0	5.9	5.9	0	26.5	0	0
Alcaligenes	27.6	3.5	6.9	(41.4)	10.3	10.3	13.8	20.7	17.2	13.8
Pseudomonas	8.7	0	4.4	8.7	(30.4)	0	0	8.7	8.7	4.4
Klebsiella	(56.5)	0	4.4	21.7	43.5	17.4	0	39.1	17.4	0
Beta Hemolytic Streptococci	37.5	0	0	(62.5)	25.0	(62.5)	0	37.5	25.0	37.5
Hemolytic Staphylococci	(100.0)	25.0	25.0	50.0	50.0	(100.0)	75.0	75.0	50.0	75.0

( ) Highest index of susceptibility.

Table I shows the total number of organisms isolated according to groups. From this chart one sees that the significant organisms are for the most part Gram-negative bacilli. It is for this reason that the treatment of urinary tract infections has been and continues to be a problem to the clinician. The therapeutic agents developed to date have proven most successful in eradication of infectious processes whose etiological agent is other than a Gram-negative bacillus.

In Table II we have listed the number of cultures, by groups, of organisms studied, that were susceptible to any of the therapeutic agents used in this study. From this table it appears that Furadantin is one of the most effective single agents available at this time. With three of the seven significant groups of organisms studied, Furadantin is the absolute drug of choice, and treat, with resultant cure, about one-half the patients with *Klebsiella* infections. Hemolytic staphylococci had an index of 100.0 in this study but the incidence of this organism as the only cause of urinary tract infection is low.

Herrold[11] emphasized the need for sensitivity studies as early as 1950. This paper substantiates that statement. Without sensitivity studies preceding treatment, the clinician would have about one chance in sixteen of selecting the therapeutic agent which would eradicate the infection according to our *in vitro* results.

One of the most difficult problems facing the clinician in treatment of urinary infections is the development of drug resistance after prolonged use of certain agents. Table IV gives the number of organisms, by group, that developed resistance to specific therapeutic agents after having been sus-

TABLE IV. NUMBER OF ORGANISMS WHICH WERE SUSCEPTIBLE ON FIRST ISOLATION BUT DEVELOPED RESISTANCE LATER

	Furadantin	Penicillin	Streptomycin	Aureomycin	Polymyxin-B	Chloromycetin	Bacitracin	Neomycin	Terramycin	Erythromycin
Escherichia and Aerobacter	3	0	4	3	2	2	0	3	4	0
Proteus	2	0	0	0	0	2	0	3	0	0
Alcaligenes	1	1	0	1	0	0	2	1	2	0
Pseudomonas	1	0	1	1	2	0	0	1	1	0
Klebsiella	1	0	0	1	0	1	0	0	0	0
Beta Hemolytic Streptococci	0	0	0	0	0	0	0	0	0	0
Hemolytic Staphylococci	0	0	0	0	0	0	0	0	0	0

TABLE V. PERCENTAGE OF SUSCEPTIBLE ORGANISMS DEVELOPING RESISTANCE

	Furadantin	Penicillin	Streptomycin	Aureomycin	Polymyxin-B	Chloromycetin	Bacitracin	Neomycin	Terramycin	Erythromycin
Escherichia and Aerobacter	9.8	0	40.0	11.1	7.1	7.1	0	8.3	14.8	0
Proteus	16.7	0	0	0	0	100.0	0	33.3	0	0
Alcaligenes	12.5	100.0	0	8.3	0	0	50.0	16.6	40.0	0
Pseudomonas	50.0	0	100.0	50.0	28.6	0	0	50.0	50.0	0
Klebsiella	7.69	0	0	20.0	0	25.0	0	0	0	0
Beta Hemolytic Streptococci	0	0	0	0	0	0	0	0	0	0
Hemolytic Staphylococci	0	0	0	0	0	0	0	0	0	0

ceptible on primary isolation. Table V presents the per cent of organisms, by groups, that developed resistance.

Table VI presents the number of original isolations, by groups, that were resistant to all therapeutic agents in this study. From this chart we see that the physician is limited from the start in some cases; for even if cultures, isolations, and sensitivity studies were made, there would still remain a significant number of organisms which would be resistant to the agents studied in this series.

TABLE VI. PERCENTAGE OF ORGANISMS RESISTANT TO ALL AGENTS ON FIRST ISOLATION

Escherichia and Aerobacter	9.1
Alpha Hemolytic Streptococci	0
Aerobic Spore Formers	5.9
Nonhemolytic Staphylococci	2.6
Proteus	17.6
Alcaligenes	10.3
Pseudomonas	2.9
Klebsiella	17.4
Beta Hemolytic Streptococci	0
Nonhemolytic Streptococci	0
Hemolytic Staphylococci	25.0
Diphtheroids	0
Yeasts	100.0
Neisseria	0

Part Two

Various investigators have studied nitroforan as regards chemical structure[2,5,6] and bacteriologic activity *in vitro*.[6,7,9,15] Others[1,4,8,13-16,19,20] have evaluated the use of one of these, Furadantin, *in vivo* clinically as to the response of the patient symptomatically and bacteriologically. Studies correlating bacteriologic sensitivity or resistance to Furadantin with clinical response to the drug have been reported for the most part from clinic or hospital series.[1,4,14,20] Most reports of *in vitro* and *in vivo* evaluations have apparently been separately, rather than simultaneously, definitive.

Some authors report largely results in acute cases; some, in both acute and chronic. Some[1,12] emphasize the necessity of surgery in indicated instances which should be axiomatic; others have not so differentiated between the surgical and nonsurgical. Some reports concern hospitalized cases only; others include these as well as ambulatory out-patients. We have been unable to find reports separately differentiating the effect of Furadantin following surgical uropathy as compared with nonsurgical infections, except Vermeulen and Goetz'[22] critical animal experiments.

Since a large majority of acute infections respond promptly to other established and less expensive medication, the series we have selected for study have been classified as chronic or recurrent cases.

We were further anxious to evaluate the use of Furadantin in private practice in conjunction with careful sensitivity studies as determined by the Laboratories of the Michigan Department of Health. Such sensitivity tests are available, as to the antibiotics previously mentioned, to any physician of Michigan upon request. In these studies, we have therefore hoped to determine to what extent this new drug may assist the individual physician in his management of stubborn infections where the patient is *not* hospitalized. A great majority of such cases at some time fall under the care of private physicians and it was hoped that possibly additional expensive hospitalization might

be avoided if Furadantin could accomplish urinary sterilization in these stubborn and extended infections.

The method of laboratory investigation has been described previously. It is noteworthy that sensitivity reports were received prior to bacterial identification, thus facilitating the early institution of specific therapy. Repeat and follow-up studies accounted for the larger total number of specimens. Of the 116 patients, fifty-four were treated with Furadantin; the remaining sixty-two were treated with other drugs. All of the fifty-four treated with Furadantin had chronic infections or were patients demonstrated to be resistant to other agents. This group, urologists recognize as presenting difficult therapeutic problems.

Therefore, the majority, sixty-two, were given immediate treatment other than Furadantin which resulted in satisfactory control or cure. While there are reports[4,12,13,20] as to the efficiency of Furadantin in acute cases, it would appear that the drug must have been first administered prior to the determination of the type of organism (except by the Gram-stained slide: Herrold[12]). Our series includes resistant infections in which the bacterial sensitivity had been determined and the organism identified by stain and culture. These cases were both complicated by structural uropathy and some not so complicated. Of the fifty-four patients to whom Furadantin was administered, it was necessary to discard six because follow-up cultural studies, for various reasons, could not be completed. Figures 1, 2 and 3 illustrate the two extremes of total resistance or susceptibility to all agents and the more commonly varied report as received from the state laboratories:

LABORATORY REPORT

This culture OF HEMOLYTIC STAPHYLOCOCCI
is susceptible (S), susceptible with resistant strains (SR), or resistant (R) to antibiotics in concentrations as indicated by the plate–disc method.

AUREOMYCIN	S 10 mcgs	PENICILLIN	S 1.5 U
BACITRACIN	S 4 U	POLYMYXIN B	S 10 U
CARBOMYCIN	S 1 mcg	STREPTOMYCIN	S 10 mcgs
CHLOROMYCETIN	S 10 mcgs	TERRAMYCIN	S 10 mcgs
ERYTHROMYCIN	S 1 mcg	TETRACYCLINE	S 10 mcgs
NEOMYCIN	S 10 mcgs	FURADANTIN	S 10 mcm

Fig. 1.

LABORATORY REPORT

This culture OF PSEUDOMONAS AND AEROBACTER
is susceptible (S), susceptible with resistant strains (SR), or resistant (R) to antibiotics in concentrations as indicated by the plate–disc method.

AUREOMYCIN	R 10 mcgs	PENICILLIN	R 1.5 U
BACITRACIN	R 4 U	POLYMYXIN B	R 10 U
CARBOMYCIN	R 1 mcg	STREPTOMYCIN	R 10 mcgs
CHLOROMYCETIN	R 10 mcgs	TERRAMYCIN	R 10 mcgs
ERYTHROMYCIN	R 1 mcg	TETRACYCLINE	R 10 mcgs
NEOMYCIN	R 10 mcgs	FURADANTIN	R 10 mcm

Fig. 2.

LABORATORY REPORT

This culture OF KLEBSIELLA
is susceptible (S), susceptible with resistant strains (SR), or resistant (R) to antibiotics in concentrations as indicated by the plate–disc method.

AUREOMYCIN	S 10 mcgs	PENICILLIN	R 1.5 U
BACITRACIN	S 4 U	POLYMYXIN B	R 10 U
CARBOMYCIN	S 1 mcg	STREPTOMYCIN	R 10 mcgs
CHLOROMYCETIN	S 10 mcgs	TERRAMYCIN	S 10 mcgs
ERYTHROMYCIN	S 1 mcg	TETRACYCLINE	S 10 mcgs
NEOMYCIN	S 10 mcgs	FURADANTIN	S 10 mcm

Fig. 3.

(Fig. 1) This patient had repeated recurrent attacks of cystitis. This organism was sensitive to all agents tested and responded promptly to Furadantin. Urine remained sterile after twelve months.

(Fig. 2) These organisms, *Pseudomonas* and *Aerobacter,* were resistant to all agents tested. The patient was a tabetic with a neurogenic bladder and retention of urine; resection permitted voiding in good amounts; residual urine, however, persisted from 26 to 30 ounces. It seems unreasonable to expect sterilization by any means under such circumstances.

(Fig. 3) This is a more typical report. Resistance was demonstrated to penicillin, Streptomycin and Polymyxin B; susceptibility to other antibiotics and Furadantin. This case was one of recurrent cystitis *(Klebsiella),* sterilized with Furadantin and remained sterile nine months later. However, in a case with an identical report of resistance (postoperative carcinoma of the bladder), the patient was cured of a *Pseudomonas* infection with Mandelamine. Sensitivity determinations avoided unnecessary expensive medication.

Of the nine antibiotics tested, as shown in the first part of our report, three appeared not applicable urologically; namely, Bacitracin, Neomycin and Polymyxin-B, since they were primarily intended for topical use and reported to be of high toxicity either orally or parenterally. Other

urologists[18] have hesitated to employ Polymyxin-B for fear of adding a nephrotoxic agent to an already embarrassed renal function. However, Yow[24] has successfully employed Polymyxin-B in considerable dosage in overwhelming infections caused by *Pseudomonas* and *Proteus* with remarkable results and without reported toxicity in five cases. We anticipate following his example. Buchtel[3] also recommends Polymyxin-B for urologic *Pseudomonas* infections.

For our own evaluations, this series has been divided into surgical (or operative) and non-surgical cases, since it appears manifest that the application of any therapeutic agent should be so differentiated, and physical corrective treatment should enhance pharmacologic results.

Table VII, analagous to the *in vitro* findings, reveals the efficacy of Furadantin in the patient with relation to the infecting organism. The second column indicates strains eradicated with Furadantin; the third column indicates those not eradicated; fourth column shows eradication with subsequent recurrence; and the fifth, eradication but subsequent replacement by other bacteria. It will be noted here that in all cases, surgical or otherwise, 50 per cent of the infections were eradicated, and the remainder, either not so or experienced recurrence or replacement.

TABLE VII. TOTAL ORGANISMS CULTURED FROM URINE OF PATIENTS WHO RECEIVED FURADANTIN THERAPY

Organisms Cultured	Number Organisms	Strains Eradicated with Furadantin	Strains Not Eradicated with Furadantin	Strains Eradicated But Recurred	Strains Eradicated But Replaced
Coliform Group*	23	13	5	2	3
Proteus	6		4	1	1
Alcaligenes	2	1	1		
Pseudomonas	12	6	6		
Klebsiella	10	4	6		
Beta Hemolytic Streptococci	3	3			
Hemolytic Staphylococci	3	2	1		
Total	59	29	23	3	4

*Includes Escherichia, Aerobacter and Paracolon.

TABLE VIII. NONSURGICAL CASES RECEIVING FURADANTIN THERAPY

Diagnosis	Number of Patients	Symptomatic Improvement	Improved Microscopic Findings with Positive Culture	Negative Urine and Culture (Bacteriologic Cure)	Treatment Ineffective
Chronic Cystitis	13	13	4	9	
Epididymitis and Cystitis	1	1	1		
Benign Prostatic Hypertrophy with Residual and Cystitis	3	2	2		1
Chronic Prostatitis	5	5	2	3	
Chronic Pyelonephritis	4	2		2	2
Polycystic Disease with Recurrent Pyelonephritis	2	2	1	1	
Glomerulornephritis with Recurrent Pyelonephritis	1	1		1	
Renal Calculus	1				1
Ureteral Calculus with Hydronephrosis	1	1	1		
Total	31	27	11	16	4

In Table VIII, the non-surgical cases are evaluated. Of thirty-one, twenty-seven were symptomatically improved; eleven showed microscopic improvement with positive culture; and in sixteen (51.6 per cent), bacteriologic cure was accomplished. Treatment was ineffective in four patients.

Fifteen surgical cases were treated post-operatively with Furadantin (Table IX). All of these experienced symptomatic improvement; eleven showed improved microscopic findings with positive culture. In four, bacteriologic cure was accomplished. There were no cases of ineffective treatment. While 100 per cent achieved symptomatic relief (with surgery and Furadantin), only 26.6 per cent were bacteriologically cured. The surgical correction of the various lesions listed is believed to have been satisfactory. All had pre-existing infection and if a longer period of follow-up had permitted, it is probable that a larger number of infections might have been determined cured.

Dosage

Dosage was originally estimated on a weight basis according to pre-established schedules, 6 to 8 mg. per kilogram per day. During the latter part of this series, a standard routine dosage of 100 mg. four times a day was prescribed. At first the drug was given for not longer than six consecutive days, followed by a two- or three-day rest interval. Later, if the patient was not intolerant, the drug was continued without interruption for as long as twenty-one days. Carroll and Brennan[4] report continued administration for forty days.

It is possible that our results might well have been improved with longer continuous dosage schedules. In some of our cases, therapeutic drug rotation was carried out. In these cases, if the organism had been demonstrated sensitive to Furadantin, the clinical response was invariably better than the response to the other agents employed.

TABLE IX. CASES RECEIVING FURADANTIN THERAPY POSTOPERATIVELY

Diagnosis	Number of Patients	Surgery	Symptomatic Improvement	Improved Microscopic Findings with Positive Culture	Negative Urine and Culture (Bacteriologic Cure)	Treatment Ineffective
Benign Prostatic Hypertrophy	2	Transurethral Resection	2	1	1	
	3	Suprapubic Prostatectomy	3	2	1	
Carcinoma of Bladder	2	Transurethral Resection	2	0	2	
Urinary Retention (Neurogenic)	2	Vesical Neck Resection	2	2		
	1	Permanent Cystostomy	1	1		
Hydronephrosis (Congenital)	1	Pyeloplasty	1	1		
Pyonephrosis	2	Nephro-ureterectomy	2	2		
Ureteral Calculus	2	Uretero-lithotomy	2	2		
Total	15		15	11	4	

TABLE X. ANALYSIS OF REPORTED REACTIONS TO FURADANTIN

Authors	Total Cases Studied	Nausea	Vomiting	Dermatitis	Fever
Rubin, et al	15	Occasional			
Norfleet, et al	50	6	1		
Mintzer, et al	25	6	1		
Mintzer, et al	12	1	0		
McCrae	Unknown	Some	Unknown		
A.M.A. Council Report	Unknown	Some	Occasional	Occasional	
Abrams	21	5	1		
Schatten and Persky	36	3	2		
Kaplan and Hobgood	50	8	2		
Herrold	40	Unknown	Unknown	2	4
Carroll and Brennan	128	43	2	1	
Breakey, Holt and Siegel	48	6	3		2
Total	425	78	12	3	6

There were no hemic, renal, or hepatic effects. No crystaluria. No spermatogenic effects demonstrated in man. Rare vertigo. Rare Diarrhea. Infrequent Malaise.

Reactions

Reports concerning reactions or drug sensitivity on the part of the patient have been at some variance.[1,4,5,10,11,13,14-16,19,20] While Carroll and Brennan[4] report 33 per cent of patients experienced nausea and 1 per cent vomiting, in only one case (Maculopapular eruption) was the drug discontinued. They mention no febrile manifestations. Herrold[10] on the contrary, reported significant febrile reaction in 10 per cent of forty cases.

Table X compares the reports of several investigators as to reactions. In two of our cases, in which the drug was necessarily discontinued, both experienced fever, nausea, vomiting, malaise, and moderate prostration. Reactions subsided within twenty-four hours after Furadantin was stopped and recurred with exacerbation within six hours after it was reinstituted. In one other case, tolerance appeared variable, from 125 mg. four times a day to 50 mg. and subsequently 100 mg. was tolerated. We encountered no cases of dermatitis. The only neurotoxic incident was a slight vertigo. There was no evident visceral toxicity nor evidence of suppression of any of the hemic components.

Controlled investigation of others[1,4,15,16,20] demonstrated no blood changes nor embarrassment of

renal or hepatic function. No instances of crystaluria were found.

Summary

We have endeavored to determine the value of Furadantin as an added therapeutic agent to the individual physician and his non-hospitalized ambulatory patient. We have determined to our own satisfaction the invaluable assistance accorded to each by the application of accurate bacterial sensitivity determinations. In the series reported, all have had follow-up urinalyses and cultural evaluations for a minimum of two months following the cessation of therapy.

With infections usually responding to accepted chemotherapeutic agents, our results with Furadantin have paralleled those of previous reports.

Our experience with *Pseudomonas* infections has not been that of most others[1,4,13,16,19,20] who found it to be almost uniformly disappointing (Table XI). We were pleased to accomplish eradication of this bacterium in six of twelves cases. While no report which we have been able to trace has included a large series of human *Proteus* infections, we find that there is some disagreement, at present, as to the efficacy of Furadantin in *Proteus* infections. While a few[1,4,15] report most promising results, our experience, as some others[13,16,19,20,23] has given no encouragement that this new agent will offer significant assistance. The reports of Vermeulen and Goetz[22] appear spectacularly encouraging and their biologic approach to the problem of *Proteus* infections with relation to calculus depositions certainly seems conclusive. Carroll and Brennan[4] emphasize this possibility in the analysis of their ten cases. We await investigations as to possible favorable results in relation to calculus formation in man. Since it was our desire to compare the efficacy of Furadantin in the more difficult resistant cases, only such instances are included in an effort to determine the comparative value of Furadantin with the antibiotics under a recognized controlled chemotherapeutic regime.

TABLE XI. REPORTED EFFICIENCY OF FURADANTIN AGAINST PROTEUS AND PSEUDOMONAS

Authors	Total Cases Studied	Proteus			Pseudomonas		
		Cases	Cured	Failure	Cases	Cured	Failure
Rubin, et al	15	4	1	3	2	0	2
Norfleet, et al	50	5	3	2	3	1	2
Mintzer, et al	25	3	3	0	1	1	0
Mintzer, et al	12	0	0	0	1	1	0
Abrams	21	7	6	1	6	0	6
Schatten and Persky	36	11	1	10*	6	0	6
Carroll and Brennan	128	10	9	1	22	1	21
Kaplan and Hobgood	50	2	0	2	4	1	3
Breakey, Holt and Siegel	48	6	0	6**	12	6	6
Total	385	48	23	25	57	11	46

*Replaced by Pseudomonas in six cases.
**Replaced by Pseudomonas in one case.
Recognition must be accorded Vermeulen's remarkable animal experiments relative to the effect of Furadantin on Proteus in relation to calculus formation.

Conclusions

1. Of the 359 cultures made, the Gram-negative bacilli were most significant, both in total number of organisms isolated and in the total number receiving Furadantin.

2. *In vitro* studies were not definitely prognostic of clinical response in our series as is evidenced by conclusions number 3 and 4.

3. *Proteus* was susceptible *in vitro* in 35 per cent of cases. *In vivo;* in only one case was the organism eradicated and this was replaced by another pathogen. Our results do not show Furadantin to be effective in the eradication of the *Proteus* organism.

4. Both *Klebsiella* and the organisms listed under the coliform group were found to be susceptible in 46 per cent of cases tested in the laboratory, but were eradicated in 69 per cent of patients treated with Furadantin. Our results, we believe, show Furadantin to be a rational form of therapy in these infections.

5. Since the *Pseudomonas* organism, which is usually extremely resistant to all forms of therapy, was eradicated in 50 per cent of our cases, we feel that Furadantin deserves a trial when this organism is found.

6. Sensitivity tests would appear to be mandatory because of conclusions drawn in numbers 5, 7, 8 and 10.

7. In cases where *in vitro* studies showed com-

plete resistance to specific agents tested, this resistance was manifested clinically by uniformly poor results when these agents were prescribed.

8. In cases where the organism was found to be sensitive to Furadantin in addition to other agents, results with Furadantin were found to be better in a significant number of cases.

9. Of forty-eight patients treated with Furadantin, there were six reactions, two of sufficient severity to cause us to discontinue the drug.

10. In view of the constant emphasis on patient-physician relationship, physical, emotional and economic, the choice of therapeutic agents should be governed by an awareness of all factors when positive therapy may be employed.

Note

Since publication, Furadantin has been found effective in a number of acute coliform infections; however, it has not been possible for us to compare this effectiveness with less expensive forms of chemotherapy.

Further, since presentation, we have believed that the simultaneous administration of Thorazine (chlorpromazine HCl—Smith, Kline and French), 10 mg. with each 100 mg. of Furadantin has tended to reduce the incidence of nausea.

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Discussion

Russell D. Herrold, M.D., Chicago.—More than twenty years ago a paper was given by Dr. Breakey in collaboration with the Michigan State Laboratory of Lansing. I had the opportunity to discuss that paper, the reliability of which has been proved by the test of time. After reading the present paper I am impressed again by the careful collaboration between the clinician and bacteriologist. I am in entire agreement with many of their conservative statements and conclusions.

A very important point has been made by the essayists in regard to the differentiation between the pathogenic organisms and the non-pathogenic contaminants. Too often one sees on hospital reports the isolation of saphrophytes together with their sensitivity readings. Also, too often on the basis of the findings, intensive, expensive, and unnecessary therapy is given, regardless of the absence of pyuria. The true criterion of pathogenicity at any particular time is the presence of pus cells in tht urine. Generally in hospitals, inoculation of the urine is made into nutrient broth in addition to solid mediums. It is impossible to obtain urine free from some bacteria even by catheterization, and saphrophytes can multiply rapidly in broth too.

Our sensitivity tests as regard Furadantin have been made on solid medium with the diagnostic tablets, of the pseudomonas tested, the resistance *in vitro* was so great we did not feel justified in trying Furadantin, so the

(Continued on Page 819)

Review of Acid-base Balance

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AN understanding of acid-base balance derives from an orderly review of several topics that include the acids produced in the body, the methods of acid elimination, the bases produced and their elimination, the expressions of electrolytes in equivalent units, the normal electrolyte pattern of the serum, and the principles of the tests used in the quantitative measurement of cations and anions. When these preliminary matters are clear, the clinical evaluation of the patient is facilitated and the principles of treatment become readily apparent.

Acids are produced in the body at all times. These substances are classified as volatile, fixed, ingested, and abnormal. The volatile acid is carbonic acid, and this substance is continuously formed as carbon dioxide emerges from the tissues to combine with water in the plasma. The main fixed acids include sulfuric, hydrochloric, phosphoric, lactic, uric, hippuric, and oxalic. The ingested acids are those arising from such foods as meats, eggs, and cereals, that oxidize to sulfuric and phosphoric acids. The common abnormal acids are di-acetic and beta-hydroxybutyric, which arise from the incomplete oxidation of lipids accompanying the metabolic disorder of diabetes mellitus. Of all of these, carbonic acid is the most important because of its continuous formation and large amount.

The maintenance of normal pH between 7.36 and 7.44 depends on the efficiency of the mechanisms that neutralize or eliminate these acids. Acids are eliminated principally by buffers, by excretion, and by conservation of base. These factors are depicted in Table I.

TABLE I. ACID ELIMINATION

Buffers	Plasma	Bicarbonate
		Alkaline phosphate
		Sodium proteinate
	Red blood cells	Hemoglobin (Chloride shift)
Excretion	Lungs	CO_2 from H_2CO_3
	Kidneys	Free acids
Conservation of base		H_2SO_4 to organic sulfates
		Di-acetic acid to neutral acetone
		Lactic acid to neutral carbohydrate
		Renal formation of NH_3 from urea

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The buffers of acids in plasma include sodium bicarbonate, alkaline phosphate, and serum proteins. The most important of these is the first, and the buffering action of bicarbonate is shown as follows:

$$\underset{\text{lactic acid}}{HL} + \underset{\text{sodium bicarbonate}}{NaHCO_3} \rightarrow \underset{\text{sodium lactate}}{NaL} + \underset{\text{carbonic acid}}{H_2CO_3} \rightarrow H_2O + CO_2$$

In this way, a comparatively strong fixed acid is replaced by a neutral salt, and a weak volatile acid is eliminated through the lungs. Thus, the stability of the pH is protected. Phosphates change from the acid form (NaH_2PO_4) to the di-basic form (Na_2HPO_4) as required. The serum proteins are amphoteric and act as buffers by changes from acid to basic forms. Of these buffers of acid in the plasma, sodium bicarbonate is much the most important.

The end product of tissue carbohydrate metabolism is carbon dioxide. Carbon dioxide (CO_2) from the tissues combines with water of the plasma to form carbonic acid (H_2CO_3). Since carbon dioxide is continuously produced in the tissues, and large amounts of carbonic acid are thus formed, an efficient buffer is required to transport this acid from the tissues to the lungs in a state that will not deflect the blood pH from its narrow normal range. The hemoglobin of the red cells provides this service. This buffering capacity of hemoglobin is due in large part to the chloride shift, or Hamberger effect. The essential reactions that take place in the red cells are shown in Figure 1.

The red blood cell progressing from lungs to tissue arrives in an oxygenated form. Several reactions now take place simultaneously. Oxygen leaves the cell and hemoglobin becomes reduced, the acidity of the hemoglobin decreases, and carbon dioxide enters the cell to join with water to form carbonic acid. The carbonic acid and reduced hemoglobin now unite to form potassium bicarbonate and HHb. The base (potassium ion) which was previously bound to non-diffusible hemoglobin, is now bound as bicarbonate, and the concentration of bicarbonate ions (HCO_3) is raised above that in the plasma. Therefore, diffusion of this anion takes place across the cell membrane. However, the cation (K) cannot pass across the semipermeable membrane, and the ionic balance is regained by the entrance of chloride ions into the cell from the plasma to replace the bicarbonate ions. These exchanges are in accordance with

the dictates of the Donnon equilibrium. In the lungs, all changes occur in the opposite direction and may be visualized by reversing all arrows of Figure 1. The speed of these reactions is indicated

Alkalis are not produced in normal metabolism, and thus alkalosis is much less frequently a clinical problem than is acidosis. However, the continued and excessive ingestion of bicarbonate or

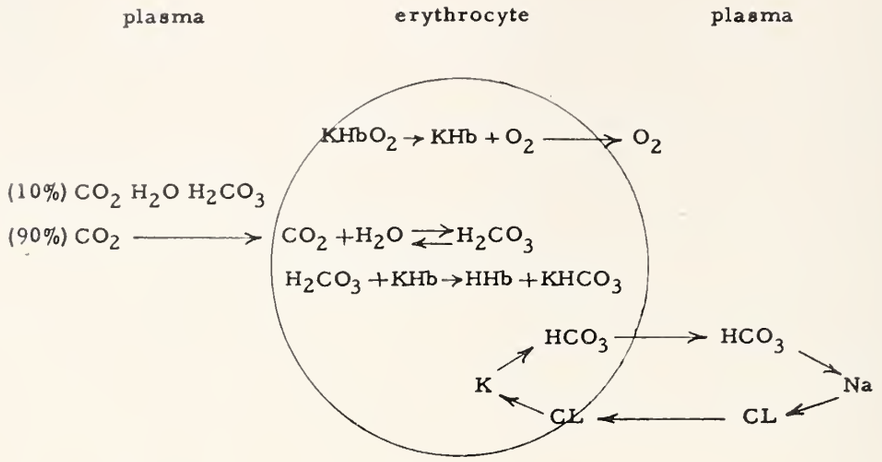


Fig. 1. The buffering action of hemoglobin. Erythrocyte in tissue capillary. The hexagonal portion of the diagram represents the chloride shift.

by the estimate that each red cell is exposed to the alveolar membrane for a period of less than one second during each cycle of passage through the lungs. It is to be emphasized that about 10 per cent of the carbon dioxide from the tissue enters the plasma and remains there in physical solution without ionization. The remainder, approximately 90 per cent, is carried in the plasma by virtue of the properties of hemoglobin and the chloride shift. Thus, the chloride shift of the hemoglobin, the plasma bicarbonate, and the pulmonary ventilation, represent the major channel of elimination of carbonic acid that is continuously produced in the tissues. It is estimated that approximately 20 to 40 liters of normal acid are excreted each day by this route. In addition, the kidneys are equipped to excrete free acids from the plasma, and it is estimated that 50 to 150 cc. of normal acid pass out of the body in the urine each day. The excretion of acid is thus a function largely of the lungs and of the kidneys.

Conservation of base and the metabolism of acids also contribute to acid elimination. For example, sulfuric acid is changed to organic sulfate, di-acetic acid is reduced to neutral acetone, and lactic acid is metabolized to neutral carbohydrate. The kidney has the unique property of extracting the ammonium ion (NH_3) from urea, for the purpose of replacing base so that the latter returns to the circulation to neutralize additional acid. Thus, sodium sulfate becomes ammonium sulfate and the displaced sodium is saved.

citrate as in the Sippy ulcer diet, or the loss of chlorides from prolonged vomiting or diarrhea occasionally lead to a state of alkalosis. In addition, prolonged ingestion of foods containing an excess of basic residue may contribute to alkalosis. These foods include all fruits and vegetables with the exception of prunes, plums, and cranberries.

Bases are buffered with carbonic acid, amphoteric serum proteins, and acid phosphate (NaH_2PO_4). The first is of greatest importance, and the buffering action of carbonic acid is shown below:

$$\underset{\text{sodium hydroxide}}{NaOH} + \underset{\text{carbonic acid}}{H_2CO_3} \longrightarrow \underset{\text{water}}{H_2O} + \underset{\text{sodium bicarbonate}}{NaHCO_3}$$

It is now in order that consideration be directed to the terms used for the expression of serum electrolyte concentration. It is, of course, necessary to express these concentrations in comparable units. Related substances may be compared on the basis of color, shape, density, weight, reaction, or other features common to all members. It has been customary in the past to express serum electrolytes in terms of weight, and thus to use weight as the basis for comparison. However, units of weight express no relation to reactive potential, and 326 mg. of sodium, for instance, are not the reactive equivalent of 326 mg. of any other serum electrolyte. Thus, the total weight of the cations is much different from the total weight of the anions even though these different weights repre-

sent equivalent reactive potentials. It is therefore of much greater utility to shift the basis of expression to terms of reactive units. On this basis, each unit, regardless of the substance, is the reactive equivalent of any other unit. For example, 142 reactive units of sodium are the equivalent of 142 reactive units of any other ions. Thus, the total number of cation units is the same as the total number of anion units. Table II presents a comparison of serum electrolytes in terms of equivalent reactive units and in terms of weight.

TABLE II. PLASMA ELECTROLYTES

		mEq./L.	mg./100 cc.
Base (Cations)	Na	142	326
	K	5	20
	Ca	5	10
	Mg	3	4
	Total	155	360
Acid (Anions)	HCO_3	27	60
	Cl	103	365
	HPO_4	2	3
	SO_4	1	2
	O. A.	16	21
	Protein	16	6500
	Total	155	6951

A substance in milligrams per 100 cc. may be converted to equivalent reactive units by multiplying by 10 to change to milligrams per 1000 cc., dividing by the atomic weight, and then by multiplying by the valence. The result is milliequivalents per liter and the conversion formula is thus drawn:

$$\frac{\text{milligrams per 100 cc.} \times 10}{\text{atomic weight}} \times \text{valence} = \text{milliequivalents per liter}$$

It is still of course proper to express non-electrolytic substances of the serum such as sugar, cholesterol, and non-protein nitrogen in terms of weight, since these substances are essentially inert and do not have a reactive ionic potential.

The normal distribution of the serum electrolytes, expressed in milliequivalents per liter, may be reviewed by referring to Figure 2.

This fundamental diagram should be memorized, as the interpretation of all clinical problems begins with an understanding of deviations from this normal pattern. O. A. represents organic acids in the diagram. Carbonic acid is not depicted on the electrolyte distribution chart because this substance is present in the plasma in only slightly ionized form.

The laboratory determinations that measure electrolytes and thus permit evaluation of acid-base equilibrium include the serum sodium, potassium, chloride, carbon dioxide combining power (bicarbonate), and pH. It may be seen from Figure 2 that these determinations provide precise measure-

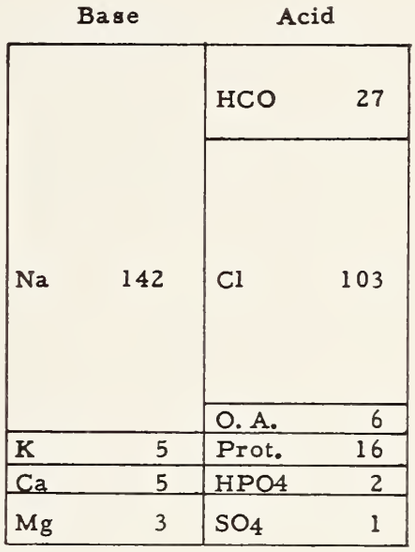


Fig. 2. Normal electrolyte pattern.

ment of all major electrolyte compartments of the serum. Sodium and potassium are determined quickly with the flame photometer. The serum chloride is determined by precipitation with silver nitrate and titration of the excess with sodium thiosulfate. The serum pH is determined with the pH meter. For reasons to be shown, it is not possible to consistently evaluate the precise state of acid-base equilibrium without knowing the plasma pH, and therefore, accurate interpretation demands this value.

The alkali reserve estimation or carbon dioxide combining power of the plasma is the most important test available for the detection of acidosis or alkalosis. For this test, which may be performed on serum or plasma, blood is drawn from the vein, and after centrifuging, the cells are discarded. As discussed under the "chloride shift," plasma contains a large amount of sodium bicarbonate ($NaHCO_3$) and a small amount of carbonic acid (H_2CO_3). There is also a minute amount of carbon dioxide dissolved in physical solution in the plasma. The carbon dioxide content measures the volume of CO_2 from the acid, the salt, and that dissolved in physical solution. During the steps that precede the actual test, some of the carbon dioxide is lost from the carbonic acid as well as from that dissolved in the plasma. Since the test determines the total CO_2, it is necessary to restore the content

of carbon dioxide. This is done by turning the plasma in a thin layer over the inner surface of a separatory funnel into which the last third of a normal expiration is directed. This portion of the

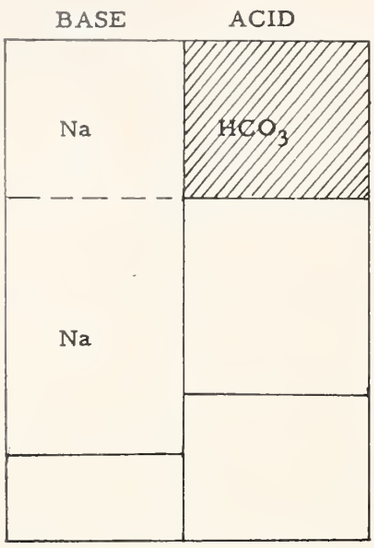


Fig. 3. The electrolyte compartment measured by the CO_2 combining power.

expiratory gas contains approximately the same pressure of CO_2 as that within the normal alveolar air (5.5 per cent). With the content of carbon dioxide restored, a measured volume of plasma is locked in the vacuum chamber of the Van Slyke gasometric apparatus. The addition of a strong acid liberates carbon dioxide from the bicarbonate ion (HCO_3) and from the carbonic acid (H_2CO_3). Since the volume of CO_2 from the carbonic acid is so small, the total carbon dioxide liberated is essentially a quantitative measurement of the bicarbonate ion. Figure 3 reveals the compartment measures by this determination.

As almost all of the CO_2 is released from the bicarbonate ion (HCO_3), this determination indirectly measures the amount of sodium held in combination with the bicarbonate ion as sodium bicarbonate. Any acid stronger than carbonic acid will take sodium away from sodium bicarbonate. Therefore, the amount of sodium attached to bicarbonate, as indirectly measured by the carbon dioxide combining power, represents the reserve of base left over after all acids stronger than carbonic acid have been neutralized. For this reason, the CO_2 combining power is also known as the alkali reserve estimation of the plasma.

It is to be emphasized that the plasma bicarbonate (HCO_3) is under renal control, and is not appreciably affected by changes in the respiratory effort. Only the circulating free carbonic acid (H_2CO_3), which cannot be quantitatively measured by laboratory test, is under the direct control of the respiratory rate.

The foregoing lists the acids and alkalis formed, the methods of their elimination, the expression of electrolytes in equivalent reactive units, and the determinations that measure deviations from normal. These facets may now be blended into a consideration of the factors that determine pH. The Henderson-Hasselbalch equation asserts that the pH is a function of the ratio of base to acid. When the proportion of base in the bicarbonate buffer system is 20 times that of acid, the pH is 7.4 regardless of the volumes of the counter parts. Normally 20 parts of base (HCO_3) are present for each part of acid (H_2CO_3). The Henderson-Hasselbalch equation is thus formed:

$$pH = \frac{BASE}{ACID} = \frac{NaHCO_3}{H_2CO_3} = \frac{20}{1} = 7.4$$

The carbon dioxide combining power measures the numerator ($NaHCO_3$), the denominator (H_2CO_3) is not subject to laboratory measurement, and the pH meter directly determines the serum pH. Two measurements (numerator and pH) are thus necessary before the third (denominator) can be estimated. Thus, the CO_2 content alone is not enough, and the pH must also be known if a full appreciation of the ratio is to be made apparent.

All deviations of acid-base equilibrium are of either metabolic or respiratory type. Metabolic deviations result from a primary change in the plasma bicarbonate, after which the pH changes, and the subsequent compensation is brought about by respiratory adjustment of the carbonic acid. Respiratory deviations result from a primary change in the plasma carbonic acid, after which the pH is deflected, and the subsequent compensation is brought about by a renal adjustment of bicarbonate. When the process begins that eventuates in electrolyte imbalance, the compensatory factors for a time restore the Henderson-Hasselbalch ratio. Later, as the process continues, these factors become ineffectual, and the disturbance then becomes rapidly progressive. Thus, all disturbances of acid-base balance are one of the types shown in Table III.

TABLE III. TYPES OF ACID-BASE IMBALANCE

1.	Metabolic acidosis, compensated or uncompensated
2.	Metabolic alkalosis, compensated or uncompensated
3.	Respiratory acidosis, compensated or uncompensated
4.	Respiratory alkalosis, compensated or uncompensated

Before discussing each in turn, it is perhaps in order to review the major clinical signs that suggest a disturbance of acid-base equilibrium. These are listed in Table IV.

TABLE IV. CLINICAL INDICATIONS OF ACID-BASE DISTURBANCE

1.	Diabetes mellitus (ketone acids accumulate)
2.	Coma (respiratory or renal impairment)
3.	Blood urea Nitrogen over 20 mg./100 cc. (renal excretion of free acids impaired)
4.	Hyperpnea (single physical sign of acidosis)
5.	Starvation (ketone acids accumulate)
6.	Tetany (physical sign of alkalosis)
7.	Toxemia of pregnancy (electrolyte depletion by fluid loss)
8.	Vomiting or diarrhea " " " " "
9.	Gastric or intestinal fistula " " " " "
10.	Large area burns " " " " "

Metabolic Acidosis

Ratio	Base / Acid	$NaHCO_3$ / H_2CO_3	20 / 1	16 / 1	16 / 0.8
pH			7.4	7.1	7.3

The common causes of metabolic acidosis are retention of organic acids due to impaired renal function or to accumulation of the ketone acids that are formed as a result of diabetes mellitus. When either of these events occur, the retained acids, being stronger than carbonic acid, combine with the sodium bicarbonate ($NaHCO_3$). The plasma sodium is thus bound and is not available for the neutralization of carbon dioxide from the tissues which is being continuously produced. Therefore, sodium bicarbonate is not formed, and the carbon dioxide combining power of the plasma is reduced. Reduction of the amount of available base, sodium, upsets the 20 to 1 ratio on which stability of the pH depends. The respiratory center of the medulla is exceedingly sensitive to disturbances of this ratio, and when this occurs, medullary impulses dictate an increase in the rate of respiration. Hyperpnea reduces the circulating carbonic acid by blowing carbon dioxide from the acid as the plasma passes the alveolar air in the lungs. Thus the denominator is reduced, the normal proportions of the ratio tend to be restored, and the pH moves back toward the normal range. When the respiratory adjustment partially restores the normal ratio of base to acid, the disturbance is compensated. However, the compensatory effort eventually fails, coma supervenes, and fatal uncompensated acidosis ensues.

Metabolic Alkalosis

Ratio	Base / Acid	$NaHCO_3$ / H_2CO_3	20 / 1	30 / 1	30 / 1.5
pH			7.4	7.8	7.5

This condition usually results from excessive ingestion of sodium or from depletion of chlorides from prolonged vomiting. In either event, there is a relative or absolute preponderance of sodium, and accordingly, of sodium bicarbonate. Thus, the numerator or bicarbonate ion (HCO_3) is increased and the CO_2 combining power is high. When the increase of sodium bicarbonate becomes disproportionate to the amount of circulating carbonic acid, the 20 to 1 ratio is altered. The sensitive medullary center then dictates that respirations be slowed so that carbonic acid may accumulate in the blood and restore the normal ratio of base to acid. As the acid increases (denominator), the ratio tends to be restored, the pH moves back toward 7.4, and the alkalosis becomes compensated. At this moment, the CO_2 combining power of the plasma is markedly elevated. However, the condition is compensated, and the pH is only slightly deflected. Therefore, the CO_2 estimation alone does not disclose whether the patient is compensated and not in serious danger, or uncompensated and in urgent need of immediate care.

The foregoing emphasizes that carbon dioxide from the tissues enters the plasma where about 90 per cent is carried to the lungs as sodium bicarbonate, and about 10 per cent is carried as free carbonic acid in the plasma. Of these two substances, only carbonic acid is under the control of the respiratory rate. Thus, when respirations are slowed, or the alveolar air exchange is impaired, carbonic acid accumulates in the plasma. Conversely, rapid and deep respirations blow off CO_2 from the carbonic acid and thus effect a reduction of the amount of that substance. Therefore, the denominator of the ratio $\frac{\text{base}}{\text{acid}}\ \frac{20}{1}$ is under respiratory control.

Respiratory Acidosis

Ratio	Base / Acid	$NaHCO_3$ / H_2CO_3	20 / 1	20 / 1.5	22 / 1.5
pH			7.4	7.1	7.3

Respiratory acidosis results from mechanical or physiologic slowing of the respirations with accumulation of carbonic acid until the ratio of base to acid is distorted. Prolonged sedation imposes a physiologic slowing. Pneumonia exerts a mechanical slowing with impairment of gaseous interchange, and in advanced emphysema, the exposure of blood to alveolar air is reduced even though the respiratory rate is increased. At the onset, the plasma bicarbonate is unaffected, the CO_2 combining power may be normal even though the ratio is distorted, and the patient is in serious acidosis.

Only the serum pH reveals the true degree of acidosis. With increase of carbonic acid and distortion of the ratio, the medullary center is no less sensitive to this change than when the cause is tions in which excessively deep or rapid respirations are a feature. However, hysteria occasionally causes sustained hyperpnea. The excessive ventilation reduces the circulating carbonic acid by

Name		Age	Date
Attending physician		Room No.	Hospital No.

Base (cations)	Normal	Patient
Serum sodium	136.0 - 145.0 m. eq.	
Serum potassium	3.5 - 4.5 m. eq.	
Acid (anions)		
Bicarbonate	26.0 - 28.0 m. mol.	
Serum chloride	100.0 - 106.0 m. eq.	
Hydrogen ion concentration	pH 7.36 - 7.44	

Normal				Patient			
Base		Acid		Base		Acid	
Na	142	HCO_3	27				
		Cl	103				
		Org. acid	6				
K	5	Protein	16			Protein	16
CA	5	HPO_4	2	CA	5	HPO_4	2
Mg	3	SO_4	1	Mg	3	SO_4	1
Total	155 m. eq.		155 m. eq.				

Fig. 4. St. Luke's Hospital Acid-Base Profile.

metabolic. However, the respiratory rate is fixed, and compensation must come from some other quarter. The kidney assumes the compensatory function and the urine becomes strongly acid as renal excretion of acid and retention of base proceeds. Thus, for a time the acidosis is compensated. However, the renal compensatory function is eventually inadequate to retain the ratio, the disproportion of base to acid increases, and death ensues.

Respiratory Alkalosis

Ratio	Base / Acid	$NaHCO_3$ / H_2CO_3	20 / 1	20 / 0.8	18 / 0.8
pH			7.4	7.8	7.5

Of all acid-base disturbances, respiratory alkalosis is the least common. There are few conditions in which excessively deep or rapid respirations are a feature. However, hysteria occasionally causes sustained hyperpnea. The excessive ventilation reduces the circulating carbonic acid by blowing off CO_2, the denominator of the ratio is decreased, and the pH begins to shift to the alkaline side. As in respiratory acidiosis, the medullary center cannot effect compensation because the respiratory rate is fixed, and the kidney again assumes the compensatory function. The renal burden is to excrete base so that the ratio is restored. Accordingly, the production of ammonium ion stops, phosphates are excreted in the alkaline form (Na_2HPO_4), and the urine becomes strongly alkaline. This renal compensation is remarkably effective and accounts for the ability of mountain climbers to labor for long periods at high altitudes. However, the compensation eventually fails and the pH deviates beyond the range that accommodates life.

Principles of Treatment

When accepting the responsibility of treating a patient in acid-base imbalance, it is first necessary to determine the nature and extent of the disturbance. The clinical features usually reveal whether the condition is of metabolic or respiratory type. The acid or alkaline direction of the pH deviation and the gravity of the condition according to the degree of compensation may be determined by five laboratory procedures. At St. Luke's Hospital, these tests in combination are termed the Acid-Base Profile. This is shown in Figure 4. A single venous aspiration of 25 cc. of blood provides adequate serum for all tests. Approximately one hour is required to complete the report. The response to treatment may be followed by repeating the acid-base profile.

For metabolic acidosis, the essential measure is the replacement of sodium. This is conveniently done by giving a solution of sodium lactate, as the sodium is retained and the lactate supports carbohydrate metabolism. When the cause of metabolic acidosis is diabetes mellitus, the restoration of normal carbohydrate metabolism stops the production of the ketone acids. For metabolic alkalosis due to excessive ingestion of base, chloride may be restored by the parenteral route as ammonium chloride, and the ingestion of base is to be stopped. Replacement of chloride is also effective when metabolic alkalosis results from vomiting with loss of fluid high in chloride content. For respiratory acidosis, antibiotics are useful in clearing the airway so that gaseous interchange is restored. Oxygen is to be given with care because oxyhemoglobin is much less a respiratory stimulant than the hypoxia to which the patient has become accustomed, and the sudden elimination of this stimulus complicates the respiratory difficulty. Thus oxygen in excess may be harmful when respiratory acidosis exists. For respiratory alkalosis due to hysteria, sedation is effective as the slowing of respirations permits the accumulation of normal amounts of carbonic acid in the plasma.

These principles of treatment do not indicate exact amounts and volumes of therapeutic substances to be used. Wide experience and exceptional clinical judgment are required for the precise treatment of acid-base disturbances. However, charts indicating the amount of corrective fluid and electrolyte replacement required for various states are available. These are based on a correlation of the plasma pH and the body weight. Such charts may provide direction for initial therapy, and periodic laboratory investigation of progress may be helpful in planning the subsequent program of treatment.

COMPARATIVE EFFICIENCY OF FURADANTIN WITH ANTIBIOTICS IN PRIVATE PRACTICE

(Continued from Page 812)

favorable response reported in 50 per cent was enlightening. E. coli and staphylococcus aureus have proved most sensitive *in vitro* and generally *in vivo*.

Concerning Proteus, the zone of inhibition has always been small. Furthermore, after administration, followed by failure, *in vitro* tests revealed complete resistance. In addition time and again proteus has emerged in the cultures while the patient actually was taking Furadantin. This would seem to be added proof that this species is quite resistant. Here the original cultures failed to indicate the presence of Proteus mixed with the other predominant and generally coliform types, for which the drug was administered. Dr. A. V. Boand at the University of Illinois has noted recently an increased incidence of *Proteus mirabilis,* formerly a rarity as compared to *Proteus vulgaris.*

Side reactions were reported a year ago of one patient who developed an allergic skin manifestation and fever after forty-eight hours of Furadantin therapy. Another patient had a similar reaction on the tenth day and a third patient with fever, only, on the twelfth day. The latter two reactions probably could have been avoided had the drug been discontinued on the sixth or seventh day which is likely the maximum period worthy of trial. We stated also a year ago that the results were not good in men when the prostate was infected because of the low blood and tissue level. Results were best in uncomplicated infections in women.

In the evaluation of Furadantin or any other agent, comparatively long follow-up is needed, clinically and bacteriologically. I was glad to note by the authors the minimum period of follow-up was two months.

Finally may it be emphasized again that pyuria is more important than bacteriuria without pyuria. The latter preferably should be managed without intensive therapy, except during a clinical exacerbation as indicated by recurrent pyuria and other evidence such as fever and acute disturbance of urination.

Alcoholism and the Private Practitioner

By Ralph Daniel, Executive Director
Michigan State Board of Alcoholism

THE role of the private practitioner in treating the alcoholic patient is a debatable role. There are some who believe that this patient can best be treated in tax-supported rehabilitation programs. If there is to be a debate, now is the time for it to start. Tomorrow may be too late.

The disease of alcoholism is as old as history. The general public is only beginning to recognize alcoholism as a disease. With this recognition has come action, and throughout the country tax monies are being spent to rehabilitate alcoholics. There is no question but what physicians will be needed to treat alcoholics. The question facing the medical profession and public agencies is: "What physicians should treat alcoholic patients and where?"

Alcoholism is commonly referred to as a public health problem. Michigan, like most other states, has enacted legislation on the disease and is using public money to fight it. Labeling alcoholism a disease and a public health problem does not necessarily determine who should treat the alcoholic patient. Two avenues are open. The precedence of the treatment of the mentally ill and the tubercular patient offers one approach. These patients are for the most part treated in tax-supported hospitals by physicians paid by public funds. The other avenue is to treat the alcoholic locally, in general hospitals, using the general practitioner and other local resources, such as Alcoholics Anonymous.

The Michigan State Board of Alcoholism has indicated its intention to use the latter approach. Printed materials are mailed to interested physicians. Scholarships to the Yale School of Alcohol Studies are available. A ten-thousand-dollar grant has been made to St. Luke's Hospital in Marquette to set up a five-year pilot program to determine the effectiveness of treating alcoholics in general hospitals. The Board has adopted a statement of treatment goals that says in part, "The ultimate goal of the program of the State Board of Alcoholism in treatment, research, and education is to make available to alcoholics the same effective services which are now available for other diseases." A Board statement relative to grants to private institutions says in part, "The people of Michigan are now meeting their health needs through private practitioners and public and private agencies. The Board of Alcoholism is of the opinion that eventually the health needs of the alcoholic should be treated by the same type of resources."

The present law states that the Legislature may appropriate up to 5 per cent of the liquor license fees for the Board's program. The Board does not consider the current appropriation of $118,000 or even the maximum of $210,000 to be adequate to finance good educational and research programs in addition to a state operated rehabilitation program large enough to take care of the needs in Michigan. The Board offers consultation services and financial aid to locally operated rehabilitation programs for alcoholics. It is expected that private practicing physicians will play a large part in these local programs.

The success of the Board's policy will be determined by several factors:

1. The interest of the private practicing physician in the disease of alcoholism.
2. The willingness of physicians to "team up" with Alcoholics Anonymous, social agencies and the clergy to treat the alcoholic.
3. The interest of general hospitals in treating alcoholics.
4. The willingness of hospitals to "team up."
5. The interest of the clergy and social agencies in alcoholism (the interest of A.A. is assured) and their ability to work with the medical profession.

The disease of alcoholism cannot be adequately treated by a single approach. The physician who gets the alcoholic "on his feet" physically and warns him to "cut down on his drinking" will have little success with the alcoholic patients. The clergyman who faces only the moral aspects or the social worker who sees only a social problem will be equally unsuccessful. In many cases members of Alcoholics Anonymous have felt the need for hospital beds and physicians' care where A. A. could supply only part of the patient's needs. Sometime there may be more adequate treatment methods, but until that time comes, a multi-disciplinary approach is the best answer.

Last year there was introduced in the State Legislature a bill that would have established a 1,000-bed hospital for alcoholics. There may be similar legislation this year. If such a law is enacted the state will be in the business. The "die will be cast."

No one really knows which method would be best for the alcoholic. Much can be said for either method, and there are many logical objections to each. It is not the objective of this article to push either private or public medicine as the answer, but rather to stimulate thinking at a time when the final decision has not yet been made.

Three points can be counted on:

1. The general acceptance of alcoholism as a disease will stimulate a need for more medical men who will treat alcoholics.

2. If the private practitioner does not treat alcoholics, there will be a demand for tax-supported physicians to do the job.

3. Successful treatment of alcoholism cannot be confined to the physical aspects alone, but must include the social, emotional, moral and economic aspects.

The following excerpts on treatment are taken from Policies and Rules of Procedure of the Michigan State Board of Alcoholism:

Treatment

(a) The Executive Director is hereby authorized to make such contracts with local units on a financial matching basis as he may deem necessary and advisable, subject however to the prior approval of the Board. The Executive Director may, and is encouraged to promote the establishment of alcoholic wards in hospitals for the care and treatment of alcoholics, or in the absence of a ward, to arrange for the admission of alcoholic patients on the same basis as any other patient. The Executive Director is further authorized to make such necessary contracts for the cost of the care and treatment of individual alcoholic patients which is provided for under the provisions of the law and under such commitments as more fully set out in the following paragraphs of this section.

(b) The Public Health Department of each county or the Public Health Department of each incorporated city of this state is hereby designated as the agency of this Board to receive voluntary requests for treatment and for commitment of individual alcoholic patients. The State Health Department shall function in areas not covered by the services of medical health officers. Any person who shall deem himself an alcoholic, and shall be certified and diagnosed as such by a registered physician of this state, may make application for treatment under the provisions of and under the rules and regulations of this Board. Such application, certification and diagnosis shall be in writing and upon such forms as shall be provided by this Board. Upon the satisfactory proof that such applicant is in need of care and treatment as an alcoholic, the county or city medical health officer may sign an order committing such applicant to a hospital for medical treatment.

(c) Any such orders committing any person to a hospital or other medical institution for care and treatment as an alcoholic shall be upon such forms as will be provided by the State Board of Alcoholism and shall contain such provisions as shall be approved by said Board. All such orders shall contain the length of time that any such patient will be under the care and supervision of the Public Health Department, as near as may be, which shall in no case be less than sixty (60) days from the date of said order; and if any case requires more than one year of treatment or supervision, then it shall be necessary that a new application and order be made in each individual case. Such orders may be changed from time to time under such conditions as the Board of Alcoholism may require, but in no case shall any new orders affect any case or cases pending without the consent of the party or parties involved.

(d) In cases of emergency, any person may receive immediate care, treatment and hospitalization as an alcoholic and without previous request or application, if any registered physician of this state, under oath, certifies that such care, treatment and hospitalization is an emergency; and any such patient receiving emergency treatment may continue to receive the benefits under the provisions of this act if such emergency may later be found to, in fact, exist; provided however, that such patient shall qualify under this act the same as any other patient as soon as practicable and as soon as such emergency shall cease to exist; and further, all expenses incurred through such emergency shall be treated the same as any other necessary expenses incurred under ordinary conditions. The maximum length of treatment under emergency provisions shall be limited to five days.

(e) Any and all files and records pertaining to the care and treatment of any individual under this procedure shall be of a private and confidential nature and shall not be opened to public inspection by any person or persons not directly connected with the State Board of Alcoholism or the various departments of Public Health hereby designated throughout the State of Michigan.

(f) The costs for the care and treatment of all alcoholics who come under this act shall be guaranteed by this Board from public funds made available for this purpose, together with funds from other co-operating agencies or local units which may be made available under the provisions of this section. Any person's financial status shall not be considered as a part of the requirements for the care and treatment provided for herein; provided, however, that the Board will require financial responsibility and reimbursement where practical.

Discussion

Clayton K. Stroup, M.D., Flint, Michigan: The problem Mr. Daniel presents our society is pertinent. Alcoholism today must be considered a disease and a public health problem. It rates with cancer, tuberculosis and heart disease as one of the four major health problems facing us today, and inasmuch as it may be one of the factors pertaining to trauma this rating is perhaps even lower than it should be. The fundamental

(Continued on Page 832)

A Physician's Report on the Yale Summer School of Alcohol Studies

By John G. Haarer, M.D.
Ionia, Michigan

THE Yale Summer School of Alcohol Studies has considerable to offer any physician interested in the vast problem of alcohol and its effects on mankind. The course is not new; last summer was the twelfth presentation to a class of approximately 200. Needless to say, these were not all physicians but persons from all walks of life seeking more information about alcohol and its social problems. There were fourteen physicians in attendance, the largest number to date, reflecting the renewed interest by this professional group. Interest in the problem is the only prerequisite for acceptance in the school. One does not need to be a recovered alcoholic or member of the WCTU, although both groups are represented.

The purpose of this four weeks course is to present a scientific unbiased, unprejudiced analysis of the problem. Yale is one of the few centers approaching the problem in the true scientific manner and certainly deserves credit for its untiring efforts. Before Yale, alcohol, its use and abuse, was taken for granted; time was wasted to study it. The only information available was the bias and prejudice handed down from one generation to another; a person had to be for or against drink—there was no middle road. Yale has taken the middle road and has interested not only the reformers, but the manufacturers, in its unbiased approach to the problem.

Alcohol is a problem the physician should not overlook, as it seriously affects the health and well-being of over four and a half million persons in this country. Physicians tend to reject the problem, feeling it is not a medical condition. It is part medical, part sociological, religious, legal, and economic; the physician should realize this and do his part, as should the others involved, to provide an integrated approach to the problem. Rejection by the physician, the church, and all other agencies involved has heightened resistance in the patient and increased the difficulties of treatment manyfold.

Yale recognizes the broad scope of this problem, so presents not only the medical aspects but the socio-economic-religious-legal-moral-sexual et cetera, complications brought about by those overindulging.

The physical properties of alcohol were discussed and the effects demonstrated on living tissues; white rats and class members were used. It was demonstrated that specific amounts of alcohol produce definite blood levels and definite degrees of anesthesia—at least with reasonable consistency. This fact has led to the development of the Alcometer by the Yale group. This is of interest in the medicolegal determination of intoxication. The blood, tissues and alveolar air contain alcohol in direct proportion, so measurement of the breath offers a fairly accurate estimate of the blood and tissue levels. The Alcometer measures the alcohol in the breath in a nearly foolproof manner and is now accepted by many police courts as evidence of the state of intoxication. Blood levels below .05 per cent are not under the influence of alcohol; those .05 to .15 per cent may or may not be under the influence; those over .15 per cent are definitely under the influence. A blood level of .15 per cent represents the ingestion and rapid absorption of a half pint of whisky. Certainly these standards would not incriminate anyone unless he were under the influence, and it protects those that might act drunk from other physical diseases, diabetes, head injury, et cetera. It was stressed that physiologically alcohol is an anesthetic agent and, like any anesthetic agent, its effect is altered by the physical state of the recipient; thus hunger, anxiety, disease, and habit alter the total reaction and lead to the misconception that alcohol *per se* affects some persons more than others—that is, definite blood levels produce definite degrees of intoxication.

Time was not spent condemning nor condoning the use of alcohol; instead efforts were made to develop a clear picture of the so-called alcoholic, tracing each step as the pattern was developed. All seem to follow a general pattern regardless of the initial cause of drinking. Dr. Jules Masserman has demonstrated with cats that neurosis leads to drink—his films were reviewed. It was shown that not only those with psychic conflicts drink—the so-called symptomatic drinker—but also the weak-willed individual who learns to like the effects of alcohol. Dr. Harry Tiebout describes this indi-

vidual as an egocentric, narcissistic, megalomaniac personality whose defiant attitude resists psychiatric treatment. This is a strong, but immature, childish ego structure and is usually termed a weak ego in comparison to the fully matured, adult ego.

Lecturers included psychiatrists, lawyers, ministers, educators, judges, manufacturers and governmental agents, et cetera, discussing the problems in their specific fields. These individuals lectured to the general group and to the seminars. There were nine seminar groups: community organization, education, industry, medical, ministers, nurses, rehabilitation, social workers, and special.

Treatment of the individual patient was of paramount interest among the medical group. Several psychiatrists discussed their experiences. Treatment of the acute alcoholic was discussed. Thorazine was mentioned here because of its specific indications in control of vomiting. It is also effective in aborting the full-blown delirium tremens syndrome. The conditional reflex regime using emetine hydrochloride, or apomorphine, is still used by some but is not favored by the majority in the long-range treatment plan. It is effective only as a crutch. Antabuse, being the most recent addition to the physician's armamentarium, received considerable discussion. Physiologically it is effective as it blocks the oxidation of alcohol in the tissues with the production of acetaldehyde, which is extremely toxic to the individual. It is effective in very small doses and no tolerance develops—allowing for continued usage for years. Most patients after months or years on the drug will test themselves with a small dose of alcohol, and readily learn their "physiology" is unable to tolerate alcohol. An effective physiological barrier is produced between the patient and the bottle. With psychotherapy directed at strengthening ego defenses (or maturing the ego described by Dr. Tiebout) the patient can gradually learn to live without alcohol and antabuse. Admittedly antabuse is a crutch, but nevertheless most of its users feel it has proven its worth and should be used as an adjunct in the total treatment program. The foregoing pertained primarily to the individual who drank sufficiently to endanger his physical health. And here is where so many physicians terminate treatment. Leaving the patient at this level, while it may produce a non-drinker, makes for unhappiness and frustration—a potent field for return to alcohol. To cope with this, it is necessary to study the socio-economic-religious, et cetera, areas of the problem.

In attempting to find the cause of drinking, which even Yale admits it does not know, considerable attention was given to the learning process. It was demonstrated that most recent learning (and the most difficult patterns of behavior) was the first to be forgotten when under the influence of alcohol. The drinker has apparently known this for a long time and makes use of it to escape his present problems, reverting to a more wholesome period in his past. Learning and habit formation develop together, so the alcoholic soon finds he needs alcohol regularly. He may have no problem or worries to escape from, but from habit he feels the need for alcohol and becomes addicted to it—a learned process. A learned process can be wiped out and relearning of old habits re-established—as demonstrated in cat experiments—thus proving to the individual there is no real need, in a physiological sense, for alcohol. Being aware of the relearning process, the physician can effect recovery in considerable numbers of the problem drinkers. On an ambulatory basis, this is difficult and requires the aid of all agencies, church, club, employer, family, et cetera, associated with the patient. The problem is to keep drink and the patient apart, and while apart cause the patient to relearn, or perhaps learn for the first time, good patterns of wholesome living. The patient should be kept away from alcohol, not just for the so-called drying-up period, as is the usual practice, but for the rest of his life. All agree the longer the patient is kept away from alcohol, the better his ability to develop the habit of going without. This has been especially borne out at the Ionia State Hospital, where the patient is given not only the physical boost of vitamins, high proteins, et cetera, but also the psychiatric reorientation and relearning that spells the difference between recovery and short-lived spasmodic remissions. Here the relearning process highlights the treatment program, effected by routinized patterns of living prolonged till the new habit is a fixed part of the total personality.

Yale stressed the value of Alcoholics Anonymous. Here the members themselves form the barriers restraining the patient from return to alcohol. Again the process of relearning good habits is developed. Alcoholics Anonymous is the

most effective treatment program, claiming approximately 75 per cent recoveries. There are about 450,000 members now. These are usually life members, substituting that intangible quality of Alcoholics Anonymous for the bottle. Alcoholics Anonymous differs from the psychiatric approach in that it substitutes relearning *per se* with another emotion, spirituality, thus treating one emotion with another. Eventually the patient, or Alcoholics Anonymous member, comes to see and admit that a power greater than himself has entered into the treatment program, and this he usually ascribes to religion or a God of his own. The feeling comes about as the individual sees the change in his personality from the defiant, narcissistic person to one who can accept help and in turn help his fellow man. He accepts this rather than religion *per se* because he has worked through it and sees its effects.

The one outstanding factor in Alcoholics Anonymous is the rapport among its members. This is the *sine quo non* of any approach to the alcoholic. He needs to feel he is understood by the therapist, and one with similar experience would then be most understanding. This does not mean that the therapist need be an alcoholic, but certainly he must be able to demonstrate sincerity to the patient. This accounts for the frequent success of non-professional therapists over the professional groups.

Many psychiatrists now conduct group therapy programs among their alcoholic patients with more success than individual therapy. Of course, there must first be an evaluation of the individual needs of the patient before any specific treatment is prescribed. Such treatment fulfills the dependent needs of the patient and yet frees him to a degree from the direct influence of the therapist.

Education of the public, bringing the problem into the open, seems the best means of attacking this problem if long-range results are desired. An understanding of the use, abuse, and results of the same is direly needed. This will lead to a more proper and fitting use of alcohol. Alcohol has a definite place in society and it is certainly not the intent of this author to crusade against it. However, abnormal and excessive use of alcohol should be the concern of everyone. Education should be directed at the high school level, as research has demonstrated that the initial drinking habits are established at this age. Also noted was the identification with parents, the children drinking or not drinking in direct proportion to the parents' drinking habits. Also the public should be convinced that the excessive drinker is a sick person, not a social outcast or misfit, one who can and should be properly treated.

Alcohol is not only an individual problem; it is a vast public health problem affecting every segment of our culture. It is imperative that every physician be cognizant of all aspects of the problem and be willing to play his role in the total treatment program.

CLOTTING OF BLOOD WITH RUSSELL'S VIPER VENOM

(Continued from Page 804)

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The Clinical Use of Radioactive Isotopes in the Diagnosis and Localization of Brain Tumors

By Robert G. Farris, M.D.,
Henry R. Pantek, M.S., and
Edgar A. Kahn, M.D.

Ann Arbor, Michigan

IN 1947 Moore[3] demonstrated that certain brain tumors selectively accumulated fluorescein when this organic dye was circulating in the blood stream. He administered fluorescein intravenously to patients having brain tumors and showed that the tumor fluoresced brightly when exposed to ultraviolet light in contrast to surrounding cerebral tissue. When artificially produced radioactive isotopes became available, he proposed that this organic dye be tagged with a tracer material and its distribution determined by external means. Using a Geiger counter, he was able to demonstrate that the majority of brain tumors selectively accumulated enough tracer material to allow accurate localization with an external count. In the meanwhile[1,4] several other investigators have pursued this problem using similar techniques and have reported widely varying results.

In 1950 a similar study was undertaken by the neurosurgical service at the University of Michigan Hospital. It was hoped that this technique could be improved and its value reassessed. An apparatus (Fig. 1)[2] was constructed for this specific purpose allowing for more rapid quantitative measurement of the distribution of isotopic material in the brain. The apparatus consists of a pair of scintillation counters mounted in a suitable mechanical framework so that the concentration of tracer material in each hemisphere of the brain may be measured simultaneously. The patient either sits in a chair or lies on a stretcher, and a mechanical framework carries the sensitive counters in an orderly fashion, scanning all areas of the head. The counts are recorded simultaneously from each side and their values balanced against each other, and any difference in counting rate on one side or the other produces a deviation in the record. A group of normal individuals were given a tracer dose of di-iodo-fluorescein and the counting rates measured. It was found that the distribution in the brain was quite symmetrical as might be expected from a bilaterally symmetrical structure such as the brain. The deviation from true symmetry proved to be quite small and normal values were established in comparing one side of the brain to the other.

A model of the human head was constructed and filled with a solution of radioactive isotopes. In order to produce a situation simulating brain tumor a small balloon was attached to a glass rod and the balloon filled with a solution of radioactive material in slightly higher concentration than the solution filling the model. The balloon was moved to various locations in the cranial cavity to demonstrate the effect of tumors in different areas of the brain in terms of counting rate.

When the balloon was placed at any point along the midline of the model, the counting rate from each of the detectors was the same since the activity emitting from the balloon contributed an equal quantity of radiation to each counter. On the other hand, when the balloon was moved further away from the midline, it produced an increasingly greater difference in the number of counts from each side. The difference in counting rate from each side increased as the square of the distance from the counter. The square law applies to all gamma radiation. When the balloon was moved twice as close to the counter, the counting rate increased four times. Similarly, when the balloon was enlarged, the difference in counting rates increased. With increased concentration of radioactive material within the balloon relative to concentration within the model, the difference in counting rates was increased proportionately.

Therefore, these facts are axiomatic: (1) the larger the tumor, the greater the difference in counting rate, (2) the greater the preferential uptake of the tracer material, the greater the difference in counting rate, (3) the further laterally that the tumor is situated, the larger the difference in counting rate. It likewise follows that a small tumor or one located in the midline, or one of low differential uptake may not be detectable.

Since 1950 we have examined 160 patients whose clinical symptoms were suggestive of brain tumor. Of these 160 patients, sixty were subse-

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quently shown to have brain tumors. In these 160 patients the overall accuracy of the test has been 87 per cent correct. Of the sixty patients having proved brain tumors, 60 per cent were accurately diagnosed by the test. In only six cases has the test indicated the presence of a tumor when no tumor has been proven to be present. On the other hand, a considerable number of tumors have not been discovered by this method. Therefore we have come to regard the results of this test as being most meaningful when a positive result is obtained since such a result is rarely in error. However, should the result be negative, further search for the presence of a tumor should not be discontinued.

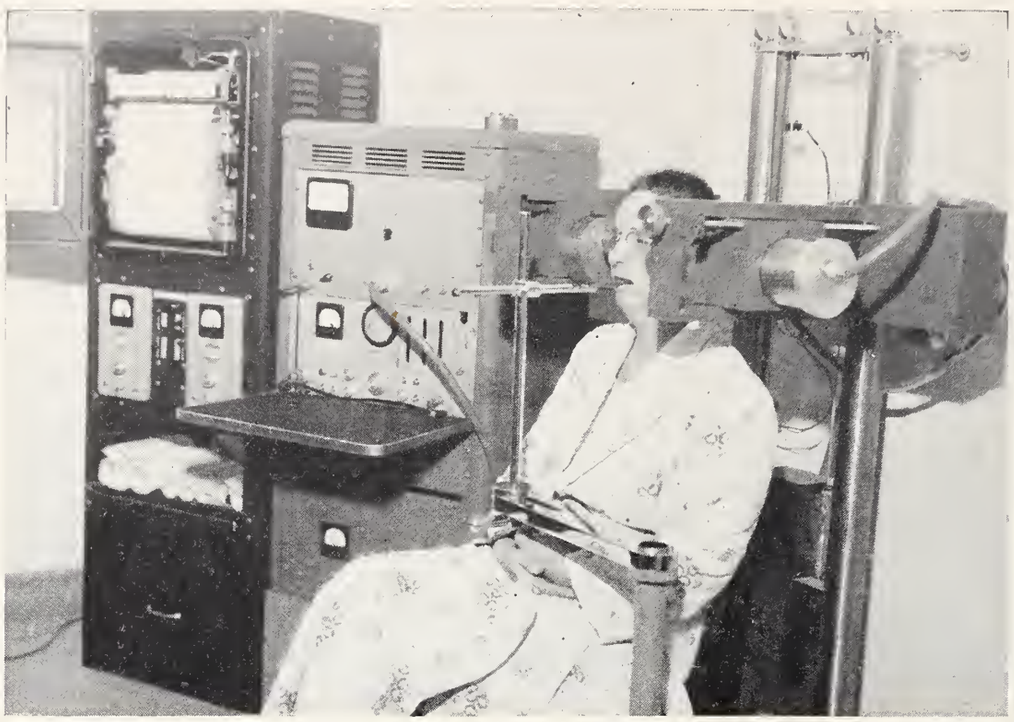


Fig. 1. The University of Michigan dual head scintillation counter with recorder and electronic units at the left. Statistical variations along the center of the graph indicate a normal record. (From Correlative Neurosurgery by Kahn, Bassett, Schneider and Crosby, Charles C Thomas, 1954. By permission of the publishers.)

It is not as yet well understood why neoplastic tissue has special affinity for various tracer materials. From the study of gross and histological material most observers believe that vascularity plays some role, inasmuch as highly vascular lesions have a general tendency towards higher preferential uptake. Extremely vascular glioblastomas usually have a high preferential uptake. On the other hand, accoustic tumors which are relatively avascular have shown high differential uptakes. In one case of accoustic tumor histologically similar to the others, the differential uptake was less than that of normal surrounding brain structures. Meningiomas, quite similar in gross and microscopic appearance, have shown widely varying propensities in the differential uptake of tracer substances. Increased cellularity does not always increase preferential uptake but there is some general correspondence between these two factors. It is well established that the property of preferential uptake is not peculiar to neoplastic tissue. Certain vascular anomalies have been reported to show significantly increased uptakes although we have not observed this in our material.

Fluorescein has been commonly used in the study of ulcerating lesions of the lower extremities, localizing itself in an area of inflammation surrounding the ulcer. We have observed increased uptake in an area of cellulitis of one leg as compared with the opposite leg, using sodium iodide as a tracer substance. Necrosis and cystic degeneration in general result in a diminished uptake of tracer substances. Following arteriography, increased uptake occurs on the side of the injection. We have also seen a very high preferential uptake in a large tuberculoma of the brain having a very thick capsule and completely necrotic purulent contents.

It is known that this property of affinity for tracer materials exhibited by neoplasms holds true not only for di-iodo-fluorescein but for sodium

iodide (I_{131}), potassium chloride (K_{42}), chromium salts (Cr_{56}), iodinated serum albumen, and other substances. It is difficult to explain why such tissues have the property of abnormal uptake for such widely different substances ranging in physical structure from simple ions to very complex protein molecules.

It is significant that the highest preferential uptake occurs at varying time intervals following administration of the tracer substance used. Di-iodo-fluorescein demonstrates its greatest preferential uptake in thirty minutes to one hour, whereas protein-bound iodine demonstrates its greatest preferential uptake at between twenty-four and thirty hours after intravenous injection. It is quite possible, of course, that there is some common denominator affecting the exact mechanism of action of these various substances such as increased metabolic rate in the tumor, increased capillary permeability, or damage to the blood-brain barrier.

We have found that the apparatus which we have designed has been very satisfactory for performing this diagnostic test. The patient is given a dose of radioactive sodium iodide between two and five hours prior to the time of testing. It is then necessary that the patient sit in the machine for a period of twenty to thirty minutes while the record is made. It is difficult but quite possible to examine unconscious and unco-operative patients while on a stretcher. We have had limited experience with small children, but find that this test is rather unsatisfactory due to their inability to sit still. We have used this entirely safe test quite freely in patients suspected of having brain tumor but in whom the suspicion is not sufficiently justified to warrant the risk of contrast studies such as pneumography or arteriography.

Summary and Conclusions

We have come to regard the radioactive isotope localization test as a valuable adjunct in the diagnosis and localization of brain tumors. When a positive result is found we have little doubt that a space taking lesion exists. A negative result does not exclude the possibility of an expanding lesion. The test is harmless to the patient and convenient to perform, both for the patient and for the operator. This test has now become a routine laboratory procedure available to all. We believe that the procedure may be further improved in the future and that the most fruitful realm of investigation lies in the discovery and preparation of tracer materials which have a greater affinity for tumor tissue.

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THE H BOMB

When millions of Americans saw pictures of the tremendous fireball of the first hydrogen test explosion in "Operation Ivy," measuring 3¼ miles in diameter, many wondered how people in any large city could survive such holocaust.

Yet the H-bomb, despite the wider range of its destructive force, will not destroy the earth.

There will always be much more of America undamaged, and many more millions of our people alive and eager to fight back and win, than there will be death and destruction.

Here are some of the facts we must learn to live with, in what President Eisenhower has called "an age of peril."

1. Atomic bombs and hydrogen bombs do exist as deliverable weapons of war. The Russians are known beyond any doubt to possess a growing stockpile of such weapons.

2. Even the small atomic weapons now make one plane able to deliver as much destruction as could be carried by about 1,000 airplanes using conventional bombs in World War II.

3. No absolute military defense exists today or is likely to exist in the foreseeable future. A determined aggressor could deliver atomic or hydrogen bombs on our cities, should he decide to attack our country.

4. A bomb 1,000 times as powerful as the Hiroshima bomb will not cause damage 1,000 times as far away—*only 10 times as far.* It will harm an area only 100 times as large—not 1,000 times as large.

5. There are practical limits to the amount of destruction that can be caused by a single bomb of any kind.

6. The best means of protection from the immediate effects of atomic or hydrogen bombs are distance from the center of the explosion and the protection of suitable shelter.

7. Co-operate fully with your local civil defense authorities. They want to help you learn how to survive, if we are attacked. What you do *before* the explosion can save your life. What you do *after* the explosion can also save lives, including your own.—*Federal Civil Defense Administration.*

Advantages of Membership in the American Academy of General Practice

By Charles Sellers, M.D.
Detroit, Michigan

THE AMERICAN Academy of General Practice is a national organization of doctors of medicine who are engaged in the practice of general medicine. The members of this relatively new medical group are working in harmony with the American Medical Association, the State Medical Societies and the County Medical Societies. They are not opposed to any other medical organization. The American Academy of General Practice has grown to such a stature that it now takes its rightful place among the great medical organizations of the country. It speaks for the general practitioners; therefore, those physicians who are interested in the future welfare of the practice of general medicine should take an active part in the Academy and in formulating its future policies.

A general practitioner is a physician who does not limit himself to a particular field of medicine, although his interest may lead him to devote more time and attention to a particular specialty. Nearly 17,000 general practitioners have joined the American Academy of General Practice, but there are many who have not joined as yet. As times goes on and the real merit of the Academy becomes better known, it seems reasonable to expect that the American Academy of General Practice will become the largest medical organization in America except, of course, for the parent American Medical Association.

Outstanding among the reasons for the formation of the American Academy of General Practice were better care of our patients through continued education in general medicine, the advancement of the art and science of general practice and protection of the rights and privileges of the general practitioner. This is not a simple undertaking. The words of certain spokesmen seem to indicate that they believe that the time is at hand to eliminate the general practitioner from various surgical, obstetrical and gynecological procedures in some hospitals. Actions have been initiated to this end. Unfair restrictions are being placed on qualified general practitioners in various localities.

The American Academy of General Practice is not going to stand idly by and see the general practitioner liquidated by being relieved of one privilege after another. The Academy contends that every general practitioner should have equal opportunity with others to qualify for hospital privileges and should be permitted to engage in all procedures in which he has demonstrated competency.

The Academy further contends that it is contrary to the basic principles of medical service to require a general practitioner to surrender a patient to a specialist when the patient enters a hospital. It is the general practitioner's duty and responsibility to see that the patient receives all the necessary diagnostic and therapeutic facilities made available by the hospital and by other members of the hospital staff and at the same time to be the patient's friend.

The Academy hopes to re-establish the general practitioner as the basic, indispensable figure in American medicine. For many generations, he has directed the medical care of his patients, called in surgeons, radiologists and other specialists when needed and protected his patients against overtreatment and excessive charges. That is the way it should be. And it is the only way that the cost of medical care can be kept from getting out of hand. Every family should have a general practitioner who knows and is interested in that family; then the proponents of socialized medicine would find themselves talking to the wind.

Academy members should be a little better equipped than the average general practitioner, for they must keep up postgraduate requirements of one hundred fifty hours study each three years to retain membership.

Members are listed in the American Medical Association Directory as general practitioners which should make it easier to refer a patient going to another city and for those in other localities to refer patients moving into our community.

The Academy has done much to re-establish the general practitioner in his rightful high place in the practice of medicine. Through its efforts, the majority of general hospitals now have a general practice section. Many medical schools are placing more emphasis on training general practitioners and their affiliated hospitals are offering internships and residencies for general practitioners.

(Continued on Page 830)

Opportunity Knocks—Medicine Is Out of Town

By Alfred E. Eyres, M.D.
Detroit, Michigan

IT GIVES me great pleasure to address this group. It is gratifying to note your interest in a problem so neglected yet so pressing.

Nervous illness and its environs constitute public health problem number one. The number ill inside and outside of hospitals is astronomical. Every practitioner of medicine sees in his daily practice, neurotic and potentially psychotic patients. One in fifteen of us spends some part of his life in a mental hospital or on a psychiatric service. One in fifty of us will commit suicide. It is somewhat easier to comprehend the problem if we visit the state hospitals and the veterans administration hospitals and view literally the hordes of patients. They have sideboards on all of these hospitals.

We hear these days much controversy about veterans administration medicine and treatment of non-service-connected disabilities. Serious as this threat is to the general welfare, to organized medicine and to private practice, it is overshadowed several times by the many facets presented by public health problem number one—nervous and mental illness.

I must state, unequivocally and without reservation, that while opportunity knocked, medicine was out of town. Why? Ignorance? Definitely not. Failure to comprehend and understand the problem? In part—yes. Could it be the general philosophy and perhaps the economic pressure of western civilization? In part—yes. Apathy? Inertia? Disregard? Scorn? Definitely yes. There is even contempt which is unfortunately a part of the organic tradition of medicine. I am reminded of my teacher, the late esteemed and learned professor of internal medicine at the State University of Iowa, Dr. Baldridge. He wrote generously. He was an authority in the differential diagnosis of functional and organic illness. On countless occasions in clinic and in lecture, his humorous contempt of the psychoneurotic in particular and the functional patient in general drew the overwhelming applause of the entire class.

Every individual and every organization, governmental or private voluntary, nurtures within instinctual self-preservation. This makes fence building necessary. The fences that organized medicine has built or is building, are at very best late, inadequate, flimsy and riddled with perforations. In the last twenty-five years our policies have been subjected to merciless crossfire. We are disunited: we flounder; we grope in the dark; we are circumstantial and on the defensive. We frequently lash out at the osteopathic physician who is reasonably well trained and usually practices credibly. We vent our hostility and antagonism on the chiropractor, the naturopath and other wild medical men farther down on the list. To how many of us does it occur that it is to the latter that go our mistreated and misunderstood patients, our misdiagnosed patients and especially our patients functionally ill as result of emotional stress. We take the time neither to treat them nor refer them. We take histories; we examine; we test and test and test; we prescribe and inject; we operate; we frequently fail in the evaluation, the treatment, and the handling of the patient. The most valuable commodity the patient and the doctor possess is time—precious time. Time means money. It means the difference between cure or arrest of disease versus chronicity.

On April 26 of this year there appeared in the *Detroit Medical News* an excellent editorial written by Dr. David Sugar entitled, "The Shame Of Our City." Dr. Sugar calls to our attention that which we have half-heartedly been cognizant of for a long time: The sordid, tragic and grossly unsatisfactory methods and facilities for the care and treatment of the nervously ill. Dr. Sugar asks, "What purpose does Eloise Hospital serve?" In one way or another and at periodic intervals in the newspapers, we hear about Eloise. Who is in a position to do something about Eloise? Make no mistake: There will be nothing done about it either by legislators or by the citizenry until such time as the doctors assume leadership and demand that changes be made. To a majority of people the word of the family physician is authoritative. May I state emphatically: There is virtually no limit to that which can be accomplished by solid logic and collective medical leadership.

Why don't we have psychiatric treatment facilities in our general hospitals? The psychiatric patients are there. Where are they? They are on the medical, the surgical, the gynecological and all

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other services. Do physicians and hospital administrators prefer to blind themselves in regard to this actuality or are they "kidding" themselves? I am reminded of the situation of the youngsters visiting the bears at the zoo and a bystander inquires casually, "Who is entertaining who?"

Unfortunately, the Michigan Hospital Service is of little or no help. Private psychiatric hospitals are covered only in a nonparticipating way. In one of three general hospitals in Detroit having a psychiatric service, full coverage is given to all types of service except psychiatric. Here confusion reigns. The Michigan Hospital Service blames the hospital and the hospital decries the Michigan Hospital Service.

In October of this year there was prepared and sent to the members of the Michigan State Medical Society, an outline for periodic history and physical examination. Painstaking and elaborate as this guide is, do you find in it anything regarding anxiety, depression or emotional stress? You certainly do not.

Housecleaning begins at home. It is the responsibility of the medical profession to assume sorely needed leadership in the crusade against mental illness. Indeed, the preventive and the therapeutic aspects of the problem are of terrible urgency. Every physician must do some of this work. The remainder should certainly be properly referred.

Psychiatric treatment is, unfortunately, more complicated, less easily defined, more time-consuming than any other kind of medical treatment. Nevertheless the results can be richly rewarding. The psychotherapeutic and the psychoanalytic methods are expensive, tedious, slow and very time-consuming. More and more there will be used as specifically indicated variable types of somatic, pharmacologic and physiologic therapy. The recent advances of neurophysiology are already dictating specific therapies. The work of Funkenstein and his co-workers in Boston provides most recent commanding research. Their work has been carefully duplicated and verified. It can now be demonstrated and proved that as the physiology is altered so is there a change in the psychology. Conversely, as there is noted a change in the psychology so there develops change in the physiology.

And so there marches on the fight for life: The relentless never-ending struggle for physical and mental health. Firm support and recognition by all of you otolaryngologists is needed. Without the aggressive participation of the internists, the surgeons, the gynecologists, all specialists and general practitioners, the cause of nervous and mental illness is lost. As the cause of nervous and mental illness is lost so will there also be lost the lion's share of the stakes in medicine. As physicians, we can yet plan and effect remedial measures. However, time is running out. For both physician and patient it will be unfortunate indeed if government and the politicians remove all medical administration from our grasp.

ADVANTAGES OF MEMBERSHIP IN THE AMERICAN ACADEMY OF GENERAL PRACTICE

(Continued from Page 828)

The annual national convention of the American Academy of General Practice and the annual state meeting of the Michigan Academy of General Practice are among the finest medical meetings held anywhere and are outstanding events for general practitioners.

Much progress has been made and more will be accomplished but our objectives could be reached sooner with a larger membership. We need you, but we are convinced that every general practitioner needs the backing of the American Academy of General Practice even more.

A family doctor for every family including the doctor's family.

Periodic Health Appraisal

The Heart and Blood Pressure

By Paul S. Barker, M.D.
Ann Arbor, Michigan

EXAMINATION of the heart should be conducted with the utmost care. Heart disease is common and often serious, and anxiety regarding the heart may be incapacitating even when the heart is normal. The early recognition of unsuspected cardiac abnormality permits the institution of proper care at a time when it is likely to be most effective. A negative examination while reassuring does not, of course provide assurance against cardiac difficulty at some future time. It is important not to interpret mistakenly minor or unimportant perculiarities in the cardiac findings as indications of serious heart disease, thus causing needless anxiety and even invalidism. The examination and the record should be sufficiently complete and precise not only to establish the presence or absence of heart disease, but also to provide quantitative data and measurements which might be of importance in recognizing changes upon the next annual examination.

The history should provide precise information. The symptoms of cardiovascular disease are not numerous, but the descriptions given by patients vary greatly. They should be recorded briefly but adequately. Dyspnea, palpitation, pain and edema are common; fatigue, cough and syncope are less characteristic. In hypertension headache, giddiness, tinnitus and impaired vision are encountered, and nocturia and other symptoms of renal disease may be significant.

It is important to note the manner of onset of symptoms and the circumstances under which they occur, how much exertion in terms of common activity causes dyspnea or pain, the frequency and duration of episodes of pain or palpitation. Dates are important and especially if the patient has stopped working or has become incapacitated. Other details should be recorded with similar care.

The physical examination requires that the patient be comfortable, relaxed and at ease. The state of nutrition, pallor, cyanosis and dyspnea are noted at a glance. The heart should be examined with the patient sitting as well as recumbent. The rate and rhythm are noted and recorded. Bulging, heaving or retraction of the precordium is noted and also the presence of a shock or thrill. The location of the apex beat and the extent of dullness should be determined accurately and recorded. Attention is given to the quality and intensity of the heart sounds and to the presence or absence of a third or gallop sound. Murmurs and friction rubs are described. The palpable arteries and pulses and their quality and peculiarities are noted. With the patient sitting, the neck veins serve as a convenient manometer for estimating the systemic venous pressure. The arterial blood pressure is best determined with the patient recumbent. If syncope is a symptom, the pressure is taken with the patient standing as well. Cautious testing of the carotid sinus reflex may be indicated, but is usually not performed unless clearly indicated. The eye grounds should be examined in all patients with hypertension. A survey for pulmonary congestion, hydrothorax, ascites, enlargement of the liver and spleen, edema, petechiae and clubbing of the fingers and toes concludes the examination.

Moderate elevation of the arterial blood pressure upon a single examination does not necessarily indicate the presence of hypertensive cardiovascular disease. In the absence of other evidence of hypertensive vascular disease, it may well be that on other occasions the blood pressure will be found to be normal. The observed elevation may be no more than a reflection of the nervousness which may naturally attend a physical examination, and especially the first such examination. Nevertheless, it should not be disregarded. It may be interpreted as an indication of the manner in which the patient responds to stress. This, of course, may mean that the patient is a candidate for hypertensive vascular disease in the future. It may be possible to help the patient control his emotional tensions.

Special observations, in addition to the history and physical examination, should be included in a thorough examination of the heart. X-ray films of the chest are indicated for purposes other than examination of the heart, but they serve as a useful record of the size, position and contour of the heart and great vessels.

An electrocardiogram should be obtained if possible as part of a complete examination of the heart. It may disclose evidence of unsuspected cardiac abnormality. It may be helpful to have a curve for comparison in the event of cardiac dif-

ficulty in the future. It is important not to misinterpret minor or insignificant peculiarities of the electrocardiogram as evidence of heart disease.

The vital capacity is easily determined and gives a figure which may be useful for comparison upon future examinations. It may serve, with certain limitations, as a measure of cardiac fitness or impairment.

The renal status should be investigated in all patients with hypertension. A careful urinalysis is indicated, and the serum creatinine level provides a useful estimate of renal function. Further special or urological examinations may be indicated.

An authoritative pamphlet entitled *Examination of the Heart* is available to doctors of medicine from the Michigan Heart Association, 3919 John R., Detroit 1.

ALCOHOLISM AND THE PRIVATE PRACTITIONER

(Continued from Page 821)

issue is: are we as physicians willing to accept our responsibility for the treatment of a disease of this magnitude? If we accept this responsibility, and I think we should, we are faced with two basic problems.

The first of these is the problem of education and salesmanship. We must sell the general hospitals on the acceptance of the alcoholic as an alcoholic. We must educate the private practicing physicians in the disease of alcoholism, and sell them on teaming up with Alcoholics Anonymous, social agencies and the clergy in the handling of the chronic alcoholic.

The second problem is the treatment of the individual alcoholic. First, there is the emergency treatment or the "drying out" of the individual. This in most instances will require hospitalization for approximately five days, and by its very nature, it would be difficult to obtain in an institution many miles away, such as a large central hospital. Second, the treatment of the patient who is "on the wagon" is a continuous process in that these patients must be followed for the larger part of their life. This also would be very hard to do in any institution which is at some distance, particularly when co-operation with other agencies is required.

It is my hope that the physicians of Michigan will be willing to accept the problem of the treatment of the alcoholic so that it will be unnecessary to have tax-supported physicians and institutions. This would only lead to more socialization of the practice of medicine.

Telangiectatic Keloidal Foci Following Skin Sandpapering

Report of a Case

By Noah E. Aronstam, M.D.
Detroit, Michigan

The patient, a woman, aged twenty-three, was sandpapered for post-acne scars approximately sixteen months ago. At first, the result of the process appeared to be promising. But within the last six months, telangiectatic zones or foci developed. When viewed at a distance, they had all the appearance of lupus erythematosus lesions; but, upon closer inspection, they presented minute keloidal foci or nodes, traversed by telangiectatic web-like proliferations. There were no subjective symptoms at any time.

The niveau of the lesions was slightly raised and the areas imparted to the fingers keloidal induration. The patient felt deeply embittered and self-conscious. I suggested as a temporary modus operandi hydrocorton ointment and oral cortogen; yet I believe that such a course would afford little hope for improvement. I desisted from the use of radiotherapy, for fear of aggravating these lesions.

I am wondering whether there are reports of similar cases in the current medical literature. Thus far, I could find no mention of such a sequel following the sandpapering therapy.

I would appreciate it if my confreres would assist me in finding similar cases either in their practice or mention of such in the current literature on the subject.

My patient emphatically refused a photograph of the lesions even by masking or excluding the eyes.

* * *

En passant: I do find an occasional mention of the etiology of keloids in several text books, but this applied to the subject of keloids in general, viz.: trauma as a causative factor.

656 Macabees Building

NOT MUCH TIME TO CALL YOUR OWN, IS THERE?

Are you a $4,500-a-year man who begins work every morning at 8 a.m.? Actually, you don't start "earning your living" until 10:36 a.m.

That report comes from the Kentucky Tax Research Association, which has figured out it takes the average man two hours and thirty-five minutes of each day to pay his taxes, both direct and indirect.

The rest of the eight-hour day? "Mr. Average" spends it like this:

For food, one hour, 37 minutes; housing, one hour, 24 minutes; clothing, 36 minutes; transportation, 42 minutes; medical and personal care, 23 minutes; reading and recreation, 20 minutes, and other goods and services, 23 minutes.

Detroit Physiological Society

Meeting of January 20, 1955

A PRELIMINARY REPORT ON THE MECHANISMS OF CIRCULATORY RESPONSE TO ENDOTRACHEAL INTUBATION

By Marion L. DeVault, M.D. and
Leroy C. Harris, Jr., M.D.
Wayne University College of Medicine and Detroit Receiving Hospital

The circulatory response to endotracheal intubation was studied on a group of patients (twenty-six to date), employing only thiamylal sodium and succinylcholine chloride. Continuous intraarterial pressures, employing a Statham strain gauge transducer and electrocardiograms, were recorded.

It has been known for some time that during anesthesia, direct laryngoscopy and tracheal intubation will produce a tachycardia and a rise in blood pressure. Cardiac arrhythmias can also be produced. This study was conducted not only to evaluate and study the cardiovascular changes that might accompany laryngoscopy and intubation but to determine the reflex pathway over which this response is mediated.

The investigation was divided into two phases:

1. A semirapid intubation employing only thiamylal sodium and succinylcholine chloride was done and all circulatory responses recorded and measured.
2. The patient was then extubated and allowed to return to a prelaryngoscopy level and reintubated following the administration of either intravenous atropin in 3 mg. doses or Regitine in 5 mg. doses. Atropine was given to block parasympathetic activity; Regitine to block sympathetic responses.

During intubation, a consistent increase in heart rate and blood pressure was noted. Arrhythmias were produced in a significant number of cases. Atropine in 3.4 mg. doses (.4 mg. was given preanesthetically) diminishes this response; Regitine appears to block it completely.

Increase in	*Intubation No. 1* Thiamylal sodium and succinylcholine *Total: 25 patients*	*Intubation No. 2* Atropine group *Total: 13 patients*	*Intubation No. 2* Regitine group *Total: 6 patients*
Heart rate	14 ± 12	3 ± 5	1 ± 5
Systolic pressure	40 ± 21	18 ± 11	7 ± 6
Diastolic pressure	30 ± 17	14 ± 10	6 ± 4
Cardiac arrhythmias	6	3*	None**

*Arrhythmias not blocked by atropine
**Arrhythmia did not reappear after Regitine

At this time, we do not have enough data to show that adrenergic blockade will diminish or completely block the cardiovascular effects of laryngeal instrumentation. No conclusions can be drawn from the small number of cases we have done.

DIFFRACTION STUDIES ON IMMATURE BONES

By L. F. Wolterink and R. J. Kraay,
Michigan State College.

Preliminary studies of untreated dried powdered femurs from day-old chicks and chick empryos by electron diffraction revealed a pattern which best fit that from the hexagonal crystals of $CaNaPO_4$, a high temperature mineral not hitherto reported from any calcified animal tissue. Since rigorous proof for this structure can not be deduced by comparisons with data available in the literature, supplementary data from x-ray diffraction were sought. This paper reports the results of such studies.

If immature chick femurs are heat ashed at about 500-600 F., the high temperature form of beta tri-calcium ortho phosphate (Whitlokite) can unequivocally be demonstrated. If similar bones are wet ashed with ethylene-diamine at temperatures below 200 F, characteristic apatite patterns are obtained. The apatite in ethylene-diamine ashed femurs can be converted to Whitlockite only by prolonged heating at 1000-1200 F and then only incompletely. It is suggested that the organic matter initially present has something to do with the formation of Whitlockite in low temperature ashing. Dried (but not ashed) femurs from hatched chicks give less distinct patterns which arise from "poorly-crystallized" apatite.

From dried (not ashed) femurs of chick embryos incubated 11 days, diffraction lines not due to apatite or Whitlockite can easily be demonstrated. These lines are very weak or not readily detectable at hatching when an apatite is the major mineral constituent of the femur.

There is present then a mineral, which is not apatite, in pre-osseous cartilage at the time it is first calcifying. The identity of this mineral is difficult to determine in the presence of apatites. It is presumably either a precursor of apatite or an alternate "shortage form" for calcium prior to the mineralization process. It is not $CaCO_3$ or $CaSO_4$ in any of their known forms.

Meeting of February 17, 1955

ISOLATION OF THE CARDIOINHIBITORY BRANCHES OF THE RIGHT VAGUS NERVE IN THE DOG

By Nicholas J. Mizeres, *Department of Anatomy, Wayne University.*

Previous personal studies have shown that vagal vilaments to the wall of the right atrium originate only from the thoracic portion (below the level of origin of the recurrent laryngeal nerve) of the right vagus nerve in the dog. Bodian and osmic acid preparations of these cardiac nerves (named the craniovagal and the caudovagal cardiac nerves) show an abundance of unmyelinated fibers. Smaller scattered groups of myelinated fibers were found to range in size from 2 to 5 microns in diameter. A few fibers above 10 microns were also present.

In ten dogs under nembutal anesthesia the EKG was recorded and the effects of stimulation of the right vagus nerve at different levels were observed. It could be determined that only the craniovagal and caudovagal cardiac nerves are capable of inducing strong inhibitory effects and often complete heart block even at a relative low stimulus strength. These nerves probably innervate the SA node.

MODIFICATION OF STRATIFICATION IN THE ERYTHROCYTE BY CARBON MONOXIDE IN NORMAL AND FAMILIAL HYPOPLASTIC ANEMIA BLOODS

By Robert H. Foulkes and Raymond W. Monto, *Edsel B. Ford Institute for Medical Research, and Henry Ford Hospital, Detroit, Michigan.*

Ultracentrifugation of normal erythrocytes in a clot will stratify three cell components differing chemically and in relative specific densities. These strata are revealed by using suitable fixatives, sectioning the clot, and staining the sections with differential stains. Two such stains, Mallory's triple stain and iron hematoxylin with acid fuchsin, were used on red cells from normal man and from a case of familial hypoplastic anemia. Treatment of normal blood with carbon monoxide resulted in the Mallory-stained cells taking less orange dye and much more red and blue dye. When treated with monoxide, the increased affinity for blue dye was not as great in anemic blood as in normal. However, the stratification was sharper in the monoxide-treated anemic blood. The hematoxylin stain was lighter in the anemic blood and showed more pronounced stratification than in the normal blood.

Meeting of March 17, 1955

THE USE OF ULTRAMICRO CHEMISTRY IN A HOSPITAL LABORATORY

By Jaan Ploompuu and Edwin M. Knights, Jr., M.D.

In certain types of hospital patients, there is considerable difficulty in obtaining amounts of blood adequate for the usual biochemical examinations. Rather than attempting to run "cut-down" determinations on standard laboratory equipment, the authors feel that the use of specially designed ultramicro apparatus offers an opportunity to obtain more reliable results on limited samples of capillary blood. Ultramicro procedures enable the physician to obtain a complete electrolyte picture on as little as two drops of blood, and satisfactory methods are available for NPN, BUN, total protein, albumin, glucose, sodium, potassium, chloride, icteric index, bilirubin, and CO_2 content or combining power. This approach has been used successfully in the chemistry division of the Department of Pathology at Harper Hospital for the past six months, and has proven a very valuable supplement to the routine methods of analysis.

FACTS ABOUT "MIKE SHOT" OF "OPERATION IVY"

1. It was a ground test of a thermonuclear device, not a bomb dropped from the air.
2. It took place at Eniwetok Atoll in the Pacific in November, 1952.
3. The fireball measured 3¼ miles in *diameter.*
4. The *radius* of total destruction was 3 miles.
5. The *radius* of heavy to medium damage was 7 miles.
6. The *radius* of light damage was 10 miles.
7. The blast destroyed the tiny island of Elugelab, leaving a crater roughly 1 mile in diameter and 175 feet deep at the deepest part.
8. After 12 minutes the cloud was nearly 20 miles high and 100 miles across.
9. Some damage from any similar device would be suffered over an area of somewhat more than 300 square miles—about the area of metropolitan New York City . . . *but*
10. Complete destruction would cover less than 30 square miles—1/100,000th of the surface area of the continental United States.—*Federal Civil Defense Administration.*

Who Is the Judge?

The battle of the General Practitioner, for his proper place in the sun, continues. For a time, it seemed that he had only to contend with the specialty groups in medicine. This was valiantly met by organization, and the setting up of standards through postgraduate study, of well qualified men in the General Practice Field. Such standards have been generally accepted as a foreward step in line with providing better medical care to the public. Some physicians have not yet acknowledged the need for their participation. Such progressive standards were promoted from within the profession, just as were the original objectives of the College of Surgeons and College of Physicians. The development of Specialty Boards was but a step toward training of quality in the various fields of medicine.

The improvement of hospital care through the impetus of these groups has been a great boon to the public. But with this standardization of hospitals has come another powerful influence which threatens to destroy or limit the ability of the whole profession to serve the public.

We have always felt that the best judges of medical competence were the doctors themselves. A hospital staff (medical) could observe and qualify practitioners according to their abilities and training and not unduly restrict the privileges of practitioners who did not fall into the specialty groups. Where this has been done, with due regard to the rights of any and all licensed doctors of medicine, the frictions of groups has been minimal and the public best served.

Now, there seems to be a growing tendency of hospital organizations and administrative boards to assume the prerogatives of the medical profession. They are attempting to be the judges of medical competence with no regard to the will and advice of the medical staff. This policy can only result in bitterness and conflict. The doctors must defend and promote their own judgments and not let laymen usurp the privileges and obligations that are truly medical.

President's Message



Robert H. Baker

President, Michigan State Medical Society

Editorial

MICHIGAN STATE MEDICAL SOCIETY ANNUAL SESSION
Civic Auditorium—Pantlind Hotel, Grand Rapids
Wednesday-Thursday-Friday, September 28, 29, 30, 1955
YOU are invited to attend the Ninetieth

NINE DOLLARS AND FIFTY-EIGHT CENTS EACH

THE MEMBERS of the Michigan State Medical Society are indeed fortunate in many ways. We have one of the most noted and worthwhile annual sessions in the state medical field. Our attendance is outstanding and our program always the best obtainable. Many doctors pride themselves on attending postgraduate courses or going to interstate or sectional meetings or big city clinics, and pay good registration money. They come home with no better courses than would have been obtainable here at our own State Medical Society.

The cost of our annual session in September was $22,000. There were 2,295 doctors in medicine registered. Each doctor attending under any other auspices would have paid the costs and much more in his registration fee—$9.58.

What did they get?

A superb program and grand time—an unparalleled postgraduate course—all in three days, all close to home, all arranged and paid for by our exhibitors (who are happy to show their wares) and arranged by our untiring headquarters office.

When you go to our coming meeting, visit with our exhibitors and save an order for them, but most of all appreciate our good fortune—and $9.58.

SALK VACCINE

BY the time this issue of THE JOURNAL is published, we hope the Salk vaccine tangle will be cleared and everything working smoothly. We commented a year ago that the making of experimental vaccine and using it in limited areas would present far fewer problems than complete commercial production. Experience has shown the problem. Soon after the first injections were allowed, cases of paralytic polio developed. To date, there have been 101 cases with five deaths.

Much study, many conferences and news releases from Washington show that practically all the vaccine prepared has been approved except two batches from the Cutter Laboratories in California. Such was the report on May 25, 1955.

Industrial history predicted the results we have had. Many years ago the chemical industry developed some complicated formulae which worked beautifully in the experimental laboratory —dye stuffs, et cetera, but commercial production was delayed for years because of "bugs" in processing. A trained experimenter can get results which cannot be reproduced in bulk, because of some unexpected slip by job workers.

The polio vaccine was no exception. "Something slipped," and some batches have not stood the test. We can remember a year ago, a national broadcaster reported that of the ten batches of vaccine being prepared for the great experiment of mass vaccination, four were suspected of still having live virus. The next day the National Foundation ordered further study, a re-survey and delayed the approval for three weeks until a group of special investigators could meet in Washington for a final report. The Foundation admitted one batch had been still viable.

If one batch could be unusable when made under Dr. Salk's personal scrutiny, is there any wonder two batches were faulty when manufactured by six different companies?

We were surprised at the minimal bad results—101 cases out of several million using the vaccine.

Constant and vigilant care must be used continuously and always in manufacturing and using this new defense against disease, but it is worth the effort. We are confident of success.

The history of medicine has been one continuous progress. It was reported on Cavalcade of America (reporting ten outstanding accomplishments of chemistry) that 85 per cent of remedies doctors now order in their prescriptions were unknown fifteen years ago.

TITLES AND DEFINITIONS

SO MANY persons are called "doctor" that the term has lost much of its historic meaning of Doctor of Medicine. The word doctor comes into the English language from the old French, and from the Latin "docere" meaning to teach. It has always been applied to a professional man, one who knows a very great deal about some department of learning, so as to be able to teach. It has been used mainly in reference to doctors of divinity, medicine, education, law, music, science, philosophy, etc.

The term "doctor" has during the years become attached especially to those practicing medicine, so much so that for the last century the word "doctor" almost always meant a doctor of medicine. It is probably unfortunate that the term became so misunderstood. The Germans use the same word, but also the word "artz". The French say "docteur" but almost always add "medicin" defining the application.

In THE JOURNAL of the Michigan State Medical Society, we try to always use the person's name with M.D. following, before referring to him as "doctor," to surely distinguish what kind of "doctor" he is.

In our time when so many cults have sprung up every member of them wants to use the term, and without modification. We have osteopaths who have become accepted in the title. Chiropractors, naturopaths, etc., are attempting to gain a legal right to the title, together with a certain amount of acceptance in the practice of some phase of the field of medicine. We also have the psychologists, who are supposedly trained in the understanding of psychic phenomena, behavior, et cetera. There are many of them connected with the schools, who are practicing something very close to medicine. Also we have the sociologists who delve into sociological problems, with emphasis more on the social and economic than the psychic.

We have our own group, the psychiatrists, who are doctors of medicine and, in addition, have taken three or more years of training in the problems primarily of the mind and of a neurological nature.

In another field of medicine, we have a group which the general public just as truly misunderstands. The ophthalmologist (old term, oculist) is a doctor of medicine who has taken years of training in diseases of the eye, its diagnosis and treatment. Here again, untrained or partly trained persons have edged into the practice of another field of medicine: the optometrist, who calls himself "doctor," has pre-empted much of the fitting of glasses, and at present is attempting to have special laws enacted in many of our states limiting to himself the fitting of glasses and the "examination of eyes." These laws might prohibit ophthalmologists, who are doctors of medicine, from fitting glasses. "Opticians" form another group, the first to invade the field. Opticians originally claimed the whole field of treatment of the eyes, used drops for refraction, but mostly confined their practice to fitting of glasses. They, too, called themselves "doctor." Their mistake was in that some of them became anxious for more meaningful use of the term "doctor", branched out, coined the word "optometrist" and started high-hatting the opticians, whom they now recognize as grinders of lenses and fitters of frames.

It is high time a legal definition and limitation of the term "Doctor" be adopted especially to protect the unwary public.

PSYCHIATRISTS ARE M.D.'S TOO!

THE ever-widening horizon in the study and treatment of mental illness has focused public attention upon the psychiatrist. This publicity is a mixed blessing and has resulted in much confusion in terminology in newspapers, magazines, and television programs. The most important area of confusion appears to be in the professional titles of those persons working primarily in the field of mental illness. This applies particularly to the limitations of activity imposed by the professional training of ancillary personnel in the field. Controversy and complication develop as a result of those attracted to this field but who are medically untrained.

Recently a national news service carried a statement, "Three psychologists were appointed by the Court to examine the 'accused.'" In a newspaper story a psychologist well known in educational circles was called a "child psychiatrist." Frequently a person who is referred to a psychiatrist for treatment of an illness objects to this referral with some such statement as, "I need a medical doctor—someone who can write prescriptions." Occasionally a patient with a serious mental illness seeks help from the "marriage counselor" instead of from the psychiatrist, and this on the recommendation of his lawyer or even his

family physician. Treatment of psychosomatic disease or of psychogenic symptoms by the psychiatrist may be misunderstood or criticized by his own medical colleagues.

It is important for the medical profession to undertake a program of better public education. The medical profession should take the initiative rather than to permit the only avenue of information to be through the medium of television, newspapers and magazine articles. We as physicians need to know the capabilities as well as the limitations of our non-medical professional confreres (psychologists, social workers, counselors, et cetera) who are extremely helpful in the field of mental health if they work under the supervision and guidance of the psychiatrist.

The public should have a better knowledge of the training and capability of the qualified psychiatrist. The psychiatrist, like any other physician, is trained in scientific medicine. He must satisfactorily complete a full medical course and a rotating internship in a recognized hospital. His specialty training requires three years of approved residency in a recognized training hospital and an additional two years of experience limited to the practice of medicine in the field of psychiatry before he is qualified to take the certifying examination as a specialist. This basic training must include physiology and pathology of the central nervous system as well as the study of psychology and psycho-therapy. The use of such physiological treatments as insulin, electroshock, and many of the new drugs by the psychiatrist requires much more than a superficial knowledge of general medicine. The numerous advances in medicine require that the psychiatrist serve in his capacity as a physician, especially in his readiness to recognize the signs and symptoms of any disease process. Psychiatric research is closely integrated with physiological and pathological studies. The medical educator is keenly aware of need for comprehensive medical training. It is the responsibility of the physician to help his patients to understand the importance of the psychiatrist who is medically trained in the treatment of mental illness. The wise practitioner of medicine will observe and alert his colleagues and patients to the dangers of the non-medical approach to a serious medical problem—mental illness.

COMMITTEE ON MENTAL HEALTH

THE TEN MOST EXPRESSIVE WORDS

Everyone who writes or gives public addresses will be interested in the list of the ten most expressive words in the English language which Dr. Wilfred Funk, noted lexicographer and dictionary publisher, picked after many years of research. We reprint them from the *American Weekly*.

The most bitter is "alone," the most revered is "mother," the most tragic is "death." The word "faith" brings greatest comfort, the saddest is "forgotten," the most beautiful "love," and the most cruel "revenge." The warmest word is "friendship," the coldest "no," and the most peaceful "tranquility."

1954 ANNUAL SESSION M.D. REGISTRATION

M.D.'s Outside Michigan	
Arizona	1
California	1
District of Columbia	1
Florida	2
Illinois	7
Indiana	8
Louisana	2
Massachusetts	2
Minnesota	7
Missouri	1
New York	4
Ohio	23
Pennsylvania	7
Texas	2
Wisconsin	24
Ontario, Canada	46
New Zealand	1
TOTAL	139

Specialty	*Michigan M.D.'s Outside Wayne County*	*Wayne County M.D.'s*
Anesthesiology	15	6
Dermatology-Syphilology	13	21
Gastroenterology-Proctology	14	10
General Practice	359	311
Medicine	64	158
Nervous and Mental	37	34
Obstetrics and Gynecology	40	79
Ophthalmology	20	18
Otolaryngology	16	11
Ophthalmology-Otolaryngology	9	8
Pathology	26	25
Pediatrics	31	31
Public Health	34	9
Radiology	10	17
Surgery	155	170
Urology	19	25
Residents and Interns	104	168
No specialty given	47	42
TOTALS	1013	1143

Frederic Schreiber, M.D.

An Example of What Interest and Industry Can Develop

While it is interesting to observe the progress of a conscientious young physician through his years of development, it is no less than exhilarating to note the scientific accomplishments and professional stature gained as an end product. Such is the feeling of the writer as it applies to Frederic Schreiber, M.D., and as it is shared by many, in and out of the medical profession.



Behind Dr. Schreiber is a rich and significant heritage. He was born in a parsonage in the Irish Hills country of Michigan, just outside of Saline, the son of a young minister who came from Thuringia, Germany. His maternal grandfather was also a minister in nearby Ann Arbor, having come originally to this country prior to the Civil War to be a missionary to the Indians.

Accomplishment in any field of endeavor represents the result of a work pattern usually established early in life; and industry—the willingness for hard work—is an outstanding factor in any review of Frederic Schreiber's early life. "Baldy," as he is commonly known to his friends, manifested this characteristic interest in work at the age of ten, when he took on his first summer job, as an office boy in Grand Rapids, where his parents had moved when he was one year old. He worked long hours for what might be considered "pin money," but he enjoyed it.

Apparently Dr. Schreiber's winning way and courteous behavior, so well recognized today, was a part of his make-up at that time. At least this charm would have been a great help in one of the duties of his first job—the daily chore of getting a front seat on the interurban car each afternoon for his boss. For this, he received an additional ten cents; and if no seat, a scolding.

"Baldy" Scheiber's early education was obtained in the public schools of Grand Rapids, where he took part in such activities as dramatics, debating and football—experiences which must have contributed to his later interest and development.

The work pattern established as a youngster continued when he entered the University of Michigan in 1915. "Baldy" Schreiber arrived in Ann Arbor a few weeks before the opening of school and took a job in a coal yard. It is often prophesied that a sure formula for success is "always do more than is expected of you." Unconscious adherence to this principle has long been a basic part of Dr. Schreiber's make-up, and even in his coal-yard days, associates recognized that young Schreiber did more than was required of him.

This experience stimulated an interest in seeking further fields to conquer, and the traditional Schreiber industry was directed to such summer activities as farming (a healthy outlet), forestry, threshing and carpentry. This last-named skill he practiced during the summer months early in World War I at Selfridge Field, Michigan, and Fort Sill, Oklahoma.

During the school year at Ann Arbor, he continued his interest in physical labor as a means for continuing his education, and on week ends he even found time for tutoring.

A year after joining the ROTC Unit at the University of Michigan, "Baldy" Schreiber was commissioned an ensign in the Naval Reserve in 1917, and called to active duty in 1918. By the

time he was discharged in the spring of 1919, he had decided to enter medical school, but for him there was no thought of remaining idle, waiting for the fall term.

This time he took to sea as an employe of the United Fruit Company.

With all this early experience, "Baldy" Schreiber had gained a background in the facts and practicalities of life, giving him a foundation helpful in that over-all understanding of the humanities important in the life of a physician.

Dr. Schreiber's four years in medical school were divided equally between the University of Michigan and Harvard Medical School, from which he was graduated in 1923. From this point, an interest in neurosurgery was in the making, for in Boston Dr. Schreiber had made the acquaintance of Harvey Cushing, M.D., at Peter Bent Brigham Hospital. Dr. Cushing recognized this potential interest in his field and assigned young Schreiber to an "Arbeit," which undoubtedly played a big part in his future. His report on "Are Uncinate Seizures of Localizing Value?", which required the reviewing of temporal lobe tumor cases, impressed Dr. Cushing.

But neurosurgery was yet to come sometime in the future.

Internship at Harper Hospital from 1923 to 1925 provided an excellent preparation for surgery. Then came time spent as a ship's doctor, a brief exposure to general practice at Mackinac Island, and an assistantship with Dr. Max Ballin from 1925 to 1928, before Dr. Schreiber's final decision to enter the field of neurosurgery.

Upon the suggestion of friends, he returned to Boston as the resident surgeon under Dr. Cushing, and here the broad experience in neurosurgery prepared him to take his place in a field not yet covered in Detroit, except for the setup at Henry Ford Hospital. When he first returned to Detroit, the prospects for building a practice in this supposedly limited field appeared not too encouraging, but soon the profession recognized the value of this additional specialty. Between the Wayne University Medical School, where he joined the faculty in 1930, and the referred work, Dr. Schreiber was kept busy much beyond the expectations of his friends. In 1932, he was made Professor of Neurosurgery at Wayne.

When ex-residents who had served under the distinguished and outstanding pioneer neurosurgeon in Boston decided to organize the Harvey Cushing Society, Dr. Schreiber was one of the original fifteen members. At the annual meeting of this society in Quebec last May, Dr. Schreiber was inducted as its president, a well-deserved honor for which the Michigan medical profession extends its hearty congratulations.

Modesty has marked the career of many physicians, with "Baldy" being no exception, but his friends have recognized his contributions in the treatment of brain abscesses, where he has been quoted in the literature; the effects of anoxia on the brain, which included the effects at birth, during anesthesia and in craniocerebral injuries. In addition, with the help of the Detroit Edison Company, Dr. Schreiber devised a light, which has proved of inestimable value in the operative work in deep wounds.

Clinically, of course, he has taken an active part in the resident-training program at Harper Hospital, where the assistant resident in surgery rotates through his service. He and his associates also have served the Children's Hospital for many years.

"Baldy" Schreiber is thoroughly devoted to his profession, but his interests go far beyond. His hobbies include an interesting collection of canes with gadgets, bird hunting, painting, and spending part of his summers "by the shores of Gitche Gumee" looking out over the water of this great lake. Of "Baldy's" outside interests, the writer has the most appreciation for the last-named and often delights in sharing it with him.

—Grover C. Penberthy, M.D.

DOCTORS GET HIGH RATING

An interesting story in a recent issue of *This Week* Magazine, written by John E. Gibson, discussed the ratings of the various professions and occupations as to prestige and social standing.

The article said that a consensus of public-opinion surveys conducted by leading research organizations and universities shows that physicians enjoy the greatest social prestige of any profession or calling. College professors rank almost as high, followed closely by scientists and bankers.

Michigan State Medical Society

Past Presidents 1866-1954

1866—*C. M. Stockwell, Port Huron
1867—*J. H. Jerome, Saginaw
1868—*Wm. H. DeCamp, Grand Rapids
1869—*Richard Inglis, Detroit
1870—*I. H. Bartholomew, Lansing
1871—*H. O. Hitchcock, Kalamazoo
1872—*Alonzo B. Palmer, Ann Arbor
1873—*E. W. Jenk, Detroit
1874—*R. C. Kedzie, Lansing
1875—*Wm. Brodie, Detroit
1876—*Abram Sager, Ann Arbor
1877—*Foster Pratt, Kalamazoo
1878—*Ed. Cox, Battle Creek
1879—*George K. Johnson, Grand Rapids
1880—*J. R. Thomas, Bay City
1881—*J. H. Jerome, Saginaw
1882—*Geo. W. Topping, DeWitt
1883—*A. F. Whelan, Hillsdale
1884—*Donald Maclean, Detroit
1885—*E. P. Christian, Wyandotte
1886—*Charles Shepard, Grand Rapids
1887—*T. A. McGraw, Detroit
1888—*S. S. French, Battle Creek
1889—*G. E. Frothingham, Detroit
1890—*L. W. Bliss, Saginaw
1891—*George E. Ranney, Lansing
1892—*Charles J. Lundy, Detroit
(Died before taking office)
*Gilbert V. Chamberlain, Flint
(Acting President)
1893—*Eugene Boise, Grand Rapids
1894—*Henry O. Walker, Detroit
1895—*Victor C. Vaughan, Ann Arbor
1896—*Hugh McColl, Lapeer
1897—*Joseph B. Griswold, Grand Rapids
1898—*Ernest L. Shurly, Detroit
1899—*A. W. Alvord, Battle Creek
1900—*P. D. Patterson, Charlotte
1901—*Leartus Connor, Detroit
1902—*A. E. Bulson, Jackson
1903—*Wm. F. Breakey, Ann Arbor
1904—*B. D. Harison, Sault Ste. Marie
1905—*David Inglis, Detroit
1906—*Charles B. Stockwell, Port Huron
1907—*Hermon Ostrander, Kalamazoo
1908—*A. F. Lawbaugh, Calumet
1909—*J. H. Carstens, Detroit
1910—*C. B. Burr, Flint
1911—*D. Emmett Welsh, Grand Rapids
1912—*Wm. H. Sawyer, Hillsdale
1913—*Guy L. Kiefer, Detroit
1914—*Reuben Peterson, Ann Arbor
1915—*A. W. Hornbogen, Marquette
1916—*Andrew P. Biddle, Detroit
1917—*Andrew P. Biddle, Detroit
1918—*Arthur M. Hume, Owosso
1919—*Charles H. Baker, Bay City
1920—*Angus McLean, Detroit
1921—*Wm. J. Kay, Lapeer
1922—*W. T. Dodge, Big Rapids
1923—*Guy L. Connor, Detroit
1924—*C. C. Clancy, Port Huron
1925—*Cyrenus G. Darling, Ann Arbor
1926—*J. B. Jackson, Kalamazoo
1927—*Herbert E. Randall, Flint
1928— Louis J. Hirschman, Detroit
1929— J. D. Brook, Grandville
1930—*Ray C. Stone, Battle Creek
1931—*Carl F. Moll, Flint
1932— J. Milton Robb, Detroit
1933—*George LeFevre, Muskegon
1934—*R. R. Smith, Grand Rapids
1935— Grover C. Penberthy, Detroit
1936—*Henry E. Perry, Newberry
1937— Henry Cook, Flint
1938— Henry A. Luce, Detroit
1939— Burton R. Corbus, Grand Rapids
1940— Paul R. Urmston, Bay City
1941— Henry R. Carstens, Detroit
1942— H. H. Cummings, Ann Arbor
1943—*C. R. Keyport, Grayling
1944—*A. S. Brunk, Detroit
1945—*V. M. Moore, Grand Rapids
(Died before taking office)
1945— R. S. Morrish, Flint
1946— Wm. A. Hyland, Grand Rapids
1947—*P. L. Ledwidge, Detroit
1948— E. F. Sladek, Traverse City
1949— Wilfrid Haughey, Battle Creek
(President-for-a-Day, Sept. 21, 1949)
1949— W. E. Barstow, St. Louis
1950— C. E. Umphrey, Detroit
1951— Otto O. Beck, Birmingham
1952— R. L. Novy, Detroit
(President-for-a-Day, Sept. 22, 1952)
1952— R. J. Hubbell, Kalamazoo
1953— L. W. Hull, Detroit
1954— L. Fernald Foster, Bay City
(President-for-a-Day, Sept. 28, 1954)

*Deceased.

MSMS 1955 Annual Session

The MSMS Annual Session will celebrate its 90th Anniversary in September, but there's no need to call in the geriatricians, for there is nothing "old" about the 1955 Annual Session. Much is new, however, especially in the scientific program, which is aimed at the future.

Twenty-eight guest speakers, chosen from the nation's greatest clinical and teaching centers, will present the newest ideas in every phase of medicine during the three-day, dawn-to-dusk postgraduate assembly, in Grand Rapids, September 28-29-30.

The attendance record for Grand Rapids, set in 1953, is due to be shattered again, according to the expectations of the Committee on Arrangements, under the co-chairmanship of C. Allen Payne, M. D., and Felix S. Alfenito, M.D., both of Grand Rapids.

In every one of these six scientific assemblies and fourteen section meetings, emphasis again will be placed on practical information valuable to the Michigan doctor of medicine in his daily practice.

The 1955 Annual Session will open with General Practice Day on Wednesday, September 28. On this and the two succeeding days, following the pattern which proved so successful last year, the noon hour will be devoted to discussion conferences allowing individual registrants a chance to question guest speakers in a forum-type of meeting. Many who attend say the discussion conference is the most valuable part of each daily program.

One highlight of the Annual Session will be presentation of the third annual Beaumont Memorial Lecture on Friday morning, September 30, by Garnet W. Ault, M.D., of Washington, D.C. The traditional Biddle Lecture, on a non-scientific topic, will climax the Officers Night program on Wednesday evening, September 28. Charles L. Anspach, Ph.D., LL.D., President of Central Michigan College of Education, Mount Pleasant, is the 1955 Biddle Lecturer.

The huge exhibit hall of Grand Rapids Civic Auditorium will be filled. A total of 132 technical exhibits and twelve scientific exhibits will serve as an important adjunct in bringing to registrants the latest in medical progress.

Now is the time to make reservations for hotel accommodations, the co-chairmen emphasize. Headquarters hotel will be the Pantlind, and early reservations already have been made by a great many planning to attend.

Thursday evening, September 29, has been set aside as a period for relaxation from the serious phases of the Annual Session. MSMS will be host at the usual State Society Night, honoring all registrants and their guests at a cabaret-style program featuring dancing and an outstanding floor show.

Concurrently with the Annual Session, the MSMS Woman's Auxiliary and the Michigan State Medical Assistants Society will hold their annual conventions. A number of specialty groups and ancillary organizations will also hold meetings and special events during the three-day period.

The Annual Meeting of the MSMS House of Delegates will be held in the Pantlind Hotel on Monday and Tuesday, September 26-27, preceding the three-day scientific session.

In ninety years, the MSMS Annual Session may have grown to maturity, but certainly there is every indication that growth and development will continue. There will be no dwelling in the past; everything will be pointed toward today and tomorrow.

Michigan State Medical Society

The Ninetieth Annual Session

PANTLIND HOTEL-CIVIC AUDITORIUM, GRAND RAPIDS, MICHIGAN SEPTEMBER 26-27-28-29-30, 1955 ANNUAL SESSION INFORMATION

DIRECTORY

Headquarters—Pantlind Hotel and Civic Auditorium, Grand Rapids.

Registration—for House of Delegates: Pantlind Hotel; for Scientific Session: Civic Auditorium (see hours below).

House of Delegates—Monday-Tuesday, September 26-27 (Grand Ball Room, Pantlind Hotel).

Exhibits—Wednesday-Thursday-Friday, September 28-29-30, Civic Auditorium.

Press Room—for House of Delegates: Parlor D, Pantlind Hotel; for Scientific Session: Room F, Civic Auditorium.

Woman's Auxiliary Headquarters—Pantlind Hotel, Grand Rapids.

Michigan State Medical Assistants Society Headquarters—Hotel Manger Rowe, Grand Rapids.

● **REGISTER**—Civic Auditorium—as soon as you arrive.

Hours:

Tuesday, September 27, 1:00 p.m. to 5:00 p.m.
Wednesday, September 28, 7:30 a.m. to 5:00 p.m.
Thursday, September 29, 8:30 a.m. to 5:00 p.m.
Friday, September 30, 8:30 a.m. to 3:30 p.m.

● **NO REGISTRATION FEE FOR MEMBERS OF MSMS AND OTHER STATE MEDICAL ASSOCIATIONS, AMA AND CANADIAN MEDICAL ASSOCIATION.**

Admission will be by badge only to all Scientific Assemblies, Section Meetings, Discussion Conferences and the Exhibition. Please present your MSMS or other State Medical Association, AMA, or CMA Membership card to expedite your registration. We wish to save your time.

● **GUESTS**—Members of any state medical association, AMA, or CMA members from any province of Canada, and physicians of the Army, Navy and U. S. Public Health Service are invited to attend, as guests. No registration fee. Present credentials at the Registration Desk.

Bona fide doctors of medicine serving as residents, interns, or who are associate or probationary members of Michigan county medical societies, if vouched for by an MSMS Councilor or the president or secretary of the county medical society in whose jurisdiction they practice, will be registered as guests. Present credentials at the Registration Desk.

● **MICHIGAN DOCTORS OF MEDICINE,** in practice but who are not members of MSMS, if listed in the American Medical Directory, may register as guests upon payment of $25.00. This amount will be credited to them as dues in the Michigan State Medical Society FOR THE BALANCE OF 1955 ONLY, provided they subsequently are accepted as members by the County Medical Society in whose jurisdiction they practice.

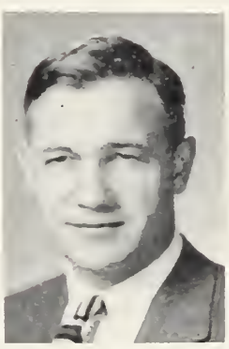


C. Allen Payne, M.D.



Felix S. Alfenito, M.D.

C. Allen Payne, M.D. and Felix S. Alfenito, M.D., of Grand Rapids, are Co-Chairmen of the 1955 MSMS Annual Session.



Walter I. Lillie, M.D.

Walter I. Lillie, M.D., of Grand Rapids, is Chairman of the Scientific Exhibit for the 1955 MSMS Annual Session.

● **DOCTOR,** register Tuesday! Registration of physicians will be held Tuesday afternoon from 1:00 to 5:00 p.m.—as well as on Wednesday-Thursday-Friday, during the 1955 MSMS Annual Session. The Tuesday afternoon registration hours are arranged so that physicians may avoid waiting in line Wednesday morning before the opening Assembly.

We recommend to Grand Rapids physicians—and those who arrive in Grand Rapids on Tuesday—that they register Tuesday, September 27, from 1:00 to 5:00 p.m., Civic Auditorium.

SECTION MEETINGS

WEDNESDAY, SEPTEMBER 28:

1:00 to 2:00 p.m.	Section on Urology
5:00 to 6:00 p.m.	Sections on Pediatrics, General Practice, and surgery

THURSDAY, SEPTEMBER 29:

1:00 to 2:00 p.m.	Section on Otolaryngology
5:00 to 6:00 p.m.	Sections on Public Health and Preventive Medicine, Gastroenterology - Proctology, Ophthalmology, Obstetrics-Gynecology, and Nervous and Mental Diseases.

FRIDAY, SEPTEMBER 30:

5:00 to 6:00 p.m.	Sections on Dermatology-Syphilology, Medicine, Anesthesiology and Radiology.

● **TELEPHONE SERVICE**—Special lines to handle local and long distance telephone service for registrants at the MSMS meeting are available in the Civic Auditorium just outside the Black and Silver Room: Glendale 1-9213, Glendale 1-9751, Glendale 1-9156. To contact the Exhibit Hall, call: Glendale 1-9145, Glendale 1-9403, Glendale 1-9738. The telephone number at the Pantlind Hotel is 9-7201.

● **GUEST ESSAYISTS** are very respectfully requested not to change time of their lecture with another speaker without the approval of the Assembly Chairman. This request is made in order to avoid confusion and disappointment on the part of members of the audience.

● **CHECK ROOM**—Both in Civic Auditorium and Pantlind Hotel.

NEW INFORMATION IN THE EXHIBIT

Many items of interest or education will be found in the large exhibit of 132 technical and 12 scientific displays. The Exhibit Section at MSMS Annual Sessions is as important, informative and desirable to most doctors of medicine as the scientific papers presented in the Assembly room.

Doctor, stop at every booth—you'll be surprised how much you'll learn! No high-pressure salesman but a courteous well-informed exhibitor will greet you and supply you with some valuable information helpful to your patients.

● **PUBLIC MEETING**—The evening Assembly of Wednesday, September 28—Officers' Night—will be open to the public. Invite your patients and other lay friends to this entertaining meeting, to be held in the Black and Silver Room of the Civic Auditorium at 8:30 p.m. Program on Page 851.

● **POSTGRADUATE CREDITS ARE GIVEN TO EVERY MSMS** member who attends the Annual Session.

● **CABARET-STYLE DANCE AND FLOOR SHOW,** with the compliments of the Michigan State Medical Society, will be held in the Grand Ballroom of the Pantlind Hotel at 10:30 p.m., Thursday, September 29. All who register, and their ladies, will receive a card of admission and are cordially invited to attend.

● **TRANSPORTATION**—The C & O Streamliners afford a convenient means of transportation to the MSMS Annual Session in Grand Rapids for hundreds of physicians located in the southeastern and central parts of the State.

● **PARKING**—Metered parking on the streets surrounding the Pantlind Hotel and Civic Auditorium. Outside lots are available as follows:

1. Rear of Rowe Hotel (two blocks from Pantlind Hotel).
2. Campau Avenue parking lot (one and one-half blocks from Civic Auditorium).

● **THE TECHNICAL AND SCIENTIFIC EXHIBITS** will open daily at 8:45 a.m. and close at 5:15 p.m., except on Friday when the break-up is at 3:30 p.m. Frequent intermissions to view the educational exhibits have been arranged before, during, and after the Assemblies.

MICHIGAN MEDICAL SERVICE MEMBERS' SCHEDULE

Pantlind Hotel, Grand Rapids

Tuesday, September 27, 1955

Coincident with MSMS Annual Session

1:00 p.m. Luncheon—Continental Room

2:00 p.m. MMS Annual Meeting—Grand Ballroom

All MSMS Delegates are Members of Michigan Medical Service corporation and are expected to attend the MMS Luncheon and Annual Meeting.

The MMS Annual Meeting is open to ALL members of the medical profession who are cordially invited to attend.

● **THE SCIENTIFIC PRESS RELATIONS COMMITTEE** is composed of: P. W. Kniskern, M.D., Chairman, H. G. Benjamin, M.D., F. C. Brace, M.D., C. A. Payne, M.D., and L. Paul Ralph, M.D., all of Grand Rapids.

● **THE HOUSE OF DELEGATES PRESS RELATIONS COMMITTEE** is composed of: K. H. Johnson, M.D., Lansing, Chairman, L. C. Carpenter, M.D., Grand Rapids, L. Fernald Foster, M.D., Bay City, J. E. Livesay, M.D., Flint, and C. L. Weston, M.D., Owosso.

INFORMATION OF PRACTICAL VALUE IN DAILY PRACTICE will be found at the Michigan State Medical Society Annual Session. All subjects on the MSMS Annual Session Program are applicable to clinical medicine. They stress diagnosis and treatment in everyday practice.

● **THE MSMS HOUSE OF DELEGATES** convenes Monday, September 26, at 10:00 a.m., Grand Ball Room, Pantlind Hotel; it will hold three meetings on Monday, September 26, at 10:00 a.m., 2:00 p.m. and at 8:00 p.m.

(and a luncheon meeting at 1:00 p.m.); also two meetings on Tuesday, September 27, at 9:30 a.m. and at 8:00 p.m. PRE-REGISTRATION OF DELEGATES WILL BE HELD SUNDAY, SEPTEMBER 25 FROM 8:00 to 10:00 P.M. IN THE LOBBY OF THE PANTLIND HOTEL. PLEASE REGISTER IN ADVANCE AND SPARE YOURSELF STANDING IN LINE MONDAY MORNING.

● **PAPERS WILL BEGIN AND END ON TIME**—Believing there is nothing which makes a scientific meeting more attractive than by-the-clock promptness and regularity, all meetings will open exactly on time, all speakers will be required to begin their papers exactly on time and to close exactly on time in accordance with the schedule in the program. All who attend the meeting, therefore, are requested to assist in attaining this end by noting the schedule carefully and being in attendance accordingly. Any member who arrives five minutes late to hear any particular paper will miss exactly five minutes of that paper!

THREE DISCUSSION CONFERENCES



A. H. Kretchmar, M.D., Flint, Leader on Wednesday, September 28, 1955



H. A. Towsley, M.D., Ann Arbor, Leader on Thursday, September 29, 1955



Douglas Donald, M.D., Detroit, Leader on Friday, September 30, 1955

Three quiz periods will be held Wednesday-Thursday-Friday, September 28-29-30, Black and Silver Room, Civic Auditorium, 12:00 noon to 1:00 p.m., with all the guest speakers of the day on the platform.

An opportunity to ask questions concerning the presentations of the guest essayists, or to discuss an interesting case with them, is provided at these Discussion Conferences.

● **THE THIRD BEAUMONT LECTURE OF THE MICHIGAN STATE MEDICAL SOCIETY,** will be presented by Garnet W. Ault, M.D., of Washington, D. C., on Friday, September 30, 9:00 a.m. Doctor Ault's subject will be "Recent and Important Changes in Treating Colonic and Rectal Carcinoma."

GENERAL PRACTICE DAY

1955 MSMS Annual Session

Wednesday, September 28, will be "General Practice Day" at the Grand Rapids Session of the Michigan State Medical Society.

The Assembly subjects on the first day of the convention are especially dedicated to the interest of general practitioners.

The General Practice Section also will meet on Wednesday at the Pantlind Hotel.

● **A CONCENTRATED THREE-DAY POSTGRADUATE COURSE**—A CAPSULE OF GREAT VALUE TO THE MICHIGAN PRACTITIONERS OF MEDICINE—THAT'S THE MSMS ANNUAL SESSION OF 1955.

MEETINGS OF SPECIAL SOCIETIES, ALUMNI AND AUXILIARY GROUPS

Tuesday, September 27, 1955

1. **The American Academy of Pediatrics, Michigan Branch.** Meeting at 10:00 a.m. and 2:00 p.m. with cocktails and dinner at 6:30 p.m.—Pantlind Hotel.

Wednesday, September 28, 1955

2. **Michigan Academy of General Practice and MSMS Section on General Practice.** Meeting at 5:00 p.m. with cocktails and dinner at 6:30 p.m.—Pantlind Hotel.
3. **MSMS Section on Urology.** Luncheon-meeting 1:00 p.m.—Pantlind Hotel.
4. **Michigan Chapter, American College of Chest Physicians.** Cocktails and dinner at 6:30 p.m. followed by a meeting at 8:30 p.m.—Pantlind Hotel.
5. **MSMS Past Presidents Club.** Luncheon-meeting at 12:00 noon—Pantlind Hotel.
6. **Michigan Diabetes Society.** Cocktails-dinner beginning at 6:30 p.m.—Pantlind Hotel.
7. **Upper Peninsula Reception and Dinner honoring President-Elect W. S. Jones, M.D., Menominee,** beginning at 6:30 p.m.—Pantlind Hotel.

Thursday, September 29, 1955

8. **MSMS Section on Neurology and Psychiatry and Michigan Society of Neurology and Psychiatry.** Cocktails-Dinner-Meeting beginning at 7:00 p.m.—Pantlind Hotel.
9. **MSMS Section on Ophthalmology.** Cocktails-dinner-meeting beginning at 6:30 p.m.—Cascade Hills Country Club, Grand Rapids.
10. **MSMS Section on Public Health and Preventive Medicine and Michigan Health Officers Association.** Cocktails-dinner-meeting beginning at 6:30 p.m.—Pantlind Hotel.
11. **MSMS Section on Otolaryngology.** Luncheon-meeting beginning at 1:00 p.m.—Pantlind Hotel.
12. **University of Michigan Alumni Dinner.** Cocktails-dinner beginning at 7:00 p.m.—Pantlind Hotel.
13. **Wayne University Alumni Dinner.** Cocktails-dinner beginning at 6:00 p.m.—Pantlind Hotel.
14. **MSMS Section on Gastroenterology and Proctology and Michigan and Detroit Proctological Society.** Cocktails-dinner-meeting beginning at 6:30 p.m. at the Peninsula Club, Grand Rapids.
15. **Michigan Association of Alpha Kappa Kappa.** Breakfast-meeting at 7:30 a.m.—Pantlind Hotel.
16. **Michigan Academy of General Practice Board** meeting at 12:00 noon—Pantlind Hotel.

Friday, September 30, 1955

17. **MSMS Section on Pathology and Michigan Pathological Society.** Meeting at 2:30 p.m.; cocktails-dinner at 6:30 p.m.; business meeting following dinner.—Blodgett Hospital, Grand Rapids.

18. **Michigan School Health Association.** Annual Conference.—Pantlind Hotel.

Women's Organizations

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

Twenty-Ninth Annual Meeting

September 26-27-28-29, 1955

Grand Rapids, Michigan

Monday, September 26, 1955

10:30 A.M. Report of the Auxiliary President (Mrs. Albert F. Milford) to the House of Delegates of the Michigan State Medical Society, Pantlind Hotel

12:00 A.M. Mezzanine—Registration
Hospitality Room, Parlor A

Tuesday, September 27, 1955

5:00 P.M. Hospitality Room opens where a welcome awaits all who attend the Convention. Plan to meet your friends here.

1:00 to 4:00 Hostesses Mrs. Albert F. Milford and Members of her Board.

4:00 to 9:00 Kent County hostesses

6:30 P.M. Organization Dinner for Retiring and Incoming Directors, President-Elect and 1st Vice President. Pantlind Hotel

6:30 P.M Past Presidents' and Secretaries' Dinner

Wednesday, September 28, 1955

9:00 A.M. Pre-Convention Board Meeting (For 1954-55 State Officers, Directors, Chairmen and County Presidents)
Red Room in Civic Auditorium

10:30 A.M. Formal Opening of the Twenty-ninth Annual Meeting. Mrs. Albert F. Milford, President, Presiding (DELEGATES AND BOARD MEMBERS WILL PLEASE REGISTER WITH THE ROLL CALL CHAIRMAN AT THE DOOR BEFORE THE OPENING OF EACH SESSION, THUS ELIMINATING THE NEED OF AN ORAL ROLL CALL.)

12:30 P.M. Luncheon honoring Past Presidents of the Woman's Auxiliary to the Michigan State Medical Society, and representatives of the Society

Mrs. Albert F. Milford, President, Presiding, Grand Ball Room, Pantlind Hotel

Greetings: C. Allen Payne, M.D., President Kent County Medical Society

Guest Speaker: To be announced
Hospitality Room

Style Show: Co-ordination with outstanding achievement of each county

9:30-5:00 Hospitality Room, Parlor A, Pantlind Hotel —Kent County hostesses

6:30 P.M. *Dinner:* Grand Ball Room, Pantlind Hotel Honoring the 1954-55 Board Members and County Presidents
Skit: Washtenaw County will put on a skit

Thursday, September 29, 1955

1:00 P.M. Annual Luncheon—Kent State Room
Presiding, Mrs. Albert F. Milford, President
Installation of Officers
Mrs. J. Earl McIntyre, Past State President
Presentation of Past President's Pin
Presentation of President's Pin and Gavel
Inaugural Address, Mrs. Delbert MacGregor

MICHIGAN STATE MEDICAL ASSISTANTS SOCIETY

Hotel Manger Rowe, Grand Rapids

September 28-29, 1955

Wednesday, September 28, 1955

A.M.

9:00 Registration .....Mezzanine

10:00 John R. Rodger, M.D., Bellaire
"Periodic Health Appraisal".....English Room

11:00 J. Joseph Herbert, LL.D., Legal Advisor to MSMS, Manistique
"Legal Problems in a Doctor's Office".....
English Room

P.M.

12:30 Luncheon—Hostess: Mrs. Shirley Feeney
Courtesy of Michigan Medical Service.....
Louis XV Room

2:00 Annual Business Meeting.....English Room

4:00 View Exhibits at Civic Auditorium

6:30 Social Hour.....Mezzanine & English Room
Courtesy of Medical Arts Pharmacy
Professional Management
White & White Drug Store

7:30 Banquet—Hostess: Miss Marie A. Erickson
Speaker: J. E. Manning, M.D., Saginaw
"Doctor's Dream Girl".....Louis XV Room

Thursday, September 29,1955

A.M.

9:00 Registration .....Mezzanine

10:00 Andrew L. Hoekstra, M.D., Grand Rapids
"Mental Health".....English Room

11:00 Dr. Russell Jenkins, Dept. Communication Skills, Mich. State College
"I've Got a Secret" New slant on public relations .....English Room

P.M.

12:30 Presidents' Luncheon—Hostess: Miss Gladys Bomers.....Louis XV Room

2:30 Eugene H. Payne, A.D., A.M., M.D., Clinical Investigator for Parke-Davis & Co., Detroit
"Tropical Travel and Incidents Along the Way" .....English Room

3:30 View Exhibits at Civic Auditorium

Anyone actively employed in a technical or in an administrative capacity in the office or laboratory of a member of the Michigan State Medical Society; also, administrative employes in the offices of Medical Hospitals or Medical Laboratories of the State of Michigan is welcome to attend all activities of the Michigan State Medical Assistants Society's meetings. All activities will be held at the Manger Rowe Hotel in Grand Rapids. Registration Fee for Non-Members is $2.00.

* * *

PLEASE MAKE HOTEL RESERVATIONS AS SOON AS POSSIBLE FOR BEST ACCOMMODATIONS. THE HOTEL HAS REQUESTED THAT THE COUPON BELOW BE USED. Mail to Reservations, Hotel Manger Rowe, Grand Rapids, Michigan.

* * *

Please make all other reservations with the following:
Luncheon sponsored by Michigan Medical Service
Reservations by mail to: Mrs. Shirley Feeney
516 Medical Arts Building
Grand Rapids 2, Michigan

Banquet—$4.00 (tax and tip included)
Reservations by mail, accompanied by check or money order to: Miss Marie A. Erickson
1469 N. Harrison
Saginaw, Michigan

Presidents Luncheon—$2.00 (tax and tip included)
Reservations by mail, accompanied by check or money order to: Miss Gladys Bomers
529 Metz Building
Grand Rapids 2, Michigan

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MICHIGAN STATE MEDICAL ASSISTANTS SOCIETY CONVENTION

PLEASE ENTER MY RESERVATION AS CHECKED:

☐ Bedroom with 1 Bed, Toilet and Running Water (1 person) $4.00

☐ Bedroom with 1 Double Bed, Toilet and Running Water (2 persons) $6.50

☐ Bedroom with 1 Bed and Bath (1 person) $5.25 to $8.25

☐ Bedroom with 1 Double Bed and Bath (2 persons) $8.50 to $10.00

☐ Bedroom with 2 Beds and Bath (2 persons) $10.00 to $12.00

☐ Bedroom with 2 Double Beds and Bath (4 persons) $15.50 to $17.50

☐ Parlor and Bedroom Suites $14.25 to $34.00
Circulating ice water and free radios in all rooms
26 rooms with television included in above prices

....
Date and Time of Arrival Date and Time of Departure

.....
Name

.....
Address

— — — — — — — — — — — — — — — — — — —

Clip and mail to Reservations, Hotel Manger Rowe, Grand Rapids, Michigan

"**UBIQUITOUS HOSTS**"—The following Grand Rapids doctors of medicine have placed themselves at the disposal of the twenty-eight visiting guest essayists who are on the program of the Ninetieth Annual Session in Grand Rapids: they will demonstrate the meaning of Michigan hospitality to the eminent speakers from other parts of the United States:

R. H. Baker, M.D.. (Pontiac); G. W. Balyeat, M.D.; J. H. Beaton, M.D.; L. C. Carpenter, M.D.; D. B. Davis, M.D.; J. A. Ferguson, M.D.; R. L. Fitts, M.D.; J. D. Flynn, M.D.; J. C. Foshee, M.D.; L. S. Griffith, M.D.; A. M. Hill, M.D.; A. J. Hoffs, M.D.; Wm. W. Jack, M.D.; Chas. Jarvis, Jr., M.D.; H. C. Jones, M.D.; D. L. Kessler, M.D.; H. P. Kooistra, M.D.; W. T. Kruse, Jr., M.D.; R. G. Laird, M.D.; J. W. Logie, M.D.; S. L. Moleski, M.D.; W. B. Prothro, M.D.; Leonard Rosenzweig, M.D.; J. A. Ryan, M.D.; M. B. Tidey, M.D.; Raymond VanderMeer, M.D.; Kornelius VanGoor, M.D.; and J. E. Webber, M.D.

HOTEL RESERVATIONS
MICHIGAN STATE MEDICAL SOCIETY
90th Annual Session
Grand Rapids, September 28-29-30, 1955

The reservation blank below is for your convenience in making your hotel reservations in Grand Rapids. Please send your application to the Committee on Hotels for MSMS Convention, Pantlind Hotel, Grand Rapids, Michigan. Mailing your application now will be of material assistance in securing hotel accommodations.

As very few singles are available, registrants are requested to co-operate with the Committee on Hotels by sharing a room with another registrant, when convenient.

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Committee on Hotels,
Michigan State Medical Society
c/o Pantlind Hotel
Grand Rapids, Michigan

Please make hotel reservation(s) as indicated below:

..... Single Room(s) ..... persons

..... Double Room(s) for ..... persons

..... Twin-Bedded Room(s) for ..... persons

Arriving September ..... hour ..... A.M. ..... P.M.

Leaving ..... hour ..... A.M. ..... P.M.

Hotel of First Choice: .....

Second Choice: .....

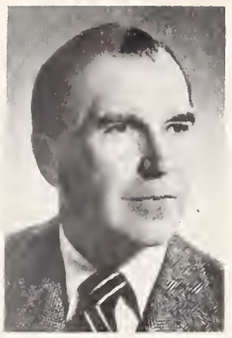
Names and addresses of all applicants including person making reservation:

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Date ..... Signature .....

Address ..... City .....

GUEST SPEAKERS 1955



B. J. Anson, Ph.D.



C. L. Anspach, Ph.D., LL.D.



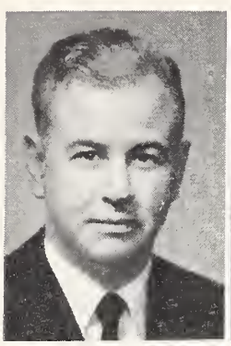
G. W. Ault, M.D.



H. L. Bair, M.D.



R. R. Best, M.D.



F. J. Braceland, M.D.



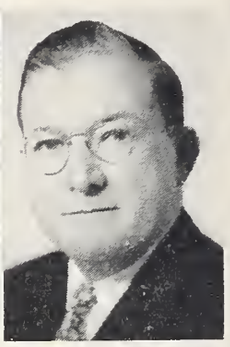
R. Colp, M.D.



W. R. Cooke, M.D.



S. A. Cosgrove, M.D.



J. B. Costen, M.D.



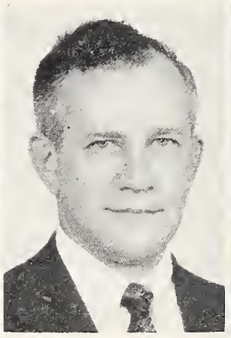
A. C. Ernstene, M.D.



R. S. Fisher, M.D.



S. O. Hoerr, M.D.



H. W. Jacox, M.D.



R. R. Kierland, M.D.



M. Levine, M.D.



R. H. Lyons, M.D.



A. M. Master, M.D.



L. S. McGoogan, M.D.



O. O. Meyer, M.D.



W. E. Nelson, M.D.



R. V. Platou, M.D.



P. G. Skillern, M.D.



R. L. Sutton, M.D.



W. N. Taylor, M.D.



R. W. Te Linde, M.D.



F. H. Top, M.D.

Michigan State Medical Society

The Ninetieth Annual Session

PANTLIND HOTEL-CIVIC AUDITORIUM,

GRAND RAPIDS, SEPTEMBER 28-29-30, 1955

Programs of Assemblies and Sections

WEDNESDAY MORNING
September 28, 1955

First Assembly

Black and Silver Room, Civic Auditorium

Chairman: Arch Walls, M.D., Detroit

Secretary: C. P. Truog, M.D., Grand Rapids

A.M. GENERAL PRACTICE DAY

9:00 **Surgery Panel on "Management of Duodenal Ulcer"**

Chairman: Stanley O. Hoerr, M.D., Cleveland, Ohio

Staff Surgeon, Cleveland Clinic Foundation; Associate Professor of Surgery, Frank E. Bunts Educational Institute

Participants: R. Russell Best, M.D., Omaha, Nebraska

Professor of Surgery, University of Nebraska College of Medicine

Ralph Colp, M.D., New York, New York

Visiting Surgeon, Flower, Fifth Avenue, Metroplitan and Bird S. Coler Hospitals; Consulting Surgeon, Mt. Sinai, Beth Israel, Beekman-Downtown, French, Harlem and Long Beach Hospitals; Clinical Professor of Surgery, The New York Medical College

Richard H. Lyons, M.D., Syracuse, New York

10:00 INTERMISSION TO VIEW EXHIBITS

11:00 **"Medicolegal Problems in Industrial Surgery"**

Russell S. Fisher, M.D., Baltimore, Maryland

Chief Medical Examiner, State of Maryland; Professor of Legal Medicine, University of Maryland Medical School

The peculiar relationship existing between the patient and the physician selected by the employer to treat his accidental injuries or occupational illnesses is more highly conducive to dissatisfaction with a poor result and hence malpractice suits than is the average physician-patient relationship. Yet the duties of a physician to his patient are in no wise lessened because the patient does not pay the physician directly for his services. The general practitioner or surgeon working in the industrial field should be impressed with the fact that malpractice suits, which increased tenfold during the 1930's have again magnified in the last fifteen years so that the probable expectation of any single physician being sued is now greater than one in eight. All this clearly indicates the need for each practitioner to acquire, for his own protection, some fundamental knowledge in the field of torts.

The details of malpractice claims vary widely. A recent survey showed that more than 25 per cent of all arise out of surgical practice; another 8 per cent concern fractures of bones and 7 per cent allege error in diagnosis or delay in establishing the diagnosis as the basis of the claim. Insufficient treatment, as in failure to do a specific blood count or to run pre-operative pregnancy tests before elective pelvic surgery, to administer indicated prophylactic injections or to use the x-ray machine before and after the fracture in industrial bone and joint injuries, have led to a great deal of grief for the practitioner. Employer-worker relationship does not excuse the industrial physician from obtaining competent operative permits which must be specific and "enlightened." The surgeon is responsible for a technical assault as the result of a trespass committed in non-emergency surgery without authorization. The administration of general anesthesia even for a relatively minor office procedure, likewise requires a proper permission and particularly in the case of an employed minor, requires parent or guardian authorization.

The records of practitioners must always be regarded as confidential disclosures and information from them may be released only on signed permission of the patient unless the doctor is under court order.

The necessity for the general practitioner, in many communities, to refer certain non-emergency cases to the specialists lest his failure to refer be the basis for malpractice action when a bad result is obtained, should be borne in mind by all engaged in industrial medical care. Related to the same course of action is the protective value of consultation which should be used whenever the patient is not doing well, whenever any untoward development is noted, or whenever the patient or his family complain unduly or express dissatisfaction with the course of treatment. As in all practice, the maintenance of a pleasant physician-patient relationship is the best way to avoid unpleasant medicolegal complications and the industrial physician must work a little harder than average because of the primary difference in the manner in which he acquires his patients.

11:30 **"Malignancy of the Upper Urinary Tract"**

Wm. N. Taylor, M.D., Columbus, Ohio

Professor in Surgery (Urology), Ohio State University

An analysis of 154 cases. A review of the symptoms of malignancy of the ureter and kidney. Renal malignancy is occasionally the cause of chronic invalidism before urinary symptoms arouse suspicions of the disease. The necessity of repeated examinations when renal tumor is suspected or when urinary or other symptoms are unexplained. The question of early surgical intervention—exploratory and definitive. Should cysts of the kidney be diagnosed and forgotten? Prognosis and mortality.

12:00 END OF FIRST ASSEMBLY

HOTEL RESERVATIONS

for the

Nineteenth Annual Session

MSMS

should be made

NOW

WEDNESDAY NOON
September 28, 1955

12:00 noon to 1:00 p.m.

Discussson Conference

Black and Silver Room, Civic Auditorium

Leader: A. H. Kretchmar, M.D., Flint
Participants: R. Russell Best, M.D., Omaha, Nebraska; Ralph Colp, M.D., New York City; Willard R. Cooke, M.D., Galveston, Texas; Russell S. Fisher, M.D., Baltimore, Maryland; Stanley O. Hoerr, M.D., Cleveland, Ohio; Richard H. Lyons, M.D., Syracuse, New York; Leon S. McGoogan, M.D., Omaha, Nebraska; Ralph V. Platou, M.D., New Orleans, Louisiana; and Wm. N. Taylor, M.D., Columbus, Ohio

ONE SECTION MEETING (LUNCHEON)

1:00 to 2:00 P.M.

SECTION ON UROLOGY

Room 328 Pantlind Hotel

Chairman: B. W. Dovitz, M.D., Detroit
Secretary: H. V. Morley, M.D., Detroit

"Retropubic Prostatectomy"

Wm. N. Taylor, M.D., Columbus, Ohio

Opinions vary as to the usefulness and necessity for this procedure. Has the operation been oversold? A review of 267 cases, stressing the technical difficulties, functional results, morbidity and mortality.

WEDNESDAY AFTERNOON
September 28, 1955
Second Assembly

Black and Silver Room, Civic Auditorium

Chairman: H. B. Zemmer, M.D., Lapeer
Secretary: E. T. Thieme, M.D., Ann Arbor

P.M.

2:00 "Infections in Newborn Infants"

Ralph V. Platou, M.D., New Orleans, Louisiana
Professor of Pediatrics Tulane Medical School

Infections, commonly due to susceptible micro-organisms, now constitute a leading correctable cause of death in the newborn period. Infections in this age group are commonly difficult to recognize by ordinary clinical criteria, thus leading to the consideration that most of them might be prevented by attention to indications for prophylactic therapy such as premature rupture of the membranes, obviously precipitate contaminated deliveries, septic maternal status, etc.

This report deals with experiences in prevention of neonatal infection by several antibiotic agents employed in one of the world's largest premature units.

2:30 "Vaginal Discharge"

Leon S. McGoogan, M.D., Omaha Nebraska
Professor of Gynecology, Chairman of the Department, University of Nebraska College of Medicine

Vaginal discharge with its attending odor, irritation and discomfort is a common complaint of the female patient. Its diagnosis presents a challenge to the attending physician. Its cure is often the despair of the doctor. No age group is immune but it is most commonly present in the reproductive age. This discharge may arise from any portion of the generative tract although the cervix and the vagina are the most common organs involved.

A carefully taken history as to the time of onset of the discharge, its consistency, color, odor, its relationship to the periods, the appearance of blood and attending symptoms of pruritus must be done. The local examination combined with the employment of the wet and dry smear, culture, and biopsy will aid in the diagnosis. In children foreign bodies and monilial infections seem to be the most common causes of vaginal discharge today. In the adult the most frequent causes are trichomonas or monilia infestations in the vagina; nonspecific infections of the cervix and uterus, and neoplasms.

Unless the patient is carefully studied treatment will fail. Resistance to therapy is frequent and re-infections are common especially those due to monilia and trichomonas.

A wide employment of antibiotics in the treatment of various infections has caused an increase in the frequency of monilial infection in the vagina and in the recurrence of infection after apparent cure.

The male may play a very important role, especially as an original infector or as a re-infector, particularly in cases of monilia and trichomonas infections and gonorrhea.

3:00 INTERMISSION TO VIEW EXHIBITS

4:00 "Endometriosis, With Special Reference to Massive Stilbestrol Therapy"

Willard R. Cooke, M.D., Galveston, Texas
Professor of Obstetrics and Gynecology, University of Texas

Brief résumé of theories in regard to etiology of endometriosis. Brief outline of the sequence of pathologic events in this condition, correlated with the symptomatology. Clinical features which permit a reasonably satisfactory diagnosis without operation. History of the development of the various forms of treatment. Notes on personal experience with presacral neurectomy and ovarian neurotomy, with discussion of adequate technique and of the reasons for failure to relieve pain through these operations. The discovery by Karl J. Karnaky of the effect of massive doses of stilbestrol upon endometriosis. Personal experience with Karnaky's original program of therapy in thirty-two cases: relief of pain, except when due to complicating factors like adhesions, etc., in all. Disappearance within three months of palpable masses except definite cysts (which require a much longer time). Recurrence in two cases, both responding to repetition of treatment. Two cases requiring subsequent operation: one for intestinal obstruction by adhesions; one neurectomy for pain without obvious physical causes. Eight pregnancies: six total previous sterility, one one-child sterility; one bizarre and unorthodox case.

Schedule

1 mg. t.i.d. p c for 5 days 2 mg. t.i.d. p c for 5 days 3 mg. t.i.d. p c for 5 days	(Prescription for 100 1 mg. tablets)
5 mg. t.i.d. p c for 5 days 10 mg. t.i.d. p c for 5 days 15 mg. t.i.d. p c for 5 days	(Prescription for 100 5 mg. tablets)
25 mg. t.i.d. p c Until bleeding	(Prescription for 100 25 mg. tablets)

occurs, when dosage is increased by 75 mg. daily repeated with each recurrence of bleeding: total duration of treatment three months.

4:30 "The Evolution of Psychiatry as an Integral Part of General Practice"

Maurice Levine, M.D., Cincinnati, Ohio
Professor of Psychiatry, University of Cincinnati

The past 25 years has witnessed a drastic change in the role of psychiatry in the everyday practice of medicine. Psychiatry is out of its ivory tower, and participates actively in the work of general hospitals, and with medical and surgical patients.

The understanding of the personality problems of the so-called psychosomatic disorders, such as peptic ulcer, migraine, etc., is of importance, but of even greater importance is a consideration of the personal and emotional problems of the general run of patients treated by the general practitioner. The speaker will present case-material, to demonstrate the principles involved in such an approach.

5:00 END OF SECOND ASSEMBLY

—Program of Sections—

WEDNESDAY AFTERNOON

September 28, 1955

5:00 to 6:00 p.m.

SECTION ON PEDIATRICS

Room G, Civic Auditorium

Chairman: J. E. Webber, M.D., Grand Rapids
Secretary: Bernard Bernbaum, M.D., Detroit

"Congenital Disturbances in Bone Formation"
Ralph V. Platou, M.D., New Orleans, Louisiana

This talk constitutes a brief review of the several disturbances included in this broad general field, generally so confusing to students and physicians by virtue of clouded eponyms and multiple diagnostic terms. The purpose of the dissertation is to review systematically the salient genetic, clinical, roentgenologic features and natural course of each of the individual variations commonly classified in this broad general category.

SECTION ON GENERAL PRACTICE

Black and Silver Room, Civic Auditorium

Chairman: R. F. Fenton, M.D., Detroit
Secretary: J. E. Wentworth, M.D., Flint

"Endometriosis"
Leon S. McGoogan, M.D., Omaha, Nebraska

The incidence of endometriosis is apparently four times greater in the private patient than in the ward patient. Its attendant symptoms are sterility and from no symptoms at all to varying degrees of dysmenorrhea, dyspareunia, backache, constipation, and meno-metorrhagia.

Diagnosis is frequently difficult and frequently missed in a high percentage of patients. Fewer errors will occur with adequate history and pelvic examinations. In the mild cases a medical regime with testosterone may be of value. Whenever surgery is performed an effort at conservative therapy with preservation of the reproductive functions should be attempted. Surgical failures may be treated with deep x-ray therapy.

Sterility is a symptom in about 30 to 40 per cent of the patients but endometriosis as a factor in sterility is very low occurring in only about 3.5 per cent of the patients with sterility problems. If all sterility factors are evaluated and the male is determined to be fertile, 60 per cent of the patients having sterility in endometriosis will become pregnant with the employment of testosterone therapy, and about 55 per cent will become pregnant following conservative surgery.

SECTION ON SURGERY

Red Room, Civic Auditorium

Chairman: J. W. Logie, M.D., Grand Rapids
Secretary: E. T. Thieme, M.D., Ann Arbor

"Chronic Pancreatitis"
Stanley O. Hoerr, M.D., Cleveland, Ohio

"Chronic pancreatitis" is a term loosely applied to a group of imperfectly understood diseases whose etiology is probably diverse. There is a vast difference in the significance of the disease in a patient, for example, who suffers from occasional attacks of acute pancreatitis associated with gall stones, and the patient with calcareous pancreatitis who has become a narcotics addict because of daily insufferable pain. The first patient may be cured by a simple cholecystectomy; the second patient may come to total pancreatectomy after three or four lesser operations have failed to relieve the symptoms.

Since the pathologic findings may vary tremendously, particularly in regard to the biliary tract (which may be entirely normal or grossly diseased), it is unlikely that any given procedure, such as sphincterotomy, will offer a universal solution. Each patient must be evaluated individually, both before operation, and during the procedure, using every aid the surgeon can find (such as x-ray demonstration of pancreatic and bile ducts). Then a realistic decision may be reached as to which procedure, or group of procedures, will be most likely to relieve the particular patient of symptoms with the least risk. The surgeon must be prepared to utilize such diverse operations as cholecystectomy, choledocho-enterostomy, transduodenal sphincterotomy, subtotal gastroectomy, and partial or total pancreatectomy, as the individual circumstances dictate, and he must be prepared to face an appreciable incidence of poor results in the severe cases, no matter how carefully he plans his operation nor how well he executes it.

WEDNESDAY EVENING

September 28, 1955

General (Public) Meeting

Black and Silver Room, Civic Auditorium

President: R. H. Baker, M.D., Pontiac
Secretary: L. Fernald Foster, M.D., Bay City

P.M.
8:30 **OFFICERS' NIGHT—PUBLIC MEETING**

1. Call to order, announcements and reports of the House of Delegates by L. Fernald Foster, M.D.
2. Introduction of President R. H. Baker, M.D., followed by President's Annual Address.
3. Induction of members into the MSMS "Fifty-Year Club" by President R. H. Baker, M.D.
4. Presentation of scrolls.
5. Introduction of President-Elect W. S. Jones M.D., Menominee, and induction of Dr. Jones into office of President of the Michigan State Medical Society by the Retiring President.
   Response of Dr. Jones.
6. Introduction of the new President-Elect and other newly elected Officers and of the Chairman of The Council, William Bromme, M.D., Detroit.
7. Presentation of scroll and Past President's Key to Retiring President Dr. Baker by the Chairman of The Council, Dr. Bromme.

9:15 8. **THE ANDREW P. BIDDLE LECTURE**
"Forever Sacred"
Charles L. Anspach, Ph.D., LL.D., Mt. Pleasant, Michigan
President of Central Michigan College of Education (30 minutes)



Andrew P. Biddle, M.D.
(Deceased August 2, 1944)
Patron of Postgraduate Medical Eduction

9. Presentation of Biddle Lecture Scroll.

10:00 10. Adjournment.

THURSDAY MORNING
September 29, 1955

Third Assembly

Black and Silver Room, Civic Auditorium

Chairman: T. P. Wickliffe, M.D., Calumet

Secretary: Coleman Mopper, M.D., Detroit

A.M.

9:00 **"Anatomical Considerations in Surgery of the Gall Bladder"**

Barry J. Anson, Ph.D., Chicago, Illinois

Professor of Anatomy, Northwestern University

Perhaps in no area of equally small dimensions are anatomic interrelationships more complex than in that of the hepatic pedicle. The divisions of the celiac artery, together with their branches to the diaphragm, esophagus, pancreas, duodenum and gall bladder, produce a pattern of great intricacy. This schema is rendered even more involved by variation in the manner of confluence of the hepatic and cystic ducts, and by irregularity in relationship of these structures to the portal vein. For example, not uncommonly two large hepatic arteries are present, the left being a derivative of the left gastric, the latter vessel sometimes constituting an element in an arcade to which the accessory hepatic contributes. In some instances the artery to the left lobe takes origin from the celiac directly; in such cases, the right lobe may be supplied by an upward-directed branch of the superior mesenteric.

These observations on "anomalous" branching of the celiac artery and its three divisions, and those having to do with the derivation of hepatic arteries from the superior mesenteric, would lead to the belief that the cystic artery might arise from any one of a number of sources. Such, actually, is the case. Although the artery most frequently arises near the liver from the adjacent, or right, division of the hepatic artery proper, it may take origin from any one of a number of sources —the frequency of occurrence decreasing with widening of the space separating the gall bladder from the particular source vessel. While in approximately 60 per cent of the cases the artery arises in the manner just described, it may take origin from such distant vessels as the superior pancreaticoduodenal, the hepatic, the ceilac, or even from the superior mesenteric.

Variations of the extrahepatic bile-duct pattern are relatively uncommon in man. Yet, when they do occur, such departures from the anatomic norm are exceedingly important. Variations in this category and those affecting the form and position of the liver, the types of union of pancreatic and common bile ducts will also be described and illustrated (by lantern slides)—on the basis of a study of several thousand specimens in the author's laboratory at Northwestern University Medical School.

9:30 **"Visual Symptomatology"**

Hugo L. Bair, M.D., Rochester, Minnesota

Consultant in Ophthalmology, Mayo Clinic; Associate Professor of Ophthalmology, Mayo Foundation, University of Minnesota Medical School

Since diagnosis of so many eye affections and disturbances of the visual apparatus depends on objective examination or subjective tests, it is easy to neglect the analysis of the patient's subjective complaint. One of the commonest complaints is of some kind of disturbance of vision, and the patient's own description of the the trouble may give an important lead in making the diagnosis.

Subjective visual disturbances may be classified as follows: (1) those due to refractive error; (2) those due to organic, nonoptical causes, and (3) miscellaneous disturbances (for example, malingering, hallucinations and migraine spectra). The symptoms of these subjective visual disturbances are shown in the following outline:

I. Visual disturbances due to refractive error.
  A. General characteristics.
    1. Usually of gradual onset.
    2. Possibly of long duration.
    3. Usually uniform for the field of vision.
    4. Usually greater either for near or for distance vision.
    5. Rarely cause any anxiety.
    6. Possibly but not necessarily associated with ocular discomfort or headaches.
    7. Usually consist of blurring and merging of details, but no real dimming of brightness.
  B. Types of complaint.
    1. Related to age of patient.
      (a) Child:
        Blurring usually related to schoolwork, movies or sports.
      (b) Young adult:
        More often blurring for close work due to hyperopia or astigmatism or both.
      (c) Middle age:
        Presbyopia.
      (d) Old age:
        Blurring for distance vision owing to cataract myopia.
        "Second sight."
    2. Diabetes:
      Blur for distance vision due to transient myopia associated with high blood sugar; blurring for near vision with lowering of blood sugar.
      May have relatively rapid change in short time.
      Instability depending on variation in blood sugar, but nowadays less than formerly due to long-acting insulin compounds.
    3. Third nerve affection with internal ophthalmoplegia:
      Rapid blur for near vision with dilated pupil.
      Drug cycloplegia.
    4. Spasm of accommodation:
      Distance blur.
      Fixed near range.
      Causes obscure.

II. Visual disturbances due to organic, nonoptical causes.
  A. General characteristics.
    1. Onset may be gradual, rapid, or sudden.
    2. Duration variable depending on nature of lesion. Frequently progressive.
    3. More often a partial or incomplete affection of the field.
    4. Usually same for near and distance vision.
    5. May cause more anxiety because of rapid onset, presence for all visual tasks, or disturbing field defects.
    6. May or may not be associated with headache or ocular pain.
    7. More often obscuring of details, dimming or darkening, rather than merging or simple blurring, as in the case of refractive errors.
  B. Types of complaint.
    1. Field defects.
      (a) Homonymous hemianopsia:
        "Half vision"; "things cut in half"; "blind in one eye" versus "blind on one side."
      (b) Bitemporal hemianopsia:
        Generally no complaint except when central vision is affected; then may note slowly progressive blindness of one eye.
      (c) Central scotoma:
        Cannot see directly but can see if gazes to one side ("out of corner of eye").
    2. Local ocular conditions.
      (a) Entoptic phenomena.
        Muscae volitantes:
        "Spots," "cobweb," "twigs."
        Dependence on light conditions—bright surface.
        Most pronounced when light source at anterior focus of eye.
        Motion with eye—variation with position in front or behind center of rotation.
        Sharpest when nearer retina.
      (b) Moore's "lightning flash" syndrome.
      (c) Halos:
        Normal type due to corneal cells, lens fibers.
        Corneal halos, 4 degrees in diameter.
        Lens halos, 8 degrees in diameter.
        Glaucoma halos, 7 to 12 degrees in diameter. Due to edema of cornea.
      (d) Glaucoma:
        Insidious failure of vision.
        May be no complaint until vision far gone or until central area affected.
        "Sudden blindness" one eye, may be of long onset.
      (e) Colored halos:
        Only with acute or subacute increases of pressure. Usually, but not always, associated with pain or ache in eye or head and with generalized blurred, steamy vision.

(f) Fundus lesions:
Macular lesions cause early symptoms; peripheral lesions more often not noticed until advanced or unless rapid, as with retinal detachment.
Positive scotoma ("dark spot") early; may be "bright spot" if early irritative lesion.
Negative scotoma (nonseeing area); advanced or old depression of function.

(g) Detachment of retina:
May have "dark curtain" depending on size and location of lesion.
First symptom often many dark spots or cloud.
Usually marked blur and dimness of one eye.
Occurs rapidly.
Relation between beginning of separation and onset of symptoms important legally in regard to traumatic cause of lesion.
May be better in morning just before getting out of bed and worse after being on feet for awhile due to settling back of retina while at rest.

(h) Retinal angiospasm and arterial closure:
Sudden onset, whole or part of field.
May come and go for awhile.
Usually in hypertension, arteriosclerosis, toxemia of pregnancy.

(i) Vitreous hemorrhage:
Rapid clouding and darkening of vision.
Usually only one eye.
May cause diminution down to faint light perception.
Field full to strong light target, but blood may settle below and cause a superior defect to weaker stimuli thus causing confusion with retinal detachment.

(j) Cataract:
"Second sight" in elderly persons.
Usually a simple blur, clouding, or fogging.
Slowly progressive except may be more rapid in dense nuclear opacities.
Never causes "spots."
May cause bright but not colored rings about lights.
"Streamers" from point sources of light.
Doubling and multiple images especially of lights seen at night.
Distortion.
Vision may be better in dim or better in bright light depending on whether opacity is in pupil or periphery, respectively.

III. Miscellaneous disturbances.
A. Types of complaint.
1. Migraine:
Visual prodrome: positive and negative scotomas, fortification spectra, moving curtain of darkening.
Of limited duration.
May or may not be followed by headache, vomiting.
2. Hallucinations:
Formed and unformed.
May be of organic cerebral origin in occipital or temporal lobe.
3. Intrinsic light of retina:
Colors and so forth with kaleidoscopic changes.
Seen in total darkness, frequently right after going to bed.
4. Chromatopsia:
May be unformed hallucination.
Usually due to drug poisoning, especially with digitalis.
5. Functional amblyopia.
(a) Neuroses.
(b) Malingering.
Patient vague as to onset and etiology except in compensation case—then may be specific.
Often wears colored lenses.
Irked by questions. Talks sparingly about condition.
Wary about being examined—often closes one eye or other before reading test charts.
May read all of one line of letters perfectly but none of the next line.
May read all letters with hesitancy.
Frequently no correlation between distance vision and near vision.
6. Specific reading disability (word blindness).
7. Double vision:
Sometimes described as "blur" rather than seeing double, especially with slight muscle paresis.
Usually of rapid onset.
May be present in all fields of gaze but frequently occurs only in field of action of a particular eye muscle.
May be accompanied by headache or other symptoms associated with cerebral lesion.

10:00 **INTERMISSION TO VIEW EXHIBITS**

11:00 **"Ear, Nose and Throat Symptoms Related to General Medical Conditions"**

JAMES B. COSTEN, M.D., St. Louis, Missouri
Clinical Professor of Otolaryngology, Washington University School of Medicine

In selecting lesions of the nasopharynx and hypopharynx as a topic of mutual interest to the general physician and the otolaryngologist, it is not intended to avoid the broad subjects as allergy, malignancy or temporal bone surgery.

From the striking picture of the adenoidal child with recurrent otitis or the allergic person of any age who has recurrent serous otitis, the degree of urgency increases as the obscurity of the nasopharyngeal lesion becomes more remote.

Not so obvious is the shocking loss of hearing after streptomycin medication, where the gravity of infection for which it is used diverts attention from the deafness.

Extremely common and regularly overlooked is the incompletely resolved otitis media. When incision of the drum was the only certain means of treatment almost all acutely infected ears were treated by the otologist. With the advent of the antibiotic era, most earaches subside with the general infection for which antibiotic is used. The patient disregards the stopped sensation, the ringing tinnitus, and the odd localizing of his own voice. It is not painful and he suspects it to be the natural result of his illness.

Persistent complaint of soreness at the base of the tongue can neither be regarded as chronic tonsil infection or neurosis. Rarity of serious lesions here simply means that we rarely diagnose them until the fatal spread to cervical glands demonstrates the cause. A case of carcinoma of the uvula, actinomycosis of base of tongue, carcinoma of base of tongue, and one of granuloma of the larynx from monilia infection, all seen within the past six months, reveal the need for searching scrutiny of the hypopharynx.

11:30 **"The Role of the Family Physician in Psychiatric Problems"**

FRANCIS J. BRACELAND, M.D., Hartford, Connecticut
Psychiatrist-in-Chief, Institute of Living, Hartford, Connecticut

The march of medicine, accompanied as it has been by the relative mastery of epidemic and infectious diseases, has wrought a tremendous change in the practice of medicine and, indeed, in the facade of disease itself. The physician finds himself confronted today by an ever increasing case loading of chronic conditions. Among these, psychosomatic disorders and emotional problems are particularly outstanding. However unwilling the general physician may be to deal with nervous and mental disorders, his understanding and assistance are urgently needed if we are ever to cope adequately with this, our greatest public health problem.

The physician in community practice may well be the key figure in the entire mental health effort. He is in a strategic position not only to detect emotional disorder in an early phase, but also to prevent and eliminate conditions harmful to mental health, particularly as these appear during childhood.

Whether emotional disorder is superimposed on physical illness, complicates such illness, or arises independently, the physician should be competent to recognize it and to deal with it as promptly as possible. He should remember that the insidiously developing psychoses are often masked for a long period by hypochondriacal symptoms. This applies both to schizophrenic and to depressive states, both of which are medical emergencies.

With the major psychiatric conditions the physician can only refer his patients to a competent specialist. There are many other conditions, however, which he can often relieve by his own efforts. Among these are the anxiety states. He can also do effective mental hygiene during periods of exceptional stress for his individual patients and during the well known danger periods of life—puberty, the climacterium and senescence. Certainly more attention to the needs of our aging

population would yield enormous gains for psychiatry, since it would do much to reduce the admission rate to mental hospitals and the retention of old people who do not belong there.

These and other aspects of the physician's role in psychiatry will be discussed during the presentation.

12:00 END OF THIRD ASSEMBLY

THURSDAY NOON
September 29, 1955

12:00 noon to 1:00 p.m.

Discussion Conference

Black and Silver Room, Civic Auditorium

Leader: H. A. Towsley, M.D., Ann Arbor

Participants: Barry J. Anson, Ph.D., Chicago, Illinois; Hugo L. Bair, M.D., Rochester, Minnesota; Francis J. Bracland, M.D., Hartford, Connecticut; Samuel A. Cosgrove, M.D., Jersey City, New Jersey; James B. Costen, M.D., St. Louis, Missouri; Waldo E. Nelson, M.D., Philadelphia, Pennsylvania; Richard W. TeLinde, M.D., Baltimore, Maryland; and Franklin H. Top, M.D., Iowa City, Iowa

* * *

ONE SECTION MEETING (LUNCHEON)
1:00 to 2:00 p.m.

SECTION ON OTOLARYNGOLOGY

Sadler Lounge, Pantlind Hotel

Chairman: J. D. Flynn, M.D., Grand Rapids

Secretary: H. M. Blackburn, M.D., Grand Rapids

"Classification and Treatment of Temporo-Mandibular Joint Problems"

James B. Costen, M.D., St. Louis, Missouri

As a corollary to continued effort to clearly assess all symptoms which might be due to abnormal action of the temporomandibular joint, evaluation of treatment presents a most complex problem.

Relief from the simplest treatment, which is splinting of the lower jaw with elastic headgear, and relief from the fundamental elaborate dental procedure of balancing occlusion, would seem to completely resolve any question of the sources of pain.

Here, however, we meet the exceptions such as overlay of other sources of pain, all expressed in the areas of the third division of the Vth nerve:

1. Atypical trigeminal neuralgia
2. Cerebral vascular pain
3. Intracranial or extracranial tumor

Hopless exceptions as to treatment fall into two groups. First, the conversion neuroses who faithfully mimic all descriptions of typical pain, appear relieved as long as dental reconstruction and changes are pursued.

Second, patients with masseter tremor, either the beginning of pseudo-bulbar palsy or as an isolated phenomenon. A group is analyzed herewith.

Pursuant with recent use of hydrocortisone in weight bearing joints for painful inflammatory changes, it has been used with gratifying results in a group reported herewith.

Meniscectomy in a group of more severe pain cases is reported and results analyzed.

THURSDAY AFTERNOON
September 29, 1955

Fourth Assembly

Black and Silver Room, Civic Auditorium

Chairman: D. B. Wiley, M.D., Utica

Secretary: J. E. Wentworth, M.D., Flint

P.M.

2:00 "Vaginal Delivery After Prior Cesarean Section"
Samuel A. Cosgrove, M.D., Jersey City, New Jersey

Consulting Obstetrician, Margaret Hague Maternity Hospital, Jersey City, N. J. and several other hospitals throughout the northern N. J. area

There is much authoritative opinion that a woman once having had a cesarean section for whatever indication should have cesarean section with each subsequent delivery thereafter. So widespread is this belief that in many areas the rule "Once a cesarean section always a cesarean section" is adhered to as a dictum of almost legal compulsion.

The natural and proper tendency for cesarean section to largely replace difficult and dangerous vaginal deliveries is properly increasing the primary incidence of cesarean section. The inevitable result of the application of the above rule will be to increase the total incidence of cesarean section to figures never heretofor generally countenanced as proper in American practice.

The feasibility of aberration of this rule by vaginal delivery following cesarean section in a considerable proportion of cases is discussed and is shown to be successfully employed in at least several leading clinics.

2:30 "Indications for Hysterectomy"

Richard W. TeLinde, M.D., Baltimore, Maryland

Professor in Gynecology, Johns Hopkins University; Chief Gynecologist, Johns Hopkins Hospital

Hysterectomy has become a commonplace procedure in most hospitals. It may be extremely simple, but it may be unexpectedly difficult and serious complications occasionally occur. For these reasons the operation should only be done when firm indications exist. The indications are discussed as follows:

1. Indications for vaginal hysterectomy.
Vaginal hysterectomy is a most valuable procedure for definitive treatment for recurrent functional bleeding and small bleeding fibroids. There are also other indications but it is not the answer to the cure of all degrees of prolapse.

2. Indications for abdominal hysterectomy for benign disease.
Under this heading the symptoms caused by fibroids which justify hysterectomy are discussed.

3. Indications for hysterectomy for adnexal disease.
This is discussed in relation to salpingitis, endometriosis and ovarian tumors.

4. Indications for hysterectomy in uterine malignancy.
Preoperative intracavitary irradiation followed by total hysterectomy and double salpingo-oöphorectomy after about six weeks has given us better results than irradiation or hysterectomy alone. We believe that the Wertheim type of hysterectomy with pelvic lymph gland dissection should be restricted to those cases of Stage I cervical cancer and an occasional Stage II that fails to respond to irradiation. Stage O cervical cancer may be treated by hysterectomy without lymph gland dissection but with removal of a generous vaginal cuff.

3:00 INTERMISSION TO VIEW EXHIBITS

4:00 "Diabetes Mellitus in Children"

Waldo E. Nelson, M.D., Philadelphia, Pennsylvania

Professor and Head, Department of Pediatrics, Temple University School of Medicine and Hospital; Medical Director St. Christopher's Hospital for Children (the Department of Pediatrics of Temple University School of Medicine)

The problems related to the diabetic child will be considered under three main headings:

1. Clinical recognition
2. Management of acidosis
3. Supervision of the healthy diabetic child

The high incidence of degenerative complications in young diabetic adults who developed diabetes mellitus in childhood and who have manifest disease for 15 to 20 years or more makes it necessary to consider the possible relationship of clinical management to the likelihood of development of these complications.

In the presentation of plans for therapy of acidosis and for continuous supervision of the non-acidotic child, especial consideration will be given to the more controversial issues. These will include the use of alkali, glucose and multielectrolyte solutions in the therapy of acidosis; and in the program for continued supervision, the pros and cons of "free" versus "restricted" diets will be considered.

Particular stress will be placed on the necessity of adequate psychologic management to the end that the child may be strengthened emotionally and socially and so become able to compete with confidence in adult life.

4:30 **"Development of Communicable Disease and Control"**

FRANKLIN H. TOP, M.D., M.P.H., Iowa City, Iowa

Professor and Head, Department of Hygiene and Preventive Medicine, College of Medicine; Director, University Department of Health; Consultant Director, State Hygienic Laboratories; Consultant in Infectious Diseases, University Hospitals, State University of Iowa.

5:00 END OF FOURTH ASSEMBLY

Program of Sections

THURSDAY

September 29, 1955

5:00 to 6:00 p.m.

SECTION ON PUBLIC HEALTH AND PREVENTIVE MEDICINE

Room C, Civic Auditorium

Chairman: W. B. PROTHRO, M.D., Grand Rapids
Secretary: V. K. VOLK, M.D., Saginaw

"Prevention of Poliomyelitis"
FRANKLIN H. TOP, M.D., Iowa City, Iowa

SECTION ON GASTROENTEROLOGY AND PROCTOLOGY

Room B, Civic Auditorium

Chairman: JAMES A. FERGUSON, M.D., Grand Rapids
Secretary: R. C. CONNELLY, M.D., Detroit

"The Surgical Treatment of Ulcerative Colitis"
GARNET W. AULT, M.D., Washington, D. C.

SECTION ON OPHTHALMOLOGY

Room A, Civic Auditorium

Chairman: G. H. MEHNEY, M.D., Grand Rapids
Secretary: C. W. LEPARD, M.D., Detroit

"Ocular Pain and Headache"
HUGO L. BAIR, M.D., Rochester, Minnesota

The eye and orbit may be the seat, objectively, of pain and headache as a result of definite ocular abnormalities. They also may be the seat, subjectively, of pains and headaches by virtue of spread of impulses throughout the extensive distribution of the trigeminal nuclei and by virtue of the extensive potential of relations of these nuclei to the nuclei of the musculature of the head and neck.

SECTION ON OBSTETRICS AND GYNECOLOGY

Black and Silver Room, Civic Auditorium

Chairman: FERDINAND GAENSBAUER, M.D., Pontiac
Secretary: H. B. RICE, M.D., Detroit

"Therapeutic Abortion"
SAMUEL A. COSGROVE, M.D., Jersey City, New Jersey

In 1944 Cosgrove and Carter presented a paper pointing out what was considered the quite unnecessary incidence of therapeutic abortion in many of the hospitals and clinics throughout the nation, and made a strong plea for the restriction of the use of this operation on the basis that there was no really valid medical reason for performing it.

Since that time many strong articles have appeared supporting this thesis. The reasons for performing the operation have been more carefully scrutinized in all quarters; increasing evidence shows the lack of necessity for it in almost all of the conditions which have heretofor appeared to justify it; more rigid requirements for accepting its necessity have been increasingly imposed by hospital authorities and staffs; it is believed that its use by the most responsible teachers and institutions has definitely lessened.

All of these statements are developed by appropriate discussion of each.

SECTION ON NERVOUS AND MENTAL DISEASES

5:15 to 6:15 p.m.

Rooms D and E, Civic Auditorium

Chairman: I. A. LACORE, M.D., Pontiac
Secretary: C. H. WARD, M.D., Detroit

"Present Directions of Psychiatry"
FRANCIS J. BRACELAND, M.D., Hartford, Connecticut

The advent of new drugs, the rise of chemotherapy, the awakening of the neurologists and neurophysiologists, and the concern of medical educators for their finished product, all point new directions for psychiatry. While great care must be exercised before making extravagant claims, it does appear as though the drugs being used presently are potent. Once new drugs are synthesized, the chemists are off in new directions and all of this augurs well for a more active therapeutic armamentarium for the future.

Psychiatry, which has been the stone which the builders rejected, may yet play an extremely important part in the comprehensive medicine which is postulated for the future. Its possible role as a basic science and an integrating influence in medical education should be considered.

These various new directions of psychiatry will be discussed.

DEANS' PANEL—TIME CHANGE

Notice to all members of the MSMS House of Delegates

The panel on Undergraduate Medical Education, originally scheduled as a 1:00 p.m. luncheon on Monday, September 26, has been changed to a dinner meeting at 6:30 p.m. The program is as follows:

PANEL ON UNDERGRADUATE MEDICAL EDUCATION

Monday, September 26, 1955

6:30 p.m. Dinner, Continental Room

Moderator

J. E. Livesay, M.D., Flint, Speaker, MSMS House of Delegates

Participants

A. C. Furstenberg, M.D., Ann Arbor, Dean, University of Michigan Medical School

G. H. Scott, Ph.D., Detroit, Dean, Wayne University College of Medicine

THURSDAY EVENING
September 29, 1955

State Society Night

Grand Ballroom, Pantlind Hotel

P.M.

10:30 An evening of entertainment for all registrants, ladies and guests

Cabaret-style Dance and Floor Show!
Host: Michigan State Medical Society

(Admission by card furnished to all upon registration)

ONLY ONE MORE DAY TO VISIT YOUR MANY FRIENDS IN THE EXHIBIT

FRIDAY MORNING
September 30, 1955

Fifth Assembly

Black and Silver Room, Civic Auditorium

Chairman: Otto O. Beck, M.D., Birmingham

Secretary: Bernard Bernbaum, M.D., Detroit

A.M.

9:00 WILLIAM BEAUMONT, M.D. LECTURE (sponsored by the Michigan Foundation for Medical and Health Education, Inc.)

"Recent and Important Changes in Treating Colonic and Rectal Carcinoma"

Garnet W. Ault, M.D., Washington, D. C.

Professor of Proctology, Georgetown University School of Medicine; Surgeon, The Proctology Clinic of Washington; Member and Diplomate, The American Board of Proctology

9:30 "Dermatitis of the Hands"

Richard L. Sutton, Jr., M.D., Kansas City, Missouri

Chairman and Clinical Professor of Dermatology, University of Kansas, Medical Center

At least ten per cent of the time and energy of a dermatologist is devoted to attending patients with dermatitis of the hands. Many of those afflicted are housewives with children, whose disability is great in proportion to the quantity of skin disease they suffer from. Every kind of skin disease may affect the skin of the hands. The kinds may be classified in an orderly fashion, and treatment can be designed in relation to causes. The causes are often combinative rather than simple. Commonplace clinical varieties include that due to contactants plus bacterial infection, that due to contactants plus hypoproteinemic eczema plus bacteria, and that due to atopy plus contactants; there are other varieties. Practical and effective therapy will be discussed for the especial purpose of enabling the physician who is not a dermatologist to manage more satisfactorily his cases of dermatitis of the hands, which are trying cases, often enough, for any physician, including the specialist.

10:00 INTERMISSION TO VIEW EXHIBITS

11:00 "The Relationship of Radiation to Surgery in Cancer of the Breast"

Harold W. Jaycox, M.D., New York, New York

Professor of Radiology in the College of Physicians and Surgeons, Columbia University and Chief of the Radiotherapy Division of the Radiological Services of the Presbyterian Hospital

The female breast is one of the commonest sites of cancer. Cures were practically unknown before the radical operation was developed in 1894. Cancer of the breast is probably the most treacherous of all cancers because of the ease with which it gets into the lymphatics and the blood stream.

All thoughtful physicians have wished many times that they knew whether irradiation really improves the prognosis for a woman who has just had a radical resection of cancer of the breast. The results of treatment vary with the degree of malignancy of the tumor, with the involvement of the nodes in the axilla and elsewhere, and with the length of time the patient waited before being operated upon.

The various factors of significance in the prognosis and treatment of breast cancer require critical appraisal because at least two divergent viewpoints have developed concerning the most effective therapeutic measures for the arrest of mammary carcinoma. In the United States, emphasis has been placed upon eliminating the malignant growth through radical excision of as much potential tumor tissue as possible. In Great Britain, emphasis has been placed by a few surgeons on irradiation as the best means for sterilizing the greatest number of carcinoma cells, particularly those occurring outside the immediate breast area. All gradations of opinion exist. The two points of view will be contrasted from a practical as well as a theoretical standpoint. A brief summary of the problem may contribute towards its clarification.

11:30 "Cutaneous Manifestations of Systemic Disease"

Robert R. Kierland, M.D., Rochester, Minnesota

Associate Professor University of Minnesota Graduate School (Mayo Foundation for Medical Education and Research); Consultant, Dermatology and Syphilology, Mayo Clinic

The skin frequently reflects evidence of systemic disease and in this presentation efforts will be made to emphasize those cutaneous signs and symptoms by which important systemic pathology may be suspected and diagnosed. The cutaneous manifestations of systemic disease are frequent and vary greatly in type from patient to patient. The skin should be one of the first organs of the body examined in the course of any physical examination.

The skin is one of the vital organs of the body and yet it is different from many other organs in that it has multiple functions. It should be recognized that the skin is the most practical indicator of the immune and allergic state.

In this talk systemic causes or diseases producing pruritus, hyperpigmentation, metabolic errors, infective granulomas and urticarial states will be discussed, together with a brief review of the cutaneous signs of sarcoidosis, collagen disease, diseases of the blood and blood vessels, new growths including the lymphoblastomas, and miscellaneous conditions.

Only a few cutaneous conditions are not part of a systemic disease or do not have some systemic reflection—all of this points to the fact that dermatology is an integral part of all of medicine and does not have a distant unrelated field.

12:00 END OF FIFTH ASSEMBLY

FRIDAY NOON
September 30, 1955

12:00 noon to 1:00 p.m.

Discussion Conference

Black and Silver Room, Civic Auditorium

Leader: Douglas Donald, M.D., Detroit

Participants: Garnet W. Ault, M.D., Washington, D. C.; A. Carlton Ernstene, M.D., Cleveland, Ohio; Harold W. Jacox, M.D., New York, New York; Robert R. Kierland, M.D., Rochester, Minnesota; Arthur M. Master, M.D., New York, New York; Ovid O. Meyer, M.D., Madison, Wisconsin; Penn G. Skillern, M.D., Cleveland, Ohio; Richard L. Sutton, Jr., M.D., Kansas City, Missouri; and Frederick H. Van Bergen, M.D., Minneapolis, Minnesota

FRIDAY AFTERNOON

September 30, 1955

Sixth Assembly

Black and Silver Room, Civic Auditorium

Chairman: W. B. Harm, M.D., Detroit
Secretary: H. B. Rice, M.D., Detroit

P.M.

2:00 **"Role of the Anesthesiologist in Care of Poliomyelitis Patients"**

Frederick H. Van Bergen, M.D., Minneapolis, Minnesota

Associate Professor and Director, Department of Anesthesiology, University of Minnesota Medical School

Certain of the symptom complexes seen in bulbar and high spinal poliomyelitis necessitate the care and attention of a respiratory physiologist. The fundamental principles underlying the treatment and care of respiratory complications are well understood by the anesthesiologist. Of prime importance in the management of these patients is adequate tissue oxygenation and the maintenance of a normal blood pH through the proper elimination of carbon dioxide. Establishment of an adequate airway by means of a large cuffed tracheotomy tube is mandatory. Ventilatory exchange is best managed by means of a rigid system, positive-pressure breathing apparatus. The minute volume is adjusted to regulate the end alveolar carbon dioxide concentration to produce a normal blood pH. The avoidance of respiratory acidosis is of primary importance since under this condition unfavorable shifts in the electrolyte balance occur. Nursing care is greatly facilitated by the use of positive atmospheric or positive-negative breathing machines. Frequent changing of the position of the patient, vigorous percussion of the chest and frequent aspiration of secretions from the tracheobronchial tree are essential features of such nursing care.

On admission, the bulbar polio patient may evidence the signs and symptoms of asphyxia. One may consider that the patient is suffering from respiratory acidosis. The avoidance of a rapid washout of carbon dioxide is mandatory at this time. It has been shown that rapid shifts towards the normal state are accompanied by rises in plasma potassium ion concentrations, and this condition may lead to bouts of severe hypotension and/or ventricular fibrillation. The prevention and treatment of pulmonary edema constitutes a significant problem in the management of respirator patients.

2:30 **"New Developments in the Treatment of Coronary Occlusion"**

Arthur M. Master, M.D., New York, New York

Cardiologist, Mt. Sinai Hospital; Associate Clinical Professor of Medicine, College of Physicians and Surgeons, Columbia University, New York

No specific rules for the treatment of all cases of coronary occlusion can be promulgated. Each case must be treated individually.

Indiscriminate prolonged bed-rest, e.g., is inadvisable in every case. The physical and psychic status of each patient will, necessarily, determine the length of his stay in bed. In mild cases, the patient may be permitted to sit in a chair on the second or third day. In severer cases, the patient may have to remain in bed for a week or two or more.

The early chair treatment not only improves the morale of the patient, but also shortens his convalescence, lessens the occurrence of constipation and distention, prevents phlebothrombosis, and reduces the need for anticoagulants.

In the average mild case, walking is permitted during the fourth week.

Anticoagulants should not be used routinely but, when used, require very close supervision of the patient. They should be employed in patients who develop heart failure or shock, peripheral phlebitis or arterial embolism, and pulmonary embolism. During the premonitory phase of coronary thrombosis, anticoagulant drugs neither prevent nor hasten the appearance of the thrombosis. The contra-indications to anticoagulants are (1) a history of bleeding tendency, (2) ulcerative colitis, (3) peptic ulcer, (4) moderately severe renal and hepatic insufficiency, (5) non-specific pericarditis, (6) a recent history of cerebro-vascular accident.

The diet should be of low-caloric value. This diminishes the work of the heart, prevents gastro-cardiac reflexes, and reduces weight in the obese.

Nausea and vomiting may be benefitted or overcome by means of the anti-motion sickness drugs, administered orally or intramuscularly.

Since the psychic state of the patient is all impotrant, he should be reassured, as soon as possible, of his probable early recovery, and his quick return to normal personal, familial, and social activities.

No drugs are used routinely in coronary occlusion, with the possible exception of penicillin which is dispensed the first few days. Digitalis is given only if heart failure develops. Digitalis, quinidine, Pronestyl, and other medicaments may be used if arrhythmias appear.

It is essential that shock be treated as soon as possible. Vasopressor drugs—Levophed, Wyamine, Vasoxyl, and Neosynephrine—are helpful in early shock. If congestive failure occurs, strophanthin or digitalis should be given.

Pulmonary edema requires immediate treatment with morphine. If necessary, aminophylline, strophanthin, the mercurias, oxygen under pressure, and phlebotomy or rotating tourniquets should be employed. The inhalation of alcohol vapor has been advocated.

The development of hiccough is of great importance—psychically and physically. It is essential that the patient be repeatedly reassured of its early disappearance. Adequate sedation should be given during the period of hiccough. Many other measures may be employed in its treatment.

Cortisone and ACTH are not efficacious in coronary occlusion.

3:00 **FINAL INTERMISSION TO VIEW EXHIBITS**

3:30 **"The Causes of Pain in the Chest"**

Ovid O. Meyer, M.D., Madison, Wisconsin

Professor and Chairman, Department of Medicine; University of Wisconsin Medical School

With present-day emphasis upon heart disease, coronary disease in particular as a cause of chest pain, there has been a tendency to minimize the importance of many other possible explanations in the patient.

Pain is a specific sensory experience mediated through nerve structures which are separate from those which mediate other sensations such as touch, pressure, heat and cold. Pain arising in visceral structures is likely to be diffuse rather than localized, and the intensity of the pain is often not proportional to the extent or severity of the tissue damage.

Since the innervation is not highly specific within and about the thorax, pain arising from any of several intra-thoracic and intra-abdominal sites may simulate pain of heart disease.

A partial general classification of the causes of chest pain is here given. The differential diagnosis for several will be discussed.

1. Lesions of the Spine and Thoracic Cage
   (a) Spine
   (b) Muscles
   (c) Skin
   (d) Nerves
   (e) Ribs
2. Heart
   (a) Myocardial hypoxia
   (b) Pericarditis
   (c) Rheumatic myocarditis
   (d) Valvular lesions
   (e) Cardiac decompensation
   (f) Cardiac neurosis
3. Lesions of Intrathoracic Viscera other than the Heart
   (a) Aorta
   (b) Pulmonary artery
   (c) Lungs and bronchi
   (d) Pleura
   (e) Mediastinum
   (f) Esophagus
4. Lesions of Abdominal Organs
   (a) Stomach
   (b) Biliary tract
   (c) Spleen
   (d) Pancreas
   (e) Intestinal tract

4:00 **Medical Symposium on "The Newer Therapeutic Tools"**

A. Carlton Ernstene, M.D., Cleveland, Ohio
Chief of Staff, Division of Medicine, Cleveland Clinic

The most important advances in the treatment of cardiovascular disease during the past fifteen years have been the adoption of the low sodium diet as an essential part of the management of congestive heart failure, improvements in the treatment of acute myocardial infarction and its complications, the surgical alleviation or correction of mitral stenosis and certain congenital cardiovascular anomalies, the development of techniques for aorta-iliac and segmental arterial grafting, the discovery of effective prophylactic measures for rheumatic fever, and the use of antibiotics in the treatment and prevention of bacterial endocarditis. In

addition, significant progress has been made in the medical treatment of essential hypertension, and a number of drugs of secondary importance have been introduced for use in the management of other cardiovascular problems. Little progress has been made in the treatment of uncomplicated angina pectoris. The most important measure in the treatment of this condition still consists of a detailed explanation to the patient of the cause and mechanism of his symptoms with emphasis on the importance of avoiding all of those situations and activities which he has learned are liable to induce an attack. For intractable angina, the induction of hypothyroidism by radioactive iodine often results in a striking reduction in the frequency and severity of the seizure.

PENN G. SKILLERN, M.D., Cleveland, Ohio

Diplomate American Board of Internal Medicine; Instructor Frank E. Bunts Educational Institute

The availability of new drugs and isotopes that are effective in the treatment of various endocrinologic diseases has produced a marked change in the status of endocrinology.

Radioactive iodine is becoming increasingly accepted by both medical and surgical men as the preferred treatment in patients having Graves' disease. Although large doses of radioactive iodine are effective in the treatment of toxic adenomatous goiter, surgery still is the treatment of choice.

Three new types of insulin, lente, semilente, and ultralente, have been produced; respectively, they correspond in action to NPH, regular, and protamine insulins.

A new preparation known as sodium-l-thyroxine may be used as a substitute for desiccated thyroid; however, it does not appear to be any more effective clinically than desiccated thyroid and at present it is more expensive. In addition to its well-established uses, desiccated thyroid now is being administered to decrease the size of the goiter of struma lymphomatosa. Recent studies at our institution indicate that struma lymphomatosa is not a chronic thyroiditis, but rather it is primary compensated and decompensated thyroid failure with compensatory thyroid enlargement. Since this condition can now be diagnosed preoperatively with newer diagnostic tools, surgery is no longer the treatment of choice.

Newer drugs such as cortisone and hydrocortisone have revolutionized the treatment of adrenocortical failure and overactivity, so that such treatment is now simple and effective.

5:00 **END OF SIXTH ASSEMBLY**

Program of Sections

FRIDAY AFTERNOON
September 30, 1955
5:00 to 6:00 p.m.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

Red Room, Civic Auditorium

Chairman: DONALD BOERSMA, M.D., Grand Rapids

Secretary: COLEMAN MOPPER, M.D., Detroit

"Writing a Book on Diseases of the Skin"

RICHARD L. SUTTON, JR., M.D., Kansas City, Missouri

The subject was selected as representing that aspect of dermatology which the speaker is most intimately familiar with, or one may say afflicted with, and which might possess novelty and interest for such physicians as are likely to attend a Section meeting on Dermatology. Sutton's "Diseases of the Skin" was first published in 1916, has gone through ten editions, two of them the collaborative work of Sutton and Sutton, and it is now being re-edited for the eleventh edition, which is due off press in 1956 and is now in galley proof. The mechanics of maintaining such a text, the history of its forty years, and the technique of putting together its paragraphs are matters to which the speaker has devoted a vast amount of time and energy and upon which he can discourse for at least the duration of a section meeting in the hope of not boring most of his audience and of telling them at least some things they don't know already. The moral of the presentation may be, "Do not enter upon the endeavor of writing a medical book with your eyes open; close them. The better part of valor is to put all pencils and foolscap in the wastebasket."

SECTION ON MEDICINE

Black and Silver Room, Civic Auditorium

Chairman: J. R. BRINK, M.D., Grand Rapids

Secretary: R. A. GERISCH, M.D., Detroit

"Anticoagulant Therapy"

OVID O. MEYER, M.D., Madison, Wisconsin

The utility of the anticoagulants in the prevention and treatment of intravascular thrombotic disease is now quite well established. There are several substances available for clinical use and still others undergoing experimental study.

Two principal types of drugs are widely used, heparin and the coumarin compounds. The indandione drugs, which like the coumarin compounds operate by producing hypoprothrombinemia, have been the most recent additions to the armamentarium.

Four coumarin compounds have been more or less widely used to date; namely, bishydroxycoumarin (Dicumarol), cyclocumarol (Cumopyrin), ethyl biscoumacetate (Tromexan), and the most recent one, and for us the most useful and most interesting, warfarin sodium (Coumadin). Warfarin sodium is the only coumarin anticoagulant that can be safely administered intravenously. It is similarly effective when given orally. It produces a more rapid hypoprothrombinemia than does Dicumarol but its greatest value appears to be due to the relative ease of maintaining the prothrombin at therapeutic levels —20 to 40 per cent—with less fluctuation than with the other coumarins.

The various indications and contra-indications for anticoagulant therapy and the value derived therefrom will be discussed. Vitamin K_1 and vitamin K_1 oxide have been found to be much more effective antidotes for excessive hypoprothrombinemia than vitamin K or blood transfusions, and this aspect will also be commented upon.

SECTION ON ANESTHESIOLOGY

Room B, Civic Auditorium

Chairman: E. D. CONNER, M.D., Birmingham

"Hypercapnia"

FREDERICK H. VAN BERGEN, M.D., Minneapolis, Minnesota

Hypercapnia frequently accompanies general anesthesia regardless of the agent used. Pentothal, cyclopropane and the curariform adjuvants are the principal offending agents. A discussion of the symptoms and the methods used in the prevention of the development of hypercapnia will be given. Electrolyte changes accompanying respiratory acidosis and their significance will be reviewed. The posthypercapnic phenomena and their prevention will occupy some of the discussion.

SECTION ON RADIOLOGY

Room G, Civic Auditorium

Chairman: C. P. TRUOG, M.D., Grand Rapids

"The Effect of Radiation on the Normal and Malignant Cell in Man"

HAROLD W. JACOX, M.D., New York, New York

During the last ten or twelve years, many more observations have been made on the qualitative and quantitative aspects of radiation effects on the cell. The question arises as to what extent the experimental data can be applied to cancer cells. The radiation effects on tumor cells induced by direct ionziation are of two kinds: temporary or reversible, and permanent or irreversible. The most important temporary effect is the suppression of mitosis. It has been found that both the duration of the suppression and the time of its onset depends primarily upon the dose. Recent investigations show that it is also affected by the dosage rate.

There is no specific biologic effect produced by one ionizing radiation and not by another. The bizarre appearance of cell nuclei following the irradiation of neoplasms has been interpreted as an indication of increasing malignancy because of the similarity to tumor anaplasia, but this is not the case. The question of whether radiation is ever stimulating often has been raised. These and other problems will be discussed at some length.

6:00 **END OF SCIENTIFIC ASSEMBLY AND OF THE 1955 ANNUAL SESSION**

Annual Reports

ANNUAL REPORT OF RHEUMATIC FEVER CONTROL COMMITTEE—1954-1955

1. The Rheumatic Fever Control Committee has met four times since the last Annual Report: September 8, 1954; December 1, 1954; February 2, 1955, and April 13, 1955.

2. The Committee has studied the monthly statistical and financial reports of the several Rheumatic Fever Diagnostic and Consultation Centers and the reports of the Medical Co-ordinator of the Program, Leon DeVel, M.D.

3. The main feature of the Program continues to be the twenty-five Rheumatic Fever Diagnostic and Consultation Centers, each operated by the local County Medical Society. These Centers function only as diagnostic and consultation centers. They see cases on referral from practicing physicians and act to aid them in handling their more difficu't cases. The statistical report for the calendar year 1954 follows: There were 312 new referrals to the centers with 168 diagnosis of rheumatic fever and 314 re-examinations.

During the eight years of operation of the Rheumatic Fever Program in Michigan, there have been 3,293 new referrals and 2,090 re-examinations. These have resulted in 1,102 diagnoses of rheumatic fever. It is interesting that a recent report on a Rheumatic Fever Program in the State of Virginia, operated by the Health Department of that state, with funds provided by the Children's Bureau of the Federal Government, had in eleven years had 2,678 admissions. The operation of this Program from the information we have, had none of the educational features of Michigan State Medical Society Program.

4. The Committee has prepared and distributed to the membership of the Michigan State Medical Society five additional "Desk Reference Cards for Rheumatic Fever" in the series previously discussed. Desk Reference Card No. 2, "Prevention and Prophylaxis" (revised); Card No. 14, "Skin Manifestations in Rheumatic Fever"; Card No. 15, "Selected References"; Card No. 16, "Differential Diagnosis of Rheumatic Fever," and Card No. 17, "Chorea." Others are in preparation, and the series will be continued.

In addition, the Committee has entirely revised the pamphlet "Rheumatic Fever," the story for parents, and it is being published and issued by the Michigan Department of Health.

5. No physicians are being sent this year for postgraduate courses in rheumatic fever as no suitable courses are being offered any place on this continent.

6. The study concerned with the education and vocational guidance of rheumatic and/or cardiac children in co-operation with the Special Education Division of the Michigan Department of Public Instruction has resulted in a new form to be kept in schools and taken by parents to their physician for recommendations as to the activities of the child. This is a rather detailed form which allows the physician to help the school understand the limitations of the child as an individual, not as just another cardiac.

7. Through the work of the Committee in conjunction with the Health Department and a special subcommittee of the Rheumatic Fever Control Committee, the State Health Department is to stock penicillin and use it to replace penicillin used in doctors offices for the prevention and prophylaxis of rheumatic fever among indigent cases.

8. The Committee has spent considerable time and appointed a subcommittee to study and bring back recommendations regarding the streptococcal epidemiology of rheumatic fever. A report on a possible research project in this field will be made later.

9. The Committee sponsored an educational cardioscope demonstration at both the meetings of the Academy of General Practice and the American Academy of Pediatrics in Detroit during the year. Among the scientific exhibits at both meetings this was one of the best attended.

10. Dr. DeVel and members of the Committee appeared before three county medical societies and numbers of other ancillary groups to give scientific programs on rheumatic fever.

11. Due to the generosity of Mr. James Gerity, Jr., Advisor to the Committee, and the very hard work of Dr. Robert Fisher, a member of the Committee, a one-hour television program on rheumatic fever was presented over TV Station WNEM in Bay City on May 15, 1955.

12. The financial support of the Program and continual interest in the Program by the Michigan Heart Association, a member of the United Health and Welfare Fund of Michigan, is most gratefully appreciated by the Committee.

13. The Chairman of your Committee appreciates very deeply the hard work, counsel and support given him by the individual members of the Committee, the medical coordinator, the Executive Committee of The Council, Michigan State Medical Society, The Council of the Michigan State Medical Society and the staff and officers of the Michigan State Medical Society.

Respectfully submitted,

S. T. Harris, M.D., *Chairman*
E. W. Adams, M.D.
P. S. Barker, M.D.
Carleton Dean, M.D.
R. E. Fisher, M.D.
Thomas Francis, Jr., M.D.
R. A. Gerisch, M.D.
M. S. Hecht, M.D.
F. D. Johnson, M.D.
J. A. Johnston, M.D.
B. I. Johnstone, M.D.
V. B. Lancaster, M.D.
J. D. Littig, M.D.
E. C. Long, M.D.
R. J. McGillicuddy, M.D.
M. F. Osterlin, M.D.
W. B. Prothro, M.D.
L. Paul Ralph, M.D.
H. H. Riecker, M.D.
D. S. Smith, M.D.
R. D. Tupper, M.D.
Frank Van Schoick, M.D.
Mr. James Gerity, Jr., *Advisor*
L. Fernald Foster, M.D., *Secretary*
Leon DeVel, M.D., *Medical Co-ordinator*

ANNUAL REPORT OF COMMITTEE ON MENTAL HEALTH—1954-1955

During the year ending in May 1955, the Committee on Mental Health held seven meetings. Four subcommittees as well as individual members carried out special assignments. These and the other activities of the Committee can be divided into the following three categories:

1. Participation in conferences:
   (a) Members of the Committee participated in the program at meetings of the Research Committee of the Michigan Society for Mental Health and of the Overall Policy Making Committee on Psychiatric Nursing in Michigan. Other representatives testified on mat-

ters pertaining to mental health before three committees of the Michigan Legislature.

(b) The Subcommittee on the Problem of Lay Psychotherapy accepted several invitations to meet with various public officials who were interested in conducting an investigation into the illegal practice of psychotherapy by lay persons.

(c) The Liaison Subcommittee regularly attended meetings of the Committee on Mental Health of the Wayne County Medical Society and the March meeting of The Council of the Michigan Society of Neurology and Psychiatry.

2. Advisory capacity:

(a) In response to the request by the Director of the Michigan State Department of Social Welfare, the Committee assisted in formulating a definition of incapacity as related to eligibility for aid to dependent children.

(b) Publication of an article on alcoholism by the Executive Director of the Michigan State Board of Alcoholism was recommended by the Committee after the manuscript was reviewed at the direction of The Council.

(c) A number of mental health bills which had been introduced in the State Legislature were studied by the Committee. Its opinions with respect to the proposed legislation were thereafter submitted for the information of the Legislative Committee.

3. Studies and statements:

(a) After determining that alarmingly few committees on mental health have been appointed by the 55 component county medical societies, the Committee has strongly urged that county mental health committees be formed in each society. In addition, the Committee has recommended that the Woman's Auxiliaries to the Michigan State Medical Society and to the component county medical societies also establish committtees on mental health.

(b) Subsequent to an inquiry by a private citizen, the Committee has conducted a study of the availability of medical and social resources to parents of mentally retarded children.

(c) The Subcommittee on Convulsive Disorders has begun a survey of the membership of the Michigan State Medical Society in order to determine which physicians are particularly interested in treating epileptics.

(d) Following a careful review of the method of operation of the "Minnesota Plan," the Committee recommended that a Committee on Medical Testimony be appointed by the Society President to consider controversial expert testimony given by Michigan physicians.

(e) The Subcommittee on Psychiatric Orientation of the General Practitioner recognized the need for making psychiatric insights available to physicians in general practice and has adopted a statement embodying the principles by means of which this need can be met.

(f) Throughout the year, the Liaison Subcommittee has devoted its efforts to the development of a program of mental health education which would be of benefit to members of the medical profession and lay persons alike. As a means of accomplishing this end, the Committee has advocated the teaching of courses in mental health in public schools, has adopted a statement on the responsibility of the physician to the patient in mental ill health and has expressed its view on the relationship between medicine and psychiatry in an article to be published in THE JOURNAL of the Michigan State Medical Society.

The Chairman wishes to thank the members of the Committee on Mental Health for the industrious cooperation given throughout the past year. It is hoped that the Committee's efforts have contributed to the mental welfare of the people living in the State of Michigan and to the accomplishment of the objectives of the Michigan State Medical Society.

Respectfully submitted,

H. W. BIRD, JR., M.D., *Chairman*
W. E. CLARK, M.D.
F. P. CURRIER, M.D.
J. M. DORSEY, M.D.
T. J. HELDT, M.D.
L. E. HIMLER, M.D.
M. H. HOFFMAN, M.D.
R. F. KERNKAMP, M.D.
I. A. LACORE, M.D.
M. H. MARKS, M.D.
P. A. MARTIN, M.D.
F. O. MEISTER, M.D.
C. J. MUMBY, M.D.
W. H. OBENAUF, M.D.
R. W. WAGGONER, M.D.
E. M. WILLIAMSON, M.D.
H. A. LUCE, M.D., *Advisor*
H. B. ZEMMER, M.D., *Advisor*

ANNUAL REPORT OF THE ETHICS COMMITTEE—1954-1955

The Ethics Committee of the Michigan State Medical Society had but one meeting this year and this was to clear up a couple of very minor points that it was not possible to finish up from the previous year at the time the report was submitted. The greatest amount of controversy concerned a misunderstanding on the part of one county society as to the duties of the Committee and the entire matter was referred back to that county society for their initial action. Nothing was heard of it thereafter. It is nice to be able to report that there was nothing for the committee to do when there is so much criticism aimed at the society as a whole. This proves, as we all know, that 90 per cent of the accusations are the figment of the imagination of a certain class of people.

Respectfully submitted,

H. W. PORTER, M.D., *Chairman*
H. B. BARKER, M.D.
W. L. HARRIGAN, M.D.
F. H. LINDENFELD, M.D.
H. L. MORRIS, M.D.
E. A. OAKES, M.D.
A. H. PRICE, M.D.
W. F. STRONG, M.D.
M. R. WEED, M.D.
J. JOSEPH HERBERT, L.L.B.

ANNUAL REPORT OF CHILD WELFARE COMMITTEE—1954-1955

The Child Welfare Committee of the Michigan State Medical Society and its subcommittees presents herewith a brief summary of its activities for the past year.

The general committee considered and recommended to Michigan State Medical Society subjects relative to the general medical welfare of the children of the State of Michigan—oxygen in the care of prematures, penicillin in the prophylaxis of opthalmia neonatorum, rural health, poliomyelitis vaccine, and infectious diarrhea of the newborn.

The Subcommittee of Ophthalmolgists considered and approved the first set of regulations for the Vision Aid Program of the Michigan Crippled Children Commission and approved a list of ophthalmologists in Michigan to serve as consultants to them for refractions. They also revised the card on "Report of Ocular Ex-

amination" and discussed statistics on the Screening Program of the Michigan Department of Health.

The Subcommittee on School Health Problems was beset by frequent changes of the chairmanship due to call by the Armed forces but was again reactivated and further pursued the recommendations regarding physical examinations, school health record cards, school health conferences and Michigan State Medical Society's September issue of THE JOURNAL.

The Subcommittee on Hearing Defects advised the Michigan Crippled Children Commission on policy regarding children coming under their jurisdiction and recommended a list of consultant otologists for the State.

The Committee wishes to express its appreciation for the co-operation of the Michigan Department of Health and will continue to serve to the best of its abilities in advising Michigan State Medical Society on current child welfare problems.

Respectfully submitted,

G. E. ANTHONY, M.D., *Chairman*

F. M. ADAMS, M.D.
F. A. BARBOUR, M.D.
C. C. BENJAMIN, M.D.
R. T. BLACKHURST, M.D.
W. N. BRALEY, M.D.
V. G. CHABUT, M.D.
G. B. CORNELIUSON, M.D.
A. J. CORTOPASSI, M.D.
R. H. CRISWELL, M.D.
CARLETON DEAN, M.D.
N. E. DUROCHER, M.D.
R. G. FERRIS, M.D.
R. M. HEAVENRICH, M.D.
W. S. JONES, JR., M.D.
RUTH E. LALIME, M.D.
W. K. LOCKLIN, M.D.
DON MARSHALL, M.D.
R. J. MASON, M.D.
M. F. OSTERLIN, M.D.
M. H. PIKE, M.D.
A. E. SCHULTZ, M.D.
L. O. SHANTZ, M.D.
L. P. SONDA, M.D.
W. C. STEWART, JR., M.D.
J. N. P. STRUTHERS, M.D.
H. A. TOWSLEY, M.D.
FRANK VAN SCHOICK, M.D.
E. H. WATSON, M.D.
J. E. WENTWORTH, M.D.

ANNUAL REPORT OF ADVISORY COMMITTEE TO WOMAN'S AUXILIARY—1954-1955

There were no meetings of this Committee during the year. Several discussions of matters relating to the activities of the Auxiliary occurred between the Chairman and the President of the Auxiliary. Two matters of importance were referred directly to the executive committee of the Council.

The members of the committee are aware of the fine work of the Auxiliary and refer the Delegates to the Annual Report of the President to be presented at the opening session of the House.

Respectfully submitted.

J. E. LIVESAY, M.D., *Chairman*
A. B. ALDRICH, M.D.
W. J. BUTLER, M.D.
F. J. KEMP, M.D.
A. F. MILFORD, M.D.
A. C. PFEIFER, M.D.
D. F. SCOTT, M.D.
W. L. SHERMAN, M.D.

ANNUAL REPORT OF ADVISORY COMMITTEE TO MICHIGAN STATE MEDICAL ASSISTANTS SOCIETY—1954-1955

Two meetings of the Medical Assistants Advisory Committee were held during 1954-1955.

At the first meeting, held on July 11, 1954, the Committee was primarily concerned with revisions of the Michigan State Medical Assistants Society's constitution. The Committee recommended several changes in the MSMAS Constitution, most important of which was: That article IV, Section II, should read as follows: "Active membership is open to any eligible person actively employed in technical or in administrative capacity in the office or laboratory of a member of the Michigan State Medical Society; also administrative employees in the offices of Medical Hospitals or Medical Laboratories of the State of Michigan."

At the second meeting of the Committee, representatives of Ferris Institute, Big Rapids, Michigan, submitted a proposed curriculum for medical assistants at Ferris Institute for the Committee's advices. The proposed program was designed to train business office workers, nursing aid-receptionists and physician's aids. Several recommendations were made to these representatives.

The Committee noted with approval an experimental placement project being carried out by the Michigan Health Council, in co-operation with the Ingham County Medical Assistants Society, and anticipates valuable information for statewide usage will accrue from this program which is designed to assist M.D.'s in obtaining qualified personnel.

Many of the county societies have carried out noteworthy projects, too numerous to mention, but all of value to the assistants and their employers.

The Committee is very pleased with the great strides made by the Medical Assistants this year in increasing their membership. The Society now has 523 state members and has added three new county societies: Jackson, Van Buren and Barry, making a total of twelve component societies as of April 1, 1955.

Designed to aid the Medical Assistants Society in its membership drive, an attractive folded card "You Are Eligible" has been prepared and 5,000 copies are being distributed throughout the state, sponsored by the Michigan State Medical Society.

The Medical Assistants Society is living up to the most optimistic expectations. It is proving to be of great value to doctors and their patients everywhere as it increases the skills and improves the spirits of its members.

Respectfully submitted,

RALPH W. SHOOK, M.D., *Chairman*
R. W. POMEROY, M.D.
L. A. PRATT, M.D.
E. C. SWANSON, M.D.
OTTO VAN DER VELDE, M.D.
J. E. WEBBER, M.D.

ANNUAL REPORT OF THE GERIATRICS COMMITTEE—1954-1955

The Geriatrics Committee held three meetings during the past year. One in Flint, Detroit and Ann Arbor, respectively. A good attendance was had each time, with an increasing amount of interest in the whole field of gerontology. Several new county geriatrics committees have been formed in the past year totaling nineteen at the present time.

During January, 1955, a Conference on Aging, for physicians, was held in Ann Arbor under the auspices of the Michigan State Medical Society and the Department of Industrial Health of the University. More than seventy-five physicians from throughout the State attended. All phases of geriatrics were covered in the meeting with a great deal of interest shown in all the discussions.

The May issue of the Michigan State Medical Society JOURNAL was devoted almost entirely to the papers presented at this Conference.

Several members of our Committee took part in planning a workshop on Health Maintenance in Later Maturity as a part of the Conference on Aging system at Ann Arbor during June of this year. The Conference was co-sponsored, as in the past, by the Michigan State Medical Society, with several of its members in active participation during the three-day meeting. Each year there is shown an increased amount of interest by the physicians throughout the state and country.

During the coming year, efforts will be made through

your Committee to explore the health needs of the retired worker, including the various health insurance plans for the aged.

Respectfully submitted,
A. Hazen Price, M.D., *Chairman*
P. C. Gittins, M.D., *Vice Chairman*
C. H. Adams, M.D.
R. M. Athay, M.D.
F. W. Baske, M.D.
H. B. Bennett, M.D.
J. R. Brink, M.D.
E. F. Crippen, M.D.
R. E. Dustin, M.D.
G. S. Fisher, M.D.
W. D. Harrelson, M.D.
J. J. Lightbody, M.D.
E. S. Rhind, M.D.
J. M. Ryan, M.D.
L. F. Segar, M.D.
C. W. Sellers, M.D.
F. C. Swartz, M.D.
G. C. Thosteson, M.D.
S. C. Wiersma, M.D.
H. W. Woughter, M.D.
W. M. LeFevre, M.D., *Advisor*

ANNUAL REPORT OF THE COMMITTEE ON POSTGRADUATE MEDICAL EDUCATION—1954-1955

During the year 1954-1955, your Committee on Postgraduate Medical Education met only once, due to the fact that the presentations on the extramural program were given in many of the centers rather late in the spring. Complete reports were not received in time to hold the second meeting before making this report.

At the meeting on December 16, 1954, the subject of the periodic health appraisal was discussed by the Committee, and a subcommittee consisting of Drs. Weiser, Kaump, Johnson, Cummings and Sheldon, was appointed to meet with the Michigan State Medical Society Committee on Periodic Health Appraisal. This meeting was held on May 12 at the Dearborn Inn. Drs. Kaump and Cummings represented the subcommittee of the committee on Postgraduate Medical Education. After a thorough discussion of the most excellent plan worked out for periodic health examinations, Drs. Kaump and Cummings promised to recommend to their Committee and the Executive Committee of The Council that a discussion of this important work be included in the extramural program for 1955-1956.

Other routine matters, such as the discussion of attendance, the various teaching centers, subject material for inclusion in the program, and suggestions of new ways of presenting postgraduate instruction were considered. Much favorable comment followed an explanation of the Weiser plan of postgraduate instruction as used at Grace Hospital.

The attention of the Committee was called to the fact that the doctors of the State have appreciated the increase in obstetrical subjects offered on the program in the last year.

The spring meeting of the Committee is planned for June 23. A report of this meeting will be included in next year's annual report.

The subjects presented during the year were:

Fall Program

Alcoholism.
Child psychiatry and its relationship to the practicing physician.
Medical and surgical aspects of hyperthyroidism.
Obstetrical hemorrhage.
Old problems and new methods in the diagnosis and treatment of thyroid disease.
Operative obstetrics.
Some medical and surgical aspects of endocrine disease.
Surgical risk in the cardiac patient.
The doctor and the patient.
The new hypertensive drugs.
The non-traumatic surgical emergencies.
Uterine surgical diseases.
Why mothers die?

Spring Program

Current attitudes on toxemia.
Current concepts in treatment of uremia.
Factors regulating the renal control of water and electrolytes.
Infections and other problems in obstetrics.
Management of diarrhea in infants and young children.
Medical aspects of neurologic emergencies in children.
Neurological emergencies.
Obstetrical hemorrhage.
Operative obstetrics.
Ophthalmology for the general practitioner.
Pathogenesis and treatment of edema.
Periodic health appraisal.
Peripheral vascular disease.

Attendance—Extramural Program

Center	*Fall*	*Spring*	*Number of physicians*
Alpena	14	15	19
Battle Creek	63	—	63
Bay City	29	28	46
Flint	80	21	89
Jackson	66	52	66
Lansing	66	—	66
Muskegon	54	63	81
Port Huron	60	10	60
Traverse City	43	—	43
Cadillac	—	31	31
Upper Peninsula:			
Escanaba	15	16	20
Houghton	19	16	21
Iron Mountain	19	19	20
Ironwood	18	18	23
Marquette	20	19	23
Menominee	24	21	29
Sault Ste. Marie	26	31	39
	616	360	739

From the attendance at the extramural programs we feel justified in stating that the interest in postgraduate medical education among the members of the Michigan State Medical Society has not waned. This fact also is emphasized by the splendid attendance at the following meetings: Michigan State Medical Society, Michigan Clinical Institute, Coller-Penberthy Conference, Wayne University College of Medicine Clinic Day and Alumni Reunion, Genesee County Medical Society Cancer Day, and other educational programs offered by county medical societies and hospital groups. The regional meetings of the National surgical and medical boards reflect the same increased interest.

A list of intramural activities offered by Wayne University College of Medicine and the University of Michigan Medical School is as follows:

Wayne University College of Medicine

Name of Course	*Doctors Enrolled*
Advanced Dissection	1
Physiological Chemistry Seminar	5
Physiology Seminar	3
Survey of Physiology	9
Beginning Hematology	5
Advanced Hematology	1
Dermatopathology	7
Dermatology Seminar	5
Medical Conference	4
Medical Seminar	3
Electrocardiography	25
Gastroenterology	3
Medical X-Ray Conference	3

Electrocardiographic Conference	8
Therapeutic Conference	4
Surgery Seminar	14
Basic Ophthalmology	5
Pathology of Bone & Joint Diseases	5
Neuropathology	2
Hematology Clinic	1
Review of Clinical Hematology	3
Cancer Detection	5
Regional Anatomy	
Head and Neck	7
Thorax, Abdomen and Pelvix	30
Back and Extremities	3
Nutrition	1
Survey of Medical Chemistry	1
Cytodiagnosis of Cancer	1
Histopathology of Ear, Nose and Throat	2
Conference on Anesthesiology (3 days)	39

The following is an explanatory note by Arthur H. Smith, Director of Graduate Medical Education at Wayne University:

"As you probably know these same courses are attended by our graduate students in the basic medical sciences and residents in hospitals who are in our graduate program. The enrollment figures given, however, are just for postgraduate doctors."

University of Michigan Medical School

Courses	*Registrants*
Anatomy	24
Basic Sciences	28
Clinical Exercises for Practitioners	19
Clinical Internal Medicine	54
Diagnostic Radiology	17
Diseases of Blood and Blood-forming Organs	17
Diseases of the Gastro-intestinal Tract	9
Diseases of the Heart	20
Electrocardiographic Diagnosis	34
Foreign Physicians	12
Interns, Residents and Assistant Residents	338
Metabolism and Endocrinology	26
Obstetrics and Gynecology	33
Ophthalmology	135
Otolaryngology	38
Pediatrics	37
Radioactive Isotopes, Clinical Use of	11
Recent Advances in Therapeutics	29
Surgical Pathology Slides and Miscellaneous	19

The following named physicians participated in the extramural postgraduate teaching program during the year:

Gaylord S. Bates, M.D.
William H. Beierwaltes, M.D.
Robert J. Bolt, M.D.
John Reed Brown, M.D.
Norman E. Clarke, M.D.
John A. Doyle, M.D.
Arthur L. Drew, M.D.
Harold F. Falls, M.D.
Stefan S. Fajans, M.D.
Herbert B. Gaston, M.D.
Bruce D Graham, M.D.
Leonard P. Heath, M.D.
Paul Hodgkinson, M.D.
Franklin D. Johnston, M.D.
Francis A. Jones, Jr., M.D.
Harold H. Lampman, M.D.
Harold W. Longyear, M.D.
Harold W. Lovell, M.D.
Yoshikazu Morita, M.D.
Harold A. Ott, M.D.
William S. Reveno, M.D.
Henry K. Schoch, M.D.
George E. Smith, M.D.
Palmer E. Sutton, M.D.
E. Thurston Thieme, M.D.
Raymond W. Waggoner, M.D.
George L. Walker, M.D.
Julius M. Wallner, M.D.
Joseph L. Whelan, M.D.

Upon the recommendation of the Committee on Postgraduate Medical Education, the Michigan Foundation for Medical and Health Education granted certificates of Associate Fellowship in Postgraduate Medical Education to eighty physicians and certificates of Fellowship to fifty physicians.

The Committee is indebted to all the speakers who participated in the program in the teaching centers of the State. We commend the sacrifice made by physicians who went to the centers in the Upper Peninsula, and the busy obstetricians who have given generously of their time in presenting timely subjects pertaining to obstetrics. We would be remiss if we did not thank the officers of the Society and the Deans of the two medical schools who have co-operated so well with the members of the Postgraduate Medical Education Committee. As long as the doctors of the State feel that the activities of this Committee are of use to them, the work will be carried on and expanded.

Respectfully submitted,
H. H. Cummings, M.D., *Chairman*
J. M. Sheldon, M.D.
E. I. Carr, M.D.
C. E. Badgley, M.D.
D. A. Cameron, M.D.
B. R. Corbus, M.D.
A. C. Furstenberg, M.D.
I. R. Heidenreich, M.D.
L. J. Hirschman, M.D.
R. A. Johnson, M.D.
D. H. Kaump, M.D.
D. W. McLean, M.D.
J. M. Robb, M.D.
G. H. Scott, Ph.D.
E. F. Sladek, M.D.
H. A. Towsley, M.D.
F. A. Weiser, M.D.

ANNUAL REPORT OF TUBERCULOSIS CONTROL COMMITTEE—1954-1955

The Committee met on March 25, 1955. The principal items brought up for discussion before the Committee were as follows:

The Committee was advised by Dr. Heustis, Commissioner of Health, State of Michigan, that the Department of Health had requested an appropriation of $554,000 for tuberculosis case-finding from the present Legislature. In the discussion, it was pointed out that a paradoxical situation exists, whereby there is an increasing number of beds in our approved county, state and municipal institutions, whereas, it is a known fact that there are still a large number of active cases walking the streets, a menace to the general public. It was further pointed out that there was a decreased utilization of tuberculosis beds in Michigan. As of February 28, there were 454 available unused tuberculosis beds; this despite the recent closing of facilities, totaling 325 beds.

It was pointed out that there are economic problems which must be faced, particularly by the county and municipal institutions in the increasing vacancy. The county and municipal institutions find themselves with a decreased income as the result of decreased subsidy and earnings for the care of patients, with a fixed expense they cannot retreat from and subsequently the counties must defray the deficit in their operational budget. The county and municipal institutions are further handicapped by the fact that they must compete with state institutions which charge an $8.00 a day rate, which is not a realistic rate and in most instances is two and three dollars below the actual cost of their operation. The deficit in their operational budget is taken care of from state funds. This unrealistic rate,

in reality, gives the counties hospitalizing patients in state institutions, double subsidy. They receive the $4.00 regular subsidy and are subsidized for the amount of the cost over and above $8.00. A general discussion developed regarding the possibility of setting up some method of subsidizing county and municipal institutions with state funds to equalize that situation.

The Committee expressed satisfaction in the progress being made in the treatment of tuberculosis, but it was generally recognized that the present empty bed situation will become worse in months and years to come. The members of the Committee recognized the problems involved and the need for some long-range planning. The Committee recommends to the Michigan State Medical Society that a commission be formed to study this situation regarding tuberculosis hospitals. The commission is to provide continuous service so that closing of any facilities, now offering good service, be carried out only after due study and with a view to allowing an orderly transition of these facilities for their most effective use. The proper treatment and prevention of tuberculosis should be a first consideration of such a commission.

The statistics in the Bureau of Tuberculosis, Michigan Department of Health, revealed that hospital discharges against medical advice in the approved institutions in Michigan ranged from 67.5 per cent down to 9.7 per cent with an average a.m.a. discharge of 35.8 per cent. In view of the great disparity between the highest and lowest of the a.m.a. discharge figures, the question arose whether or not all hospitals were using uniform methods of determining what constituted an a.m.a. discharge. It was felt that a unified system must be incorporated before any comparison should be made.

In a review of the veterans now being hospitalized in state, county, and city facilities, it was revealed that in 1950 there were 510 state-at-large veterans in these hospitals. In 1954, this figure had risen to 607, indicating a 14 per cent increase in the number of state-at-large patients using tuberculosis facilities. It was also reported that there was pressure being brought to bear on these cases to transfer to VA facilities to lessen the burden on the state. It was further brought out that the Veterans Administration is bringing pressure to bear on the service-connected veterans to seek hospitalization in the VA hospitals. This is brought to the attention of the Committee for what bearing it might have on the entire bed problem as discussed through the meeting. The committee decries the substitution of home or office care by physicians as a substitute for sanatorium study and substitution of treatment. The physicians of the state are called upon to co-operate to the fullest degree with local or state sanatoria and health departments.

The Michigan Tuberculosis Association at this meeting reiterated their offer to defray expenses of prominent speakers on tuberculosis upon request of local county medical societies. To date, no such request has been made. Discussion brought out, however, that this did not indicate that tuberculosis programs have not been held at county medical society meetings. It would show that the financial assistance of the Michigan TB Association had not been requested. The Committee accepts with thanks the Michigan Tuberculosis Association offer for financial support for the establishment of tuberculosis institutes and it was agreed that these institutes should be cleared with the Director of Postgraduate Medical Education to avoid any conflicts in dates, speakers, et cetera.

The editorial staff of the Michigan State Medical Society JOURNAL has seen fit to devote the November, 1955 issue of the JOURNAL to the subject of diseases of the chest. Several members of the Committee met with Mr. William Burns, Executive Director of the State Society, at which time a general outline was decided upon. In part, it would include: (1) Preface, (2) TB and Children, (3) Chest Trauma, (4) Clinical—Pathological Report, (5) Training Necessary for TB Control Work, (6) Protecting Hospital Employes, and (7) Editorial.

Respectfully submitted,
J. W. TOWEY, M.D., *Chairman*
P. T. CHAPMAN, M.D.
J. L. EGLE, M.D.
W. B. HOWES, M.D.
G. T. MCKEAN, M.D.
R. L. RAPPORT, M.D.
D. S. SMITH, M.D.
A. F. STILLER, *M.D.*
C. J. STRINGER, M.D.

ANNUAL REPORT OF COMMITTEE ON INDUSTRIAL HEALTH—1954-1955

The objectives of Committee activity 1- Improved relationship between physicians and industrial personnel departments. This is a continuing project which needs attention at all times. 2—Co-operation with the State Health Department in the matter of occupational disease reporting as a means of retaining industrial hygiene in this department rather than the Labor Department. 3—Stimulate preventive medicine in small plants through physicians in private practice that care for such industries. 4—The Committee was organized on a Councilor District basis with the addition of new members to cover the state. It is felt that it is the responsibility of members of the State Committee on Industrial Health to work with the Councilor in his respective area in stimulating interest in this phase of medicine.

The Committee recommends that a Section on Occupational Medicine be created in MSMS. This section to be medium of broadening industrial health activities by physicians throughout the state.

THE JOURNAL of MSMS for August was devoted to Industrial Health. The Committee appreciates the co-operation of the Editor and the Publication Committee of The Council in giving us the opportunity of using this issue for these subjects.

The Committee endorsed "Guiding Principles of Occupational Medicine" issued by The Council on Industrial Health of the AMA.

Respectfully submitted,
O. J. JOHNSON, M.D., *Chairman*

S. E. ANDREWS, M.D.	C. P. MCCORD, M.D.
T. I. BOILEAU, M.D.	G. P. MOORE, M.D.
H. S. BROWN, M.D.	R. D. MUDD, M.D.
M. R. BURNELL, M.D.	P. J. OCHSNER, M.D.
W. P. CHESTER, M.D.	O. J. PRESTON, M.D.
E. B. CUDNEY, M.D.	D. M. RICHMOND, M.D.
W. A. DAWSON, M.D.	N. W. SCHOLLE, M.D.
E. A. IRVIN, M.D.	M. W. SHELLMAN, M.D.
M. W. JOCZ, M.D.	S. D. STEINER, M.D.
V. S. LAURIN, M.D.	A. J. SWINGLE, M.D.
E. F. LUTZ, M.D.	C. D. SELBY, M.D., *Advisor*

ANNUAL REPORT OF THE MATERNAL HEALTH COMMITTEE—1954-1955

The Maternal Health Committee continues in its sixth year of study of maternal deaths. The February issue of THE JOURNAL of the Michigan State Medical Society contains the historical background and analysis and exposition of this co-operative project for the first three years.

The Committee feels that progress is best made by continuation of programs of education to the public and to the doctor and to hospital administrators with maternity units.

Our representatives attended the American Medical Association meeting designed for organization and standardization of all state surveys of maternal deaths

to bring about, if possible, more uniformity at the national level. We also have active representation in a similar project of the Central Association of Obstetricians and Gynecologists. We also have representation on the Health Department's Advisory Committee for the licensing of maternity units.

As this Committee is one of several included under the general designation of the Preventive Medicine Committee, a detailed annual report is contained in the transaction of the Preventive Medicine Committee.

Respectfully submitted,
P. E. Sutton, M.D., *Chairman*
C. D. Barrett, Jr., M.D.
C. M. Bell, M.D.
W. G. Birch, M.D.
H. R. Brukardt, M.D.
G. B. Corneliuson, M.D.
A. L. Foley, M.D.
Ferdinand Gaensbauer, M.D.
Margaret S. Hersey, M.D.
Francis Jones, Jr., M.D.
W. C. Lambert, M.D.
H. W. Longyear, M.D.
S. T. Lowe, M.D.
N. F. Miller, M.D.
H. A. Ott, M.D.
H. A. Pearse, M.D.
C. S. Stevenson, M.D.
D. W. Thorup, M.D.
C. E. Toshach, M.D.
Kathryn D. Weburg, M.D.
H. R. Williams, M.D.

ANNUAL REPORT OF IODIZED SALT COMMITTEE—1954-1955

The promotion of the use of iodized salt has continued throughout the year. The State Health Department has had several pamphlets on iodized salt prepared and distributed. We feel that a very satisfactory coverage of the school, the home and the grocer has been obtained.

The study of the incidence of goiter in Michigan continues and the number and types of thyroid operations are being followed.

We have considered that our progress in goiter prevention is such that we have not further pursued the idea of legislation to have all table salt iodized. We are keeping in touch with Ohio, Wisconsin and other states

One meeting was held during the year.

Respectfully submitted,
B. E. Brush, M.D., *Chairman*
H. A. Towsley, M.D., *Vice Chairman*
J. B. Blodgett, M.D.
F. M. Dodds, M.D.
R. C. Moehlig, M.D.
R. L. Waggoner, M.D.

ANNUAL REPORT OF THE SCIENTIFIC RADIO COMMITTEE—1954-1955

During the year 40 scientific radio programs were perpared and presented by members of the Michigan State Medical Society and the faculties of the University of Michigan Medical School and Wayne University College of Medicine. These broadcasts went out weekly over radio station WUOM and its affiliated stations.

These talks have included subjects in the fields of pediatrics, psychiatry, neurology, internal medicine, geriatrics, blood diseases, cancer, dermatology, allergy, obstetrics and gynecology, heart disease, physical medicine and rehabilitation, endocrinology and metabolism, nutrition, urology, orthopedics, thoracic surgery, and occupational medicine.

Insofar as possible, programming for the year 1955-56 is being developed to coincide with the activities of National and State Health agencies, i.e., cancer month, heart month, et cetera. Efforts are being made also to provide continuity in the program so that related subjects will be given in series. It is hoped by this procedure to increase public interest in health education.

At the meeting of this Committee on February 24, 1954, it was unanimously agreed to explore the possibility of using the radio facilities of the University of Michigan to broadcast programs designed for health education to the elementary school systems throughout the State. The recommendation was submitted to the Executive Committee of The Council who in turn referred it to the Subcommittee on School Health Problems of the Child Welfare Committee. It is reported that this recommendation has been approved by the Subcommittee on School Health Problems. Upon confirmation of this approval, the Scientific Radio Committee is planning to take the necessary steps to establish a suitable educational program via radio for the school children of Michigan.

Respectfully submitted,
H. A. Towsley, M.D., *Chairman*
C. B. Beeman, M.D.
J. H. Buell, M.D.
W. L. Foster, M.D.
F. J. Kemp, M.D.
C. E. Lemen, M.D.
G. H. Scott, Ph.D.
R. W. Teed, M.D.
K. W. Toothaker, M.D.
E. C. Von der Heide, M.D.
J. M. Sheldon, M.D., *Advisor*

ANNUAL REPORT OF MEDIATION COMMITTEE—1954-1955

During the past year there has been one meeting of the Mediation Committee of the Michigan State Medical Society, which was held on March 2 at the Hotel Olds in Lansing.

The meeting was called to order at 5:20 p.m. by the Chairman, Ralph Wadley, M.D. Those present were: D. R. Boyd, M.D., E. B. Johnson, M.D., L. R. Leader, M.D., R. W. Teed, M.D., Charles TenHouten, M.D., and L. Fernald Foster, M.D., Secretary of MSMS. Also present from the MSMS staff were William J. Burns, A. DeWitt Brewer, and Stuart A. Campbell.

The matter under consideration, which for purposes of identification, was called Case No. 1. The complete file on the claimant was read and discussed, and for purposes of clarifying the case, the doctor was asked to submit the report in writing. This matter has been followed and at the present time the situation has been partially corrected and will be completely corrected in the near future.

The following procedure was adopted—

(1) The claimant must present his complaint in writing.

(2) The defendant must also present his side of the story in writing; from this point on the grievances will be discussed both with the claimant and defendant and every method followed through to make a satisfactory settlement.

Respectfully submitted,
Ralph A. Wadley, M.D., *Chairman*
D. R. Boyd, M.D.
A. E. Gamon, M.D.
E. B. Johnson, M.D.
L. R. Leader, M.D.
W. Z. Rundles, M.D.
R. W. Teed, M.D.
Charles TenHouten, M.D.

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

POLIO VACCINE ADVISORY GROUP NOW FUNCTIONING

The State Advisory Committee on Salk Polio Vaccine Distribution, appointed by Governor Williams on May 24, held its first meeting in the offices of the Michigan Department of Health in Lansing on June 17.

"The function of the committee," Governor Williams said, "will be to maintain liaison with the federal authorities; to establish priorities according to age groups and other appropriate factors; and to provide for the rapid and equitable distribution to Michigan children of all the vaccine we can get."

Dr. Albert E. Heustis, State Health Commissioner, was appointed chairman of the committee by the Governor. The eight other members of the committee are:

Kenneth H. Johnson, M.D., of Lansing, who was nominated by the Michigan State Medical Society to represent the medical profession;

Joseph A. Walker, D.O., of Royal Oak, recommended by the Michigan Association of Osteopathic Phsyicians and Surgeons to represent that profession;

Joseph G. Molner, M.D., Detroit City Health Commissioner, and Dr. Oscar D. Stryker, Director of the Macomb County Health Department, representing public health agencies;

Robert Kugel of Grand Rapids, representing pharmacists;

Mrs. George Cook of Ionia, Women's Advisor for Michigan to the National Polio Foundation;

Mrs. Margaret Price, Ann Arbor, Chairman of the Michigan Youth Commission;

Miss Josephine Brown, Calhoun County Health Department, nominated by the Michigan Nurses Association.

Planning for use of Michigan's $2,000,000 legislative appropriation for the purchase and distribution of polio vaccine was the first task of the advisory committee.

MEDICAL EXTERN PROGRAM CONTINUES

The medical extern program that has been a summer feature of the department's comprehensive inservice training program since 1952 will be in operation again this summer. Six medical externs will work on especially assigned projects in local health departments. Three of the medical students are from the University of Michigan and three are from Wayne University.

One extern will be assigned to the Washtenaw County Health Department, to spend part time on a polio project centered upon determining blood titers of vaccinated children. The remainder of his time will be given to assisting in the department's general public health program.

Two externs will work with the Oakland County Health Department. One will make a survey of all the TB casefinding facilities in the county and will participate in the planning for a casefinding program. The other extern will divide his time between a special heart project and the general public health program.

An extern will work with the Macomb County Health Department and another with the Monroe County Health Department on the general public health program.

An extern assigned to the Barry County Health Department will study hospital records from the standpoint of the data they may furnish of value to public health program planning in general and to diabetes control in particular.

TECHNICAL ADVISORS AID IN VACCINE PROGRAM

Working with the Commissioner and the State Advisory Committee on Salk Polio Vaccine Distribution is the group of technical advisors that has assisted Dr. Heustis in other medical programs. The group is made up of representatives of interested committees of the State Medical Society, of the Michigan Branch of the Academy of Pediatrics and of the State's two medical schools. Thomas Francis, Jr., M.D., is a member of the group.

EVALUATION OF MULTIPLE SCREENING PROGRAM BEGUN

The community multiple screening project in Livingston County was completed on May 20 with a total of 3,937 persons screened. This exceeded the original expectation of 3,000 persons.

Further action to be taken by the department in multiple screening will depend upon the outcome of the evaluation now underway of the total multiple screening program which has covered a little over 10,000 persons in six counties in Michigan.

NEW LOCAL HEALTH DIRECTORS

E. K. Musson, M.D., was appointed medical director of the Lansing-Ingham County Health Department effective June 6. Dr. Musson came from the Wayne County Health Department where he was deputy director. He is a graduate of the University of Kansas School of Medicine with a Master's Degree in public health from the Harvard School of Public Health.

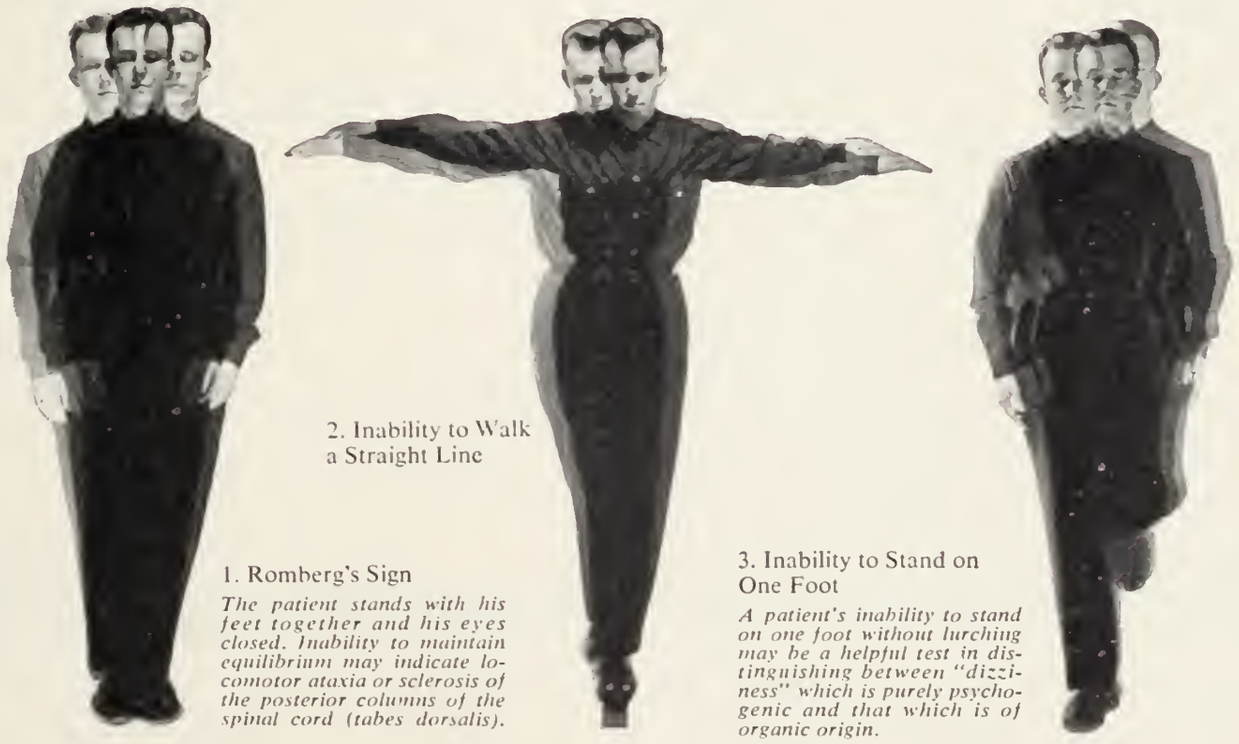
Earl Hamilton, M.D., became director on June 1 of the Central Michigan District Health Department which is made up of Isabella, Mecosta and Osceola Counties. Dr. Hamilton came to the Michigan position from the medical staff of the Pennsylvania Railroad.

There is a definite relationship between pernicious anemia and carcinoma.

Stomach cancer predominates in males, in a ratio of about 2 to 1.

Notes on the Diagnosis and Management of "Dizziness"

II. False Dizziness



1. Romberg's Sign

The patient stands with his feet together and his eyes closed. Inability to maintain equilibrium may indicate locomotor ataxia or sclerosis of the posterior columns of the spinal cord (tabes dorsalis).

2. Inability to Walk a Straight Line

3. Inability to Stand on One Foot

A patient's inability to stand on one foot without lurching may be a helpful test in distinguishing between "dizziness" which is purely psychogenic and that which is of organic origin.

False dizziness is a sensation of sinking or lightheadedness which is often of psychogenic origin. It should be distinguished from true "dizziness" or vertigo[1] in which there is a definite whirling, moving sensation.

Unsteadiness, lightheadedness and similar manifestations of false dizziness[2] may be psychogenic or the result of arteriosclerosis, hypoglycemia, drug sensitivity and general metabolic disturbances such as anemia and malnutrition. Hypertension is often the cause of these symptoms.

Psychogenic dizziness probably originates at the highest brain centers. It may be described as a sense of uncertainty with occasional mild lurching but not to the point of falling. In these patients there is no nausea, no disturbance of vestibular pathways and otologic and neurologic examinations are negative. The sensation is unaffected by head movement. Symptoms usually disappear[3] with complete rest.

Dramamine® has been found highly effective in many of the conditions already mentioned. Maintenance therapy with Dramamine will often keep the patient from becoming incapacitated by his condition.

Dramamine is also a standard for the management of motion sickness and is useful for relief of nausea and vomiting of fenestration procedures and radiation sickness and for relief of "true dizziness" of other disorders.

Dramamine (brand of dimenhydrinate) is supplied in tablets (50 mg.) and liquid (12.5 mg. in each 4 cc.). G. D. Searle & Co., Research in the Service of Medicine.

1. Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

2. DeWeese, D. D.: Symposium: Medical Management of Dizziness. The Importance of Accurate Diagnosis, Tr. Am. Acad. Ophth. *58*:694 (Sept.-Oct.) 1954.

3. Kunkle, E. C.: Central Causes of Vertigo, J. South Carolina M. A. *50*:161 (June) 1954.

SEARLE

In Memoriam



The medical profession in Michigan lost one of its leaders, March 17, 1955, with the death of **CLAUDE R. KEYPORT, M.D.**, of Grayling. He was sixty-nine years old.

Dr. Keyport served as President of MSMS in 1943-44, and as a Delegate to the American Medical Association for many years. He filled numerous committee assignments within MSMS. From 1931 to 1939, Dr. Keyport was a member of the State Board of Registration in Medicine. In earlier years, he was President of the North Central Counties Medical Society.

Dr. Keyport was Chief of Staff at Grayling Mercy Hospital, and his last civic venture was as Chairman of a successful campaign to raise funds for a new hospital.

In civic affairs, Dr. Keyport was a leader. At various times, he served as President of the Grayling Board of Education, Grayling Chamber of Commerce, Grayling Winter Sports Association, Grayling Kiwanis Club, and Grayling Golf Club, and as a Director of the Northeastern Michigan Development Bureau. During World War I, he served as Medical Examiner for Selective Service, and in World War II as Chairman of Medical Advisory Board No. 17. In recent years, he served as Chairman of the Michigan Volunteer Advisory Committee for the Selective Service system in northern Michigan.

Dr. Keyport was born in Bay City and was graduated from Western High School there in 1903. He entered Detroit College of Medicine, now a part of Wayne University College of Medicine, in 1905, graduating with his M.D. degree in 1909. After his internship at Harper Hospital, Detroit, he established his practice in Grayling in December, 1910.

Dr. Keyport is survived by his widow, Nora Belle, and a daughter, Mrs. Jayne Isabelle Hayes.

* * *

WALTER R. PARKER, M.D., nationally known ophthalmologist and Professor Emeritus of Ophthalmology at the University of Michigan Medical School, died April 1 at his home in Grosse Pointe. He was 89 years of age.

(Continued on Page 870)

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PREDNISONE
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in rheumatoid arthritis
more potent
than other corticosteroids
lessened incidence
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In emotional and nervous disorders, Mebaral exerts its calming influence without excessive hypnotic action.

Mebaral is also a reliable anticonvulsant.

INDICATIONS:

Because of its high degree of sedative effectiveness, Mebaral finds a great field of usefulness in the regulation of agitated, depressed or anxiety states, as well as in convulsive disturbances. Specific disorders in which the calming influence of Mebaral is indicated include neuroses, mild psychoses, nervous symptoms of the menopause, hypertension, hyperthyroidism and epilepsy.

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Relief of pain in the "rheumatic" conditions—bursitis, periarthritis, fibrositis, and the common types of arthritis — may be provided by properly applied ultrasonic therapy.

Please write for descriptive literature.

With its unique action of heating at areas of different densities such as the bone-muscle interface, ultrasonic energy creates a new approach to relief in this distressing group of deep-seated conditions.

To be sure of obtaining maximum therapeutic response, reliable equipment is essential. For example, the Burdick UT-1 Ultrasonic Therapy Unit provides a signal to assure that contact with the surface — an essential factor in ultrasonic therapy — is maintained. This and other features are consistent with the Burdick policy of offering only the highest quality in physical medicine apparatus.

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(Continued from Page 868)

Dr. Parker was on the staff at the University of Michigan for twenty-eight years, retiring in 1933. He was a consultant at Harper Hospital and Woman's Hospital, gaining a national reputation for treatment of diseases of the eye.

In 1922 Dr. Parker was President of the American Academy of Ophthalmology and Otolaryngology, and in 1928, of the American Ophthalmological Society. He was Chairman of the Ophthalmological Section of the AMA in 1915 and a year later was awarded the Knapp Medal for outstanding medical research. He was a member of the British Ophthalmological Society and many other professional organizations and clubs.

Dr. Parker served in the Spanish-American War as a naval ensign and in World War I was a colonel in the Army Medical Corps.

Born in Marine City, Dr. Parker attended Michigan Military Academy and was graduated from the University of Michigan in 1888. His medical training was at the University of Pennsylvania, from which he was graduated in 1891.

MIDWEST CONFERENCE ON RHEUMATIC DISEASES

Henry Ford Hospital, Detroit, Michigan
Wednesday, October 5, 1955

This meeting will be a whole day of postgraduate sessions and will cover practically the entire field of arthritic diseases. The program is sponsored by the Michigan Chapter of the Arthritis and Rheumatism Foundation and the Michigan Rheumatism Society. Co-sponsorship of this important meeting has been obtained from the Department of Postgraduate Medicine, University of Michigan Medical School, the Michigan State Medical Society, Wayne University College of Medicine, Academy of General Practice, and the Wayne County Medical Society.

Program

Dr. Charley Smyth, Denver, Colorado—"Diagnosis and Treatment of Gout."
Dr. Otto Steinbrocker, New York City—"Painful Shoulder."
Dr. Carl Badgley, University of Michigan—"Back Pain."
Dr. Joseph Hollander, Philadelphia, Pa.—"Diagnosis of Rheumatoid Arthritis."
Dr. Joseph Bunim, Bethesda, Md.—"Treatment of Rheumatoid Arthritis."
Dr. Russell Cecil, New York City—"Osteoarthritis."
Dr. Paul Hodges, Chicago, Ill.—"X-ray Diagnosis in Rheumatic Diseases."
Dr. Currier McEwen, New York City—"Diagnosis and Treatment of Rheumatic Fever."
Dr. Ed. Lowman, New York City—"Physical Medicine in Rheumatic Diseases."
Dr. Richard Freyberg, New York City—"Spondylitis."



When your ears tell you that a patient may be "caffein sensitive," he doesn't have to give up drinking coffee. He only needs to give up drinking caffein. Why not suggest Sanka Coffee—97% caffein-free?

New, extra-rich Sanka is a wonderful coffee, Doctor. You'll enjoy it yourself.



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MICHIGAN STATE MEDICAL SOCIETY ANNUAL SESSION

Civic Auditorium—Pantlind Hotel, Grand Rapids
Wednesday-Thursday-Friday, September 28, 29, 30, 1955
YOU are invited to attend the Ninetieth

MICHIGAN AUTHORS

James L. Wilson, M.D., and **David G. Dickinson, M.D.,** Ann Arbor, are the authors of an article entitled "Use of Dioctyl Sodium Sulfosuccinate (Aerosol O.T.) For Severe Constipation," published in the *Journal of the American Medical Association* May 28, 1955.

Herbert E. Pedersen, M. D., and **A. Jackson Day, M.D.,** Detroit, are the authors of an article entitled "The Transmetatarsal Amputation in Peripheral Vascular Disease," published in the *Journal of Bone and Joint Surgery,* and condensed in the *American Practitioner and Digest of Treatment,* May, 1955.

V. Everett Kinsey, Ph.D., Enriqueta Camacho, M.D., Gerard A. Cavanaugh, M.S., Detroit, **Marguerite Constant,** St. Louis, and **Daniel A. McGinty, Ph.D.,** Detroit, are the authors of an article entitled "Dependence of IOP-Lowering Effect of Acetazoleamide on Salt," published in the AMA *Archives of Ophthalmology,* May, 1955.

J. M. Hammer, M.D., F.A.C.S., F.I.C.S., and **P. H. Seay, Ph.D.,** Kalamazoo; and **F. W. Prust, M.D., E. J. Hill, M.D.,** and **R. B. Campbell, M.D.,** Detroit, are the authors of an article entitled "Use of Viable Intestinal Segments for Plastic Operations on the Urinary Bladder," published in the *Journal of the International College of Surgeons,* April, 1955.

Brock E. Brush, M.D., Joseph L. Ponka, M.D., Frank Damazo, M.D. and **John Whitcomb, M.D.,** Detroit, are the authors of an article entitled "An Evaluation of Dilation of the Sphincter of Oddi," published in the AMA *Archives of Surgery,* May, 1955.

J. L. Wilson, M.D., and **D. G. Dickinson, M.D.,** Ann Arbor, are authors of an article under "Clinical Notes" which appeared in JAMA of May 28, entitled "Use of Dioctyl Sodium Sulfosuccinate (Aerosol O.T.) for Severe Constipation."

* * *

The First Annual Student Night was inaugurated by the University of Michigan School of Medicine on May 12, 1955. The event included papers on various subjects in clinical and experimental medicine including the use of Cobalt in sterilizing tissue culture, alcoholism, metabolism, and enzyme studies.

The First Annual Student Night is a new educational device in the training of undergraduate medical students. The public presentation took place in the main amphitheater of the University Hospital and was sponsored by Alpha Omega Alpha (medical equivalent of Phi Beta Kappa.)

Among the students presenting papers were the following from Michigan: Charles L. Votaw, Muskegon; Gerald J. Gleich, Escanaba; Nancy F. Thomas, Holland; John L. London, Olivet; Victor Bloom, Ann Arbor; Richard D. Stewart, Ann Arbor; and Gerald D. Abrams, Detroit.

* * *

The Kalamazoo Academy of Medicine dedicated its May 17 meeting to "Cancer Control." Speaker was Sidney Farber, M.D., of Boston. The meeting was arranged in co-operation with the Kalamazoo County Cancer Society, of which Mrs. Wade Van Valkenburg is President and John Kreilick is Secretary.

* * *

Wm. J. Burns, MSMS Executive Director, addressed the Clinton County Medical Society at its annual Ladies Night meeting in St. Johns on May 14. Mr. Burns spoke on "Watching the 76," referring to the legislative bills in Lansing of interest to the Michigan medical profession.

* * *

New officers of the Michigan Society of Neurology and Psychiatry for the year 1955-56 are: Philip H. Brown, M.D., Ypsilanti, President; Benjamin Jeffries, M.D., Detroit, President-Elect; Louis Koren, M.D., Detroit, Secretary; Benjamin Barenholtz, M.D., Detroit, Treasurer; and Ivan LaCore, M.D., Ypsilanti, and Joseph L. Whelan, M.D., Detroit, Councillors.

Congratulations, Doctors Brown, Jeffries, Koren, Barenholtz, LaCore and Whelan!

* * *

The American Cancer Society, Pennsylvania Division, hailed the announcement of the success of the Salk polio vaccine with a statement congratulating the sister health agency, the National Foundation for Infantile Paralysis, for making possible the research from which the vaccine was developed.

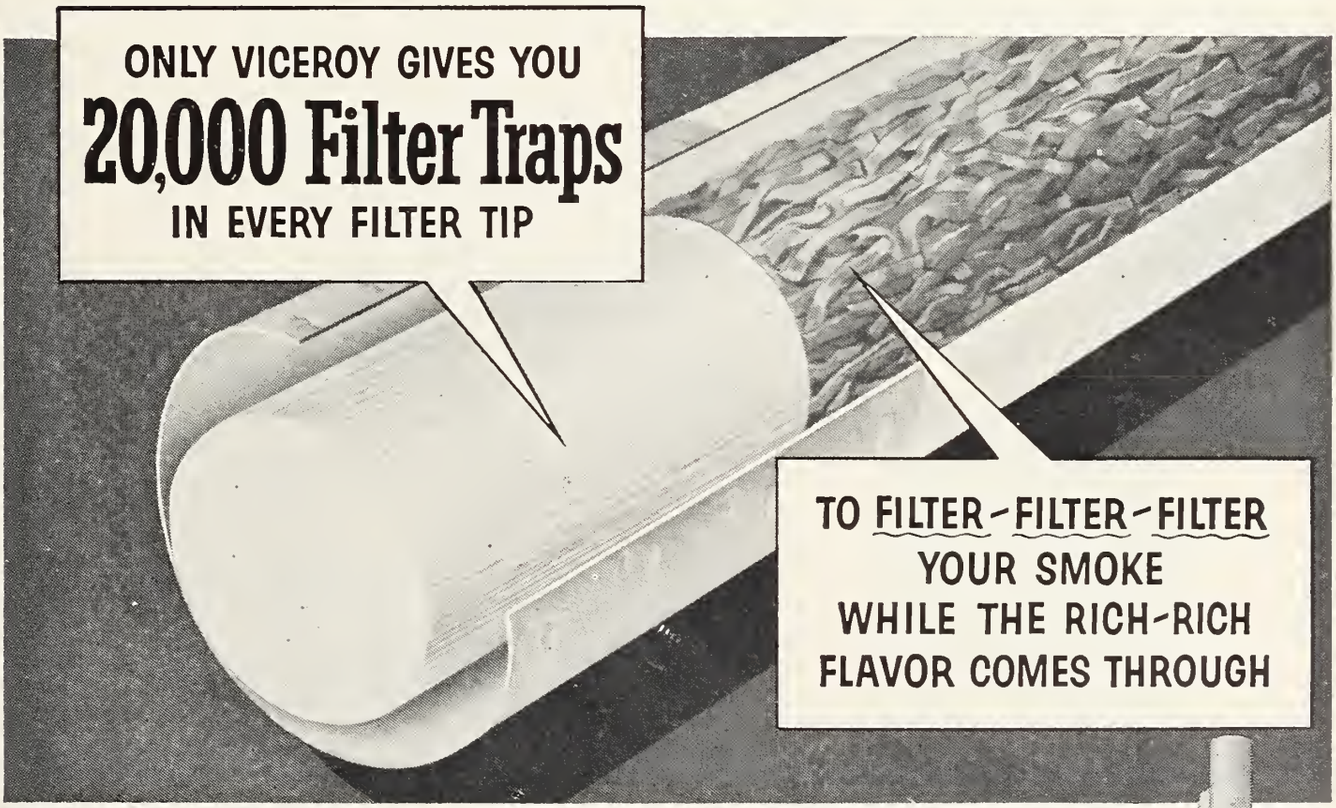
"The development of the Salk vaccine is in the highest tradition of scientific inquiry and the support of the long painstaking search for the truth which it entailed is in

(Continued on Page 874)



DOCTOR, here's a question and an answer you may find useful when patients ask about cigarettes:

What do Viceroys do for you that no other filter tip can do?



These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide maximum filtering efficiency without affecting the flow of the smoke.

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PHYSICIANS CASUALTY
AND
HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

(Continued from Page 872)

the highest tradition of the voluntary health agency," it was stated.

Pointing out that the first rule of all scientifically organized research is "that before any compound is tested its composition and method of preparation must be made known by its proponent," the Society declared that announcement of the Salk vaccine "gives the lie to critics who allege a conspiracy to suppress the truth and perpetuate disease."

* * *

Student American Medical Association-Blue Shield contest announces the following prize winners: *First prize:* Wilbur C. Pickett, Jr., University of Maryland, Baltimore; *second prize:* Carl B. Younger, UCLA School of Medicine, Los Angeles, California; *third prize:* William Kent Murphy, The University of Texas, Galveston, Texas. The essays on "A Medical Student Looks at Blue Shield" may be printed in whole or in part in medical journals. The winners were announced at the Chicago meeting of the Student American Medical Association held in May, 1955.

* * *

A bequest of $500,000 to the University of Michigan was contained in the will of Walter R. Parker, M.D., Professor Emeritus of Ophthalmology at the University of Michigan Medical School, who died April 1 at the age of eighty-nine. His home was in Grosse Pointe.

The terms of the will provided that half of the property of Dr. Parker be used to establish a fellowship in the Department of Ophthalmology, and to acquire etchings, paintings, and objects of art. These latter will be added to the collection previously given to the University in 1936 by Dr. Parker's late wife, Margaret Watson Parker.

As an alternative, the fund for art objects may be used in connection with the erection of a building to house art collections.

* * *

A committee to meet with representatives of labor and management in a joint effort to understand and help solve some of the medical problems that are associated with working people, has been appointed by the A.M.A. Board Chairman Dwight H. Murray.

* * *

Use of a multi-million dollar cancer research laboratory has been given to the Wayne University by the Detroit Board of Education, on a tentative agreement. The facility is owned and maintained by the Army at the Detroit Arsenal, Centerline. The agreement provides for leasing of the equipment to the University's College of Medicine during the hours when it is not being used by the Army.

* * *

Six medical students, who are pledged to future practice in Lapeer County, got acquainted with their colleagues-to-be as special guests, May 7, at a joint meeting of the Lapeer County Medical Foundation, and the Lapeer County Medical Society and its Auxiliary.

These students were six of the eight men who have been awarded scholarships under the program of the La-

(Continued on Page 876)



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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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4444 Woodward Avenue, Detroit 1, Mich.

(Continued from Page 874)

peer County Medical Foundation, established in 1951 with guidance from the County Medical Society. The Foundation was given great impetus by a bequest from the widow of Herbert M. Best, M.D., Lapeer physician who died in 1949, and the scholarships were set up as a memorial to Dr. Best and Wm. J. Kay, M.D., widely-known Lapeer physician who died in 1930.

Two scholarships are granted every year, each having a value of $500 per year, for a period of no more than four years. Scholarships are granted only to medical students who voluntarily agree to practice in Lapeer County one year for each year's scholarship. One year's loan is cancelled for each year of practice in the county.

Should the recipient upon graduation decide to practice elsewhere, he is obligated to repay the amount of the scholarship.

The special meeting lasted all afternoon, beginning with a luncheon at Lapeer County General Hospital followed by a tour of that institution. L. Fernald Foster, M.D., of Bay City, Secretary of MSMS, was the principal speaker at the dinner meeting. His topic was "Public Relations in Private Practice."

The unusual scholarship fund is one of the major projects in the expanding public relations program being carried out by the Lapeer County Medical Society.

* * *

A new idea for the customary MSMS exhibit at the Michigan State Fair will make its appearance when the 1955 Fair opens in Detroit on Friday, September 2, for a ten-day period.

For the first time at a State Fair exhibit, MSMS will co-operate with another organization as co-sponsor. In conjunction with the Michigan Diabetes Association, MSMS, through its Subcommittee on Diabetes Control of the Geriatrics Committee, will present an educational display. Details of the exhibit are being worked out under the guidance of W. M. LeFevre, M.D., of Muskegon, Chairman of the Subcommittee on Diabetes Control.

Detection of diabetes will be emphasized, and current literature on the disease will be distributed. Members of the MSMS Public Relations field staff will have charge of the booth at the Fair. Two adjoining exhibit spaces will be used to allow room for an eye-catching display.

* * *

Michigan Summer Camp for Diabetic Children.—Camp Midicha, sponsored by the Michigan Diabetes Association, a group of Doctors of Medicine especially interested in diabetes, provides fun and health for diabetic children and helps them learn to overcome their specific problems related to their disease.

The camp is supported by donations of money, time and supplies from friends and organizations in addition to fees received from campers. It costs approximately $70.00 per child per week to run the camp. Contributions will be gratefully accepted. If interested, please write Mary H. Harrington, Secretary, 3825 Brush Street (Room 123), Detroit 1, Michigan.

(Continued on Page 878)

Say you saw it in the Journal of the Michigan State Medical Society

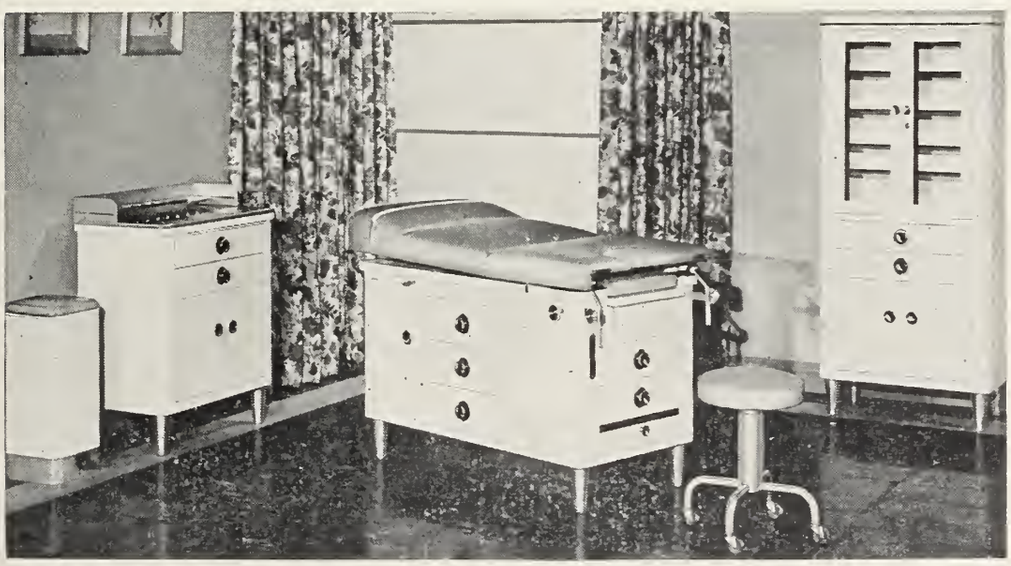
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(Continued from Page 876)

The Detroit Dermatological Society announces its new officers for 1955: L. W. Shaffer, M.D., Detroit, President; H. K. B. Pinkus, M.D., Monroe, President-elect; and Coleman Mopper, M.D., Detroit, Secretary-Treasurer.

Congratulations, Doctors Shaffer, Pinkus and Mopper!

* * *

Collier's for May 27 carries a picture story, "Rippling Along" about Nathan Hack's most recent contribution—The Ripple Sole Shoe.

* * *

The Coller-Penberthy Conference, which was to have been held in July, has been postponed one month because of the fact that Dr. Frederick A. Coller and Dr. Grover Penberthy will be in Copenhagen on the original date.

The conference will be held on Thursday, August 25 and Friday, August 26.

* * *

The American College of Gastroenterology announces that its Annual Course in Postgraduate Gastroenterology will be given at The Shoreland in Chicago, on October 27, 28, 29, 1955.

The course will again be under the direction of co-chairmanship of Dr. Owen H. Wangensteen, Professor of Surgery of the University of Minnesota Medical School, who will serve as surgical co-ordinator and Dr. I. Snapper, Director of Medical Education, Beth-el Hospital, Brooklyn, N. Y., who will serve as medical co-ordinator. Drs. Wangensteen and Snapper will be assisted by a distinguished faculty selected from the medical schools.

The subject matter to be covered in the course, from a medical as well as surgical viewpoint, will be, essentially, the advances in diagnosis and treatment of gastrointestinal diseases and a comprehensive discussion of diseases of the mouth, esophagus, stomach, pancreas, spleen, liver and gall bladder, colon and rectum, with special studies of radiology and gastroscopy.

For further information and enrollment, write to the American College of Gastroenterology, Department P.G., 33 West 60th Street, New York 23, N. Y.

* * *

A Workshop in Medical Writing will be held on the second day of the twelfth annual meeting of the American Medical Writers' Association, Saturday, October 1, 1955, under the instruction of members of the journalism faculties of the University of Illinois, University of Missouri and University of Oklahoma, from 8:00 a.m. to 12:00 noon at the Hotel Jefferson, St. Louis, Missouri.

Subjects and instructors are as follows:

"From First Draft to Printed Article"—Dr. Paul Fisher, School of Journalism, University of Missouri; "Specific Devices for Increasing the Readership of Medical Articles"—Professor Stewart Harral, School of Journalism, University of Oklahoma; "Writing Magazine Articles for the Lay Reader"—Theodore Peterson, Assistant Professor, School of Journalism and Communications, University of Illinois. Richard M. Hewitt, M.D., Rochester, Minnesota, is co-ordinator.

Those who wish to attend are asked to enroll at the Registration Desk. There is no charge for the workshop to members of AMWA. For others, the fee is $5.00. In order to keep classes small, enrollees will be divided into three groups of approximately equal size, and each instructor will give his material three times. At the end of each recess, members of each group will pass to a new room and will meet a new instructor. Division into groups will be made, and rooms will be announced, at the general assembly.

Those who intend to enroll are invited, well in advance of the meeting, to send manuscripts of popular medical articles they may have on hand to Theodore Peterson, Assistant Professor, School of Journalism and Communications, University of Illinois, Urbana, Illinois. He will criticize some of these manuscripts at the workshop.

* * *

The Ninth Annual Fall Postgraduate Clinic of the Michigan Academy of General Practice, will be held at the Sheraton-Cadillac Hotel, Detroit, November 9 and 10, 1955. The two-day meeting is expected to attract over 1,000 doctors engaged in the general practice of medicine.

On Wednesday, November 9, the speakers and their papers are:

Laurie Dickson, M.D., Detroit, Michigan—"Psychosomatic Medicine"
I. C. Winter, M.D., Chicago, Illinois—"Evaluation of Therapeutic Agents"
Peter J. Talso, M.D., Chicago, Illinois—"The Ambulatory Hypertensive"
Charles H. Reed, M.D., Iowa City, Iowa—"Endocrine Diseases in Childhood"
Jerome Weiss, M.D., New York City—"The Diarrheal Syndrome"
George Boines, M.D., Wilmington, Delaware—"Management of Anxiety in Polio"
Daniel Shaw, Jr., M.D., Oreland, Pennsylvania—"Non-Narcotic Analgesic"
William Boger, M.D., West Point, Pennsylvania—"Oral Administration of Penicillin"

The annual business meeting and election of officers of the Michigan Academy of General Practice will be held at 3:45 p.m. Kenneth H. Toothaker, M.D., of Lansing, will be completing his term of office as President, and Russell Fenton, M.D., Detroit, the President-Elect, will assume office. There will be a cocktail party at 6 p.m., followed by the annual banquet at 7 p.m. in the Grand Ballroom.

The banquet speaker will be the President of the American Academy of General Practice, John R. Fowler, M.D., of Barre, Massachusetts. His address is entitled "The New Philosophy in Medicine." The floor show will be presented by the Michigan Barn Dance group, of television fame, and will provide a lively evening's entertainment. Dancing will follow the floor show.

Guest speakers and their topics for Thursday, November 10, are:

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and potassium depletion
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R. S. Griffith, M.D., Indianapolis, Indiana—"Antibiotic Therapy"
Peter J. Warter, M.D., Trenton, New Jersey—"Evaluation of Treatment in Rheumatoid Disease"
Julius Pomeranze, M.D., New York City—"Trends in Pediatric, Adult and Geriatric Nutrition"
Roy G. Holly, M.D., Omaha, Nebraska—"Treatment of Anemia of Pregnancy"
William Caveness, M.D., New York—"New Hope for the Epileptic"
Kenneth Wade Thompson, M.D., Orange, New Jersey—"Long Acting ACTH"

The Scientific Exhibit section is a most impressive one. Twenty-two original scientific exhibits, constructed by teaching hospitals, medical schools and practicing physicians, will have their premiere showing at this clinic.

The leading pharmaceutical research houses of the nation will be present as technical exhibitors.

F. P. Rhoades, M.D., Detroit, General Chairman of the Clinic, announces that members of the American Academy of General Practice will secure twelve hours study course credit (formal) for attendance at this two-day postgraduate clinic.

* * *

Advisory Unit On Vaccine.—With supplies of Salk polio vaccine remaining for only 40,000 inoculations, Gov. Williams on May 24, 1955, named an advisory committee to co-ordinate Michigan's program with the Federal Government.

Williams acted on advice of Dr. Albert E. Heustis, State health commissioner. There have been administered only 325,000 first doses and 15,000 second doses to first and second graders in Michigan.

Some of the 40,000 remaining shots will be used for makeup clinics. The rest will be used in areas where schools close first.

Dr. Heustis will head the advisory committee. Others on it are Dr. Kenneth M. Johnson, of Lansing, representing state doctors; Dr. Joseph A. Walker, Royal Oak osteopath; Dr. Joseph G. Molner, Detroit health commissioner; Robert Kugel, of Grand Rapids, representing pharmacists; Mrs. George Cook, of Ionia, woman's advisor of the National Polio Foundation; Mrs. Margaret Price, of Ann Arbor, chairman of the State Youth Commission, and Miss Caroline Brown, Calhoun County health officer. —*Press Release.*

* * *

Do you know that the average letter in the United States travels 561 miles from its origin to its destination?

* * *

The American Board of Clinical Chemistry, Inc., held its annual meeting at Henry Ford Hospital, Detroit, May 20-21, 1955. Three clinical chemists, who successfully passed the examination given by the Board last October, were certified: Sol I. Dulkin, Lawrence C. Kier, and Otto E. Lobstein. The total number of certified clinical chemists is now 241.

A complete Directory of Certified Clinical Chemists may be obtained by writing to the Secretary-Treasurer, Dr. O. H. Gaebler, Henry Ford Hospital, Detroit 2,

Michigan, and will be sent without charge to hospital departments or other laboratories which engage in clinical chemistry.

Clinical chemists interested in being certified should also write for the Instructions to Applicants for Certification. In order to be considered for admission to the next regional examinations, which will probably be held during October, 1955, candidates should file their applications immediately.

The Board elected the following officers for the coming year: Marschelle H. Power, President; Clarence W. Muehlberger, Vice-President; and Oliver H. Gaebler, Secretary-Treasurer. Other present members of the Board are: Joseph W. E. Harrisson, Arnold E. Osterberg, William A. Wolff, Warren H. Sperry, Harry Sobotka, Robert M. Hill, and Albert L. Chaney.

* * *

The Part II Examinations of the American Board of Obstetrics and Gynecology were held May 12-20, 1955, at the Edgewater Beach Hotel in Chicago, with 387 candidates examined.

After twenty-five years of continuous service, Dr. Walter T. Dannreuther was succeeded as President of the Board by Dr. F. Bayard Carter. Dr. Dannreuther will continue with the Board as a member of the Executive Committee.

The resignation of Dr. Willard R. Cooke, who has served many years as a Director, was accepted with regret and Dr. Conrad G. Collins of New Orleans was elected to fill his unexpired term.

Applications for certification for the 1956 Part I Examinations are now being accepted. Candidates are urged to make such application as early as possible, and before October 1, 1955, to American Board of Obstetrics and Gynecology, Inc., Office of the Secretary—Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio.

* * *

The State of New Jersey has a single medical practice law covering every phase of the healing art, with representatives of each kind of medical practice on the Board.

"The Board shall consist of eleven full members and one qualified member . . . the Board shall consist of nine graduates of schools of medicine who shall possess the degree of M.D., of whom five shall be old-school physicians, three shall be homeopaths, and one an eclectic . . . in addition the Board shall comprise one osteopath, one chiropractor, and the qualified member, who shall be a chiropodist [who votes only on matters concerning chiropodism]."

The leaders of the New Jersey Medical Society got the M.D.'s to secure a new amendment to the act two years ago as follows:

"3. Section 45:9-14.5, added to the Revised Statutes by Chapter 115 of the laws of 1939, is amended to read as follows:

"Section 45:9-14.5. Within the meannigs of the provisions of Sections 45:9-14.6, 45:10-14.7, 45:14.8 and 45:9-14.9 hereof, and of this act, which supplements Chapter 9 of Title 45 of the Revised Statute, the practice of chiropractic is defined as follows: 'A system of adjusting the articulations of the spinal column by

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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manipulations thereof.' A licensed chiropractor shall have the right in the examination of patients to use the neurocalometer, x-ray, and other necessary instruments solely for the purpose of diagnosis or analysis. No licensed chiropractor shall use endoscopic or cutting instruments, or prescribe, administer, or dispense drugs or medicines for any purpose whatsoever, or perform surgical operations excepting adjustment of the articulations of the spinal column.

"No person licensed to practice chiropractic shall sign any certificate required by law or the State Sanitary Code concerning reportable diseases, or birth, marriage or death certificates."

Not a single application for examination in chiropractic was made in 1954.

* * *

An artificial eye, operated by magnets that cause it to move and even twinkle as effectively as the living eye it matches, has been developed at the Veterans Administration hospital in Boston, Massachsetts. The "magnetic eye" already has been implanted in more than 150 patients. The designers are Everett H. Tomb, chief of the eye, ear, nose and throat section, and Donald F. Gearhart, chief of the plastic eye and restorations clinic at the Boston VA Hospital. After six years of research, Tomb and Gearhart have perfected a magnetized implant, the magnet of which is placed within clear, nonirritating plastic.

Tomb has provided the surgical technique that permits the implant to become completely buried within the eye socket and to which the muscles of the removed eye are directly attached. Wounded or once diseased eye sockets are then allowed to heal completely over the buried implant before the artificial eye is made.

A permanent magnet is set into the artificial eye during its fabrication to match the magnet of the imbedded implant. These magnets are so aligned that the artificial eye cannot slip out of correct, normal position. The magnets provide excellent anchorage for the eye, which relieves the eyelids of the burden of carrying the weight of the artificial eye.—*Connecticut State Medical Journal,* June, 1955.

* * *

One of seventeen traffic accidents, in Michigan, can be attributed to a physical condition.

Of the seventeen, three-fifths are due to driver fatigue, one-fourth to defective eyesight, one-fifth to defective hearing.

Twenty-eight per cent of highway accidents are caused by speed; twenty-two per cent by drinking; sixteen per cent by weather conditions; twelve per cent to faulty vision; seven per cent vehicle failure; five and one-half per cent to physical defects.—Extract from minutes of MSMS Committee on Prevention of Highway Accidents, meeting of May 12, 1955.

* * *

Cancer Manual.—The constant interest of the medical profession of the world in the cancer manual, developed by the MSMS Cancer Control Committee, is best exemplified by an order for this book entitled "Study of Cancer for High Schools" by P. Arunachalam, M.D., Director of the Cancer Institute of India with headquarters in Madras.

(Continued on Page 884)

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The Michigan Alcoholic Rehabilitation Foundation is a non-profit organization devoted to the proper hospitalization of alcoholics seeking to stop drinking.

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(Continued from Page 882)

Times Have Changed.—Not too long ago there was a hue and a cry, especially from bureaucratic centers in Washington, that medical schools were overcrowded and ambitious boys and girls couldn't get into schools to study medicine. If that was true, there has been a startling reversal in a short time, judging from an editorial in the April 21 issue of the Louisville, Ky., *Courier-Journal.* Here is the first paragraph of the editorial:

"A call is out to all young Kentuckians who want to be doctors. The Medical School of the University of Louisville has twenty-six places in next year's freshman class which are still unfilled. All qualified Kentuckians who have applied have already been accepted. Now there are places going begging."—*AMA Secretary's Letter.*

* * *

During the 1920's, individual surtax rates were lowered from 65 to 20 per cent; and, at each step of the way, the budget was balanced, a surplus created and $10 billion in debt paid off. At the same time, tax exemptions for married taxpayers were increased from $2,000 to $3,500, dependents from $1,000 to $1,500. Obviously, with the surplus created and reduced debt, internal revenue went up considerably.

In Canada in 1953, personal and corporate income taxes were reduced 11 and 9 per cent, respectively. Whereas a surplus of $11 million had been forecast, it actually came to more than $200 million.

Nine million persons were covered by independent health plans as of December 1953, it was reported in *The Washington Report on the Medical Sciences.* Hospitalization protection was carried by 6.9 million, 6.6 million had surgical protection, 5.4 million were eligible for medical benefits in the hospital, at home, or in the doctor's office, 3.4 million were eligible for diagnostic services, and 600,000 for dental care. The report shows that the 9 million beneficiaries are equally divided between employees and dependents. That the percentage of dependents is not higher is due to the fact that employees alone are eligible for benefits in 40 per cent of the plans. In the last five years union plans have increased from 18 in number with less than 500,000 members to 76 with a membership of 2.8 million.

These figures were taken from a preliminary report of a survey of 299 consumer-controlled co-operatives, privately operated prepayment clinics, plans conducted by medical societies and fraternal groups, and other types not associated with insurance companies, Blue Cross, or Blue Shield. The study was made by the Division of Research and Statistics, Social Security Administration, under the direction of Mrs. Agnes Brewster.

* * *

Albert E. Heustis, M.D., Commissioner of Health in Michigan, was granted an honorary degree of Doctor of Laws by Michigan State College at its annual commencement exercises.

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DOCTOR LOCATIONS—THROUGH MAY 31, 1955

Name	Opened Practice in	Approximate Date	From
Placed by Michigan Health Council			
William D. Peterson, M.D.	Mesick	May	Dearborn
Herbert L. Fishbeine, M.D.	Detroit	.....	Brooklyn, N. Y.
Manuel Jacobs, M.D.	Van Dyke	January 1	Ohio
Harold Daly, Jr.	Albion	May 23	Maryland
Marion Daly	Albion	May 23	Maryland
Harry Schmidt (Locum Tenens)	Lansing	June 1	Ann Arbor
Assisted by Michigan Health Council			
Willis L. Dixon, M.D.	Grand Rapids	.....	Detroit
Claud I. Hepworth, M.D.	Cheboygan	.....	Traverse City
Maurice Sorenson, M.D.	Elkton	.....	Detroit
Edwin G. Pear, M.D.	Royal Oak	.....	Detroit
A. W. Suksta, M.D.	Roseville	.....	Midland
C. O. Peake, M.D.	Kalamazoo	.....	Rochester, Minn.
Robert M. Taylor, M.D.	Petoskey	.....	Sault Ste. Marie
Richard Novack, M.D.	Livonia	.....	Detroit
Mark S. Beaubien, M.D.	Detroit	June 1	Military Service

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Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

REVIEW OF MEDICAL MICROBIOLOGY. By Ernest Jawetz, Ph.D., M.D., Professor of Bacteriology and Lecturer in Medicine and Pediatrics, University of California School of Medicine, San Francisco; Joseph L. Melnick, Ph.D., Professor of Epidemiology, Yale University School of Medicine, New Haven; Edward A. Adelberg, Ph.D. Assistant Professor of Bacteriology, University of California, Berkeley. Los Altos, California: Lange Medical Publications, 1954. Price $4.50.

This is an excellent reference book, which wastes scarcely a word. Considering the low price, it is well illustrated, the electron photomicrographs of the various organisms being particularly good. Outstanding chapters are those on general virology, mycology, and viral hepatitis. A number of the new antibiotics are discussed in considerable detail and even the side effects are mentioned, although it is felt that in at least two instances the unfavorable reactions are overstressed.

In most cases there is a brief clinical evaluation of the various tests which is helpful and adequate. A few exotic diseases are allotted a questionably lengthy description, an example being West Nile fever. The toxonomic and bacterial evaluation and the descriptive properties of bacteria follow Bergey's manual and are excellent.

This is highly recommended for all laboratory students and technicians, internists, pathologists, and other physicians who wish a concise and current source book for microbiological data.

A.A.H.

CLINICAL DISORDERS OF HYDRATION AND ACID-BASE EQUILIBRIUM. By Louis G. Welt, M.D., Professor of Medicine, Department of Medicine, University of North Carolina. Boston and Toronto: Little, Brown and Company, 1955. Price, $6.00

This is an orderly and well-organized text. The arrangement of disorders is exceedingly well done. The keynote is clearness, step-like and unconfusing as are many texts on the subject.

The bibliography is replete and of recent vintage of contributions to the subject matter. The author has done an excellent job of bringing forth the subject matter in a clear, concise manner. The graphic representation and charts are excellent and can be followed with ease. The clarity of presentation is an outstanding feature from cover to cover.

The index is very good. This text can be highly recommended for all physicians and medical students.

V.B.L.

HEALTH SUPERVISION OF YOUNG CHILDREN. A guide for practicing physicians and child health conference personnel. Prepared and authorized for publication by the Committee on Child Health of the

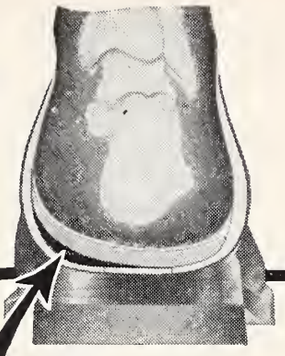
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American Public Health Association. New York: The American Public Health Association, Inc., 1954. Price $2.00.

Part I of this book should be read by every practitioner of medicine, who has to deal with children and mothers. It gives the doctor real insight and understanding. It stresses the need for more sympathy and less dogma in securing parental co-operation. Many helpful hints in the office handling of child health problems are presented.

Part II is concerned with the personnel and physical make-up of the well-baby clinic and child health centers. It will soon solve many problems for the professional workers responsible for setting up such centers.

R.S.

ION EXCHANGE AND ADSORPTION AGENTS IN MEDICINE. The Concept of Intestinal Bionomics. By Gustav J. Martin, Sc.D., Research Director, The National Drug Company, Philadelphia. Illustrated with 15 line drawings and 11 photographs. Boston-Toronto; Little, Brown and Company, 1955. Price $7.50.

This text presumably represents one of the few compendiums devoted to this particular subject. It is well documented, and the bibliography is extensive. Experimental results are given in some detail but these appear to be somewhat weighted in favor of the general thesis. There is a tendency to interlard hard, statistical, and scientific data with philosophical meanderings. The price is not unreasonable for the few that are interested in this particular facet of medical science.

A.A.H.

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SHOULD THE PATIENT KNOW THE TRUTH? A Response of Physicians, Nurses, Clergymen, and Lawyers. Edited by Samuel Standard, M.D. and Helmuth Nathan, M.D. New York: Springer Publishing Company, Inc. 1955. Price $3.00.

This volume is composed of a series of short, well-written essays on an engaging subject. Among the contributors are nurses, clergymen, lawyers, as well as physicians. Each of the authors attempts to present the subject from his own experience and from his own viewpoint. Though there is some repetition, this approach does produce interesting and stimulating views.

As one might expect, the instance most frequently selected in these essays is that of the cancer patient. The question is debated from all angles, but the consensus is that each sick person is an individual problem—individual from the standpoint of the patient as well as from the standpoint of the physician who is to make the decision. The physician must decide "What is the truth?" in each instance. He must be guided by the nature of the whole problem so that what is told can facilitate treatment as well as adaptation to the less pleasant aspects of the problem. A somewhat different view is expressed by the clergy who properly insist that the sick person be told enough of "the truth" to make the necessary religious preparation.

A problem only briefly mentioned has to do with the person who is sick with a slowly progressive degenerative disease. Such a person and his family must be protected from the false hopes encouraged by the short-sighted physician as well as from the fraudulent promise and "guarantees" of the charlatan. If "brutal frankness" is ever indicated, it may well find a place in this type of problem, if "shopping around" and waste of money is to be avoided.

F.O.M.

ATTI DELLA SOCIETA ITALIANA DI CARDIOLOGIA. Volume I, Relazione; Volume II, Communicazioni.

These two volumes containing over 600 pages are the reports of the 15th Congress on Cardiology of the Italian Society of Cardiology. There are many papers, most of them profusely illustrated by diagrams, electrocardiograms, and x-rays.

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THE UNWED

Doctors and professional people have a large bibliography of jokes concerned with biological facts but to the unfortunate woman who is faced with the biological fact of illegitimate pregnancy biology is not a joke. The doctor often has the first interview with such a woman, and the tact and sympathy with which he helps her to face her problems makes all the difference between a maturing experience and a terrifying and traumatic ordeal.

If the doctor could give the time to the family—doing the planning with them for confinement, medical supervision of the pregnancy, financial support, planning for the baby, repeated interviews with parents of the girl involved to find out the basic reasons for her actions and feelings (hostilities, rejections, guilt feelings, shame, insecurities and so on), it would be ideal. Yet we must ask, who among us have the time to do this for these people? We must be as much concerned about the welfare of the unborn child as we are concerned about the social forces which produce him.

Probably a case work agency with skilled social workers to whom the patient is referred early in the pregnancy can do the most complete detail work, and in being able to bring together adequate

(Continued on Page 892)

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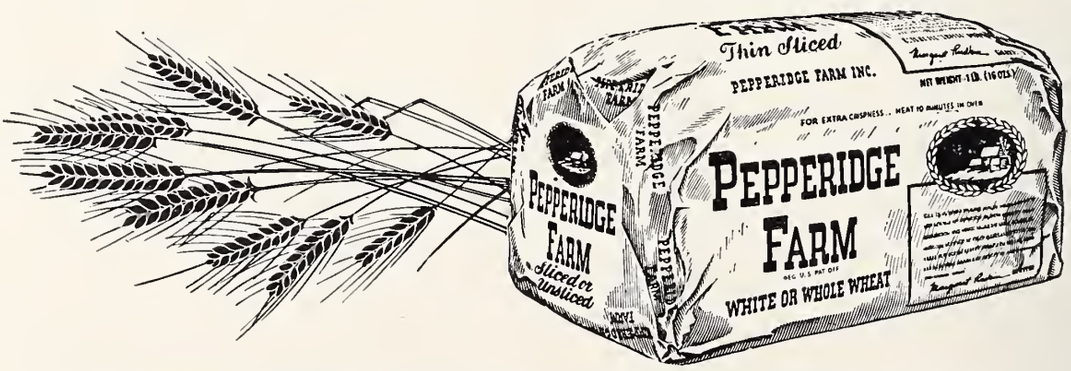
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THE UNWED

(Continued from Page 890)

medical supervision with social readjustment. Social workers have "stood by" families in need of help in many different ways. One case worker was invited to the wedding of the girl and her baby's father. She went. Several mothers have been helped during the pregnancy and have later decided to keep the baby after careful planning to decide what is best for them both. Many babies are released for adoption after the persons involved are sure this is what is best for all concerned.

Of course, there is an infinite variety of situations and one should not expect these mothers to fall into any one pattern. Many people fear "social agencies" with the same unreasonableness they fear "doctors," in the abstract, that is. Therefore, there will be many families who need help and find themselves so hostile to any outside planning that nothing can be done to establish contacts, let alone offer any aid.

Perhaps the title of this item should be "The Unwed but Fertile." They are not girls, which implies immaturity, for they have shown biological maturity. Calling them mere females denies their human dignity. Unfortunate women, yes, and the unborn citizen is as much our concern as hers.—RBH in *Bulletin of the Genesee County Medical Society,* March 29, 1955.



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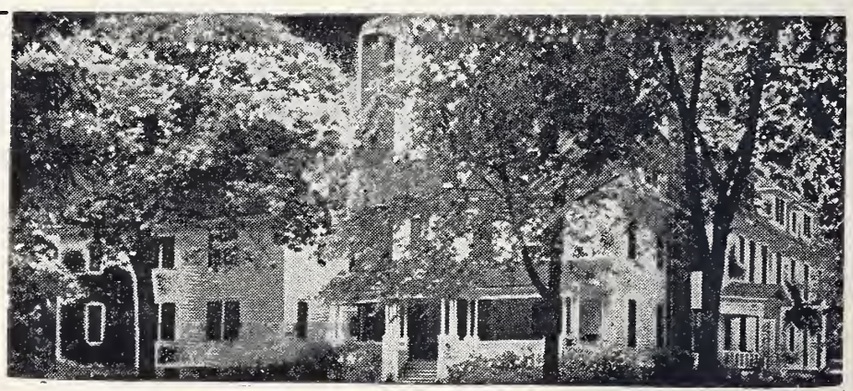
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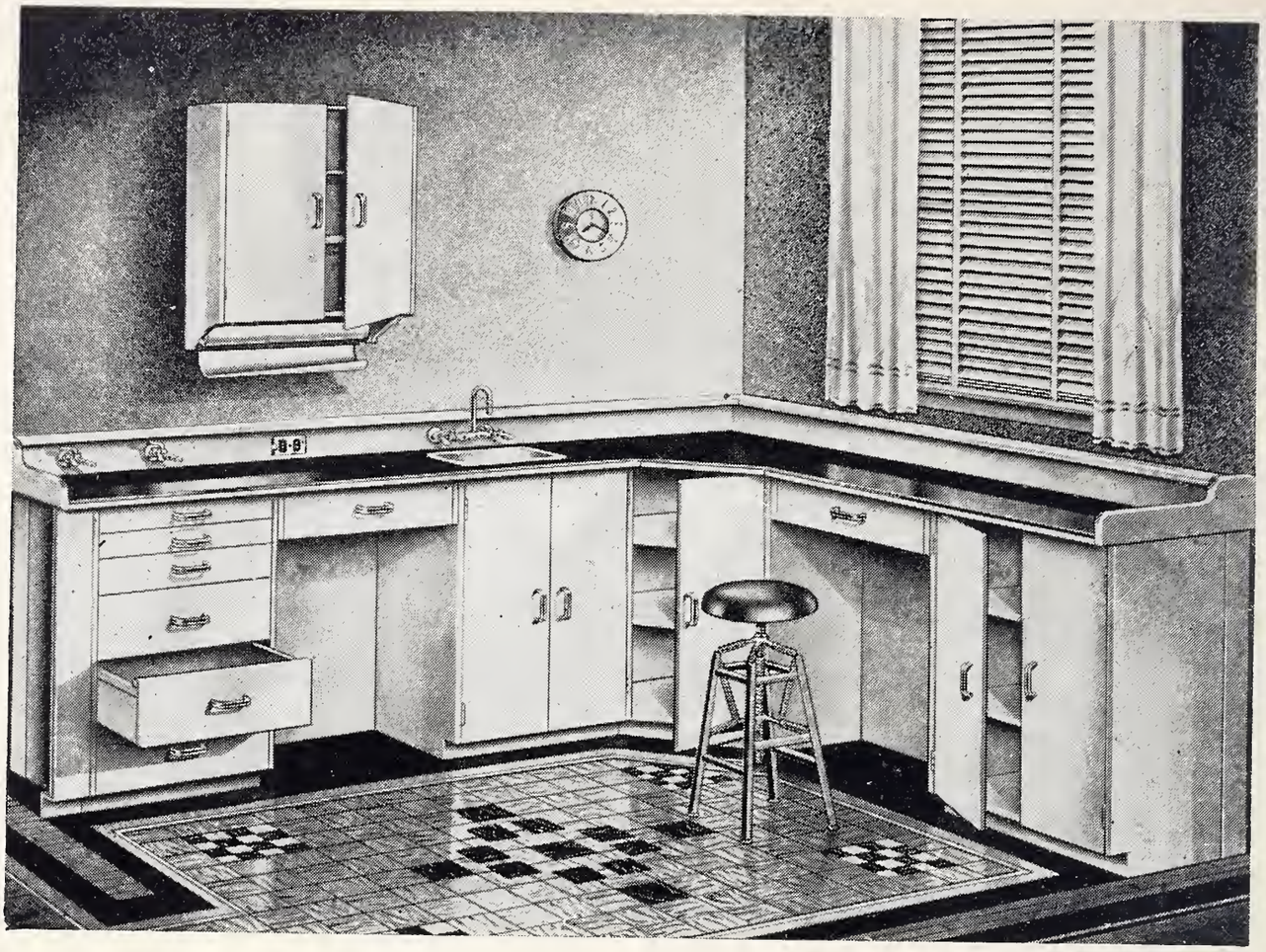
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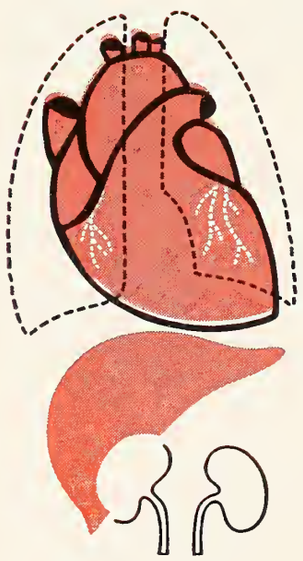
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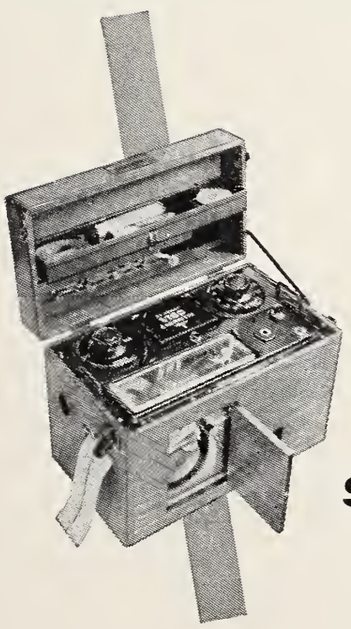
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AMA Washington Letter

THE MONTH IN WASHINGTON

For more than a year the administration has been attempting to work out a system of voluntary, contributory health insurance for Uncle Sam's two million or so civilian employes and their families. It would seem a simple thing to arrange, considering that most big employers have had similar plans in operation for years. At any rate, the plan is ready now for Congress to act on, but putting it together hasn't been easy.

First, there was the question of how to fit in the many already existing health insurance plans (some conducted by U. S. employe unions), and at the same time to offer coverage to government people working and living where no adequate insurance is being offered.

Also, there was wide disagreement as to how much of the premiums the federal government should pay; in private industry, employers' contributions range from a small percentage to the entire cost. U. S. employe unions naturally thought the federal government should set an example in generosity.

The program was first outlined early in the year. It then was put on the shelf for two reasons: a few refinements had to be made, and Congress first had to decide how big a pay raise it was going to allow U. S. workers this year before thinking about a fringe benefit, such as health insurance. The whole program was sent to House and Senate just at the start of the adjournment rush, with the realization that not much could be hoped for this session.

The plan offers U. S. employes the option of signing up with a local non-profit service or indemnity plan, providing 75 per cent of the workers in the particular operation vote for a particular plan and providing that plan is approved by the U. S. Civil Service Commission. If the employes can't get together, or if no adequate plan is available locally, they can sign up for a uniform national indemnity plan to be underwritten by one or more large national insurance companies and negotiated by the Civil Service Commission. The proposed law itself lists specifically the original benefits that must be provided by the uniform plan, but authorizes the Commission to readjust them.

Regardless which type coverage the employe selects for himself and his family, the federal contribution would be figured the same way. It could not exceed one third of the total premium, or $19.50 annually for a single person or $52 for one with dependents, whichever figure is the lesser. If the uniform plan is chosen, the single employe could not be charged more than $39 annually, or the one with dependents more than $108 annually. But under any other plan, the employe would pay the difference between the U. S. contribution and the premium cost.

A system of major medical cost or catastrophic insurance also would be provided. Under it the employe would have to pay the first $100 of cost, after benefits of the basic policy had been exhausted, before major medical cost benefits would become available. From that point on, until $10,000 had been paid by the company, the employe would have to pay only 25 per cent.

* * *

The first major medical bill enacted was the extension for another two years of the doctor draft act, which for five years has been furnishing the Armed Forces and the Public Health Service with most of their doctors. Before passage, two changes were made in the law. The maximum age for induction was dropped five years. Under the old law a man could not be taken against his wishes after he had reached his fifty-first birthday; the new law reduced it to his forty-sixth birthday. Also, the law no longer applies to physicians and dentists who have reached their thirty-fifth birthdays and who have been rejected for a medical or dental commission at any time solely on the grounds of physical condition.

Defense Department points out that the man has to be able to demonstrate that he actually applied for a medical or dental commission and was rejected; a 4-F draft board classification is not sufficient. The department also said that the law will not result in the discharge of men already in uniform, even though they could not be inducted under the new law.

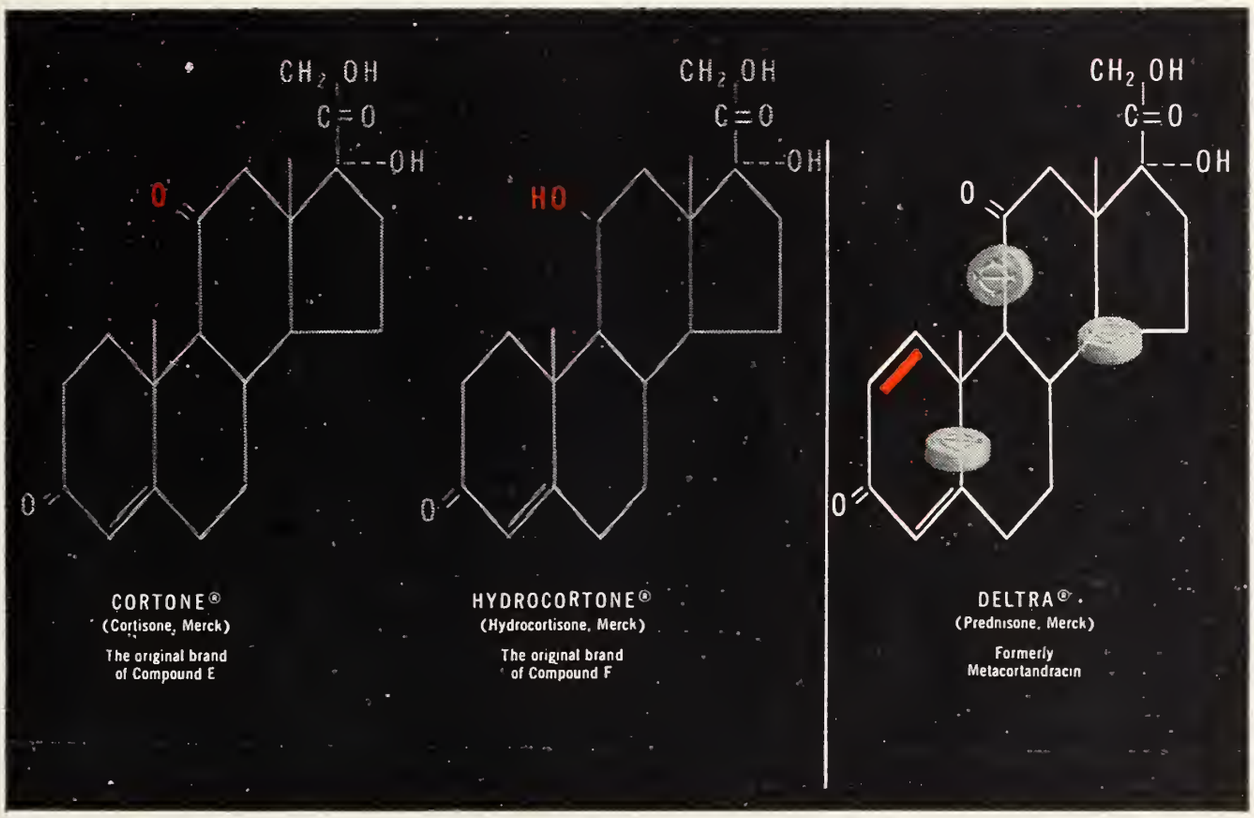
As adjournment approached, prospects were that not much more medical legislation would be enacted this session. Most likely of success was a proposal for U. S. grants to states to help finance Salk vaccine costs; the states would decide the priority of age groups, but in a public program there could be no "means test" to determine whether a family could afford to pay. Under this plan the states would receive a certain amount as a straight grant, based on the state's economic need and the number of uninoculated children. If they wanted to put up dollar-for-dollar, the states also could draw on a second account. The bill does not set any limit on U. S. appropriations.

Two other possibilities were bills for a national survey of mental illness (which passed the House early in the session), and for U. S. grants to medical schools.

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MICHIGAN STATE MEDICAL SOCIETY ANNUAL SESSION
Civic Auditorium—Pantlind Hotel, Grand Rapids
Wednesday-Thursday-Friday, September 28, 29, 30, 1955
YOU are invited to attend the Ninetieth

CRIPPLED-AFFLICTED CHILDREN AND DELINQUENT BILLING

Delinquent billings from hospitals and doctors of medicine for service to afflicted and crippled children performed between July 1, 1954, and June 30, 1955, will now be paid. Permissive legislation passed by the 1955 Michigan Legislature permits this reimbursement.

The Legislature this year also extended the sixty-day billing clause, in effect for many years, to ninety days. Doctors and hospitals are now permitted ninety days after services are rendered in which to furnish billing for medical service and hospital care to crippled and afflicted children.

Bicillin and Rheumatic Fever

The Michigan Crippled Children Commission will inaugurate a program next autumn covering children coming under the Michigan Afflicted Children's Act having rheumatic fever. The doctor of medicine will be paid $3.00 by the Commission for each injection of bicillin, the drug being supplied free for all cases, afflicted children and others, by the Michigan Department of Health. Physicians may order a supply of bicillin from the Michigan Department of Health Laboratories, but it must be kept refrigerated.

Detailed information on the new crippled children program will be mailed by the Commission to every MSMS member in September or October.

HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of June 15, 1955

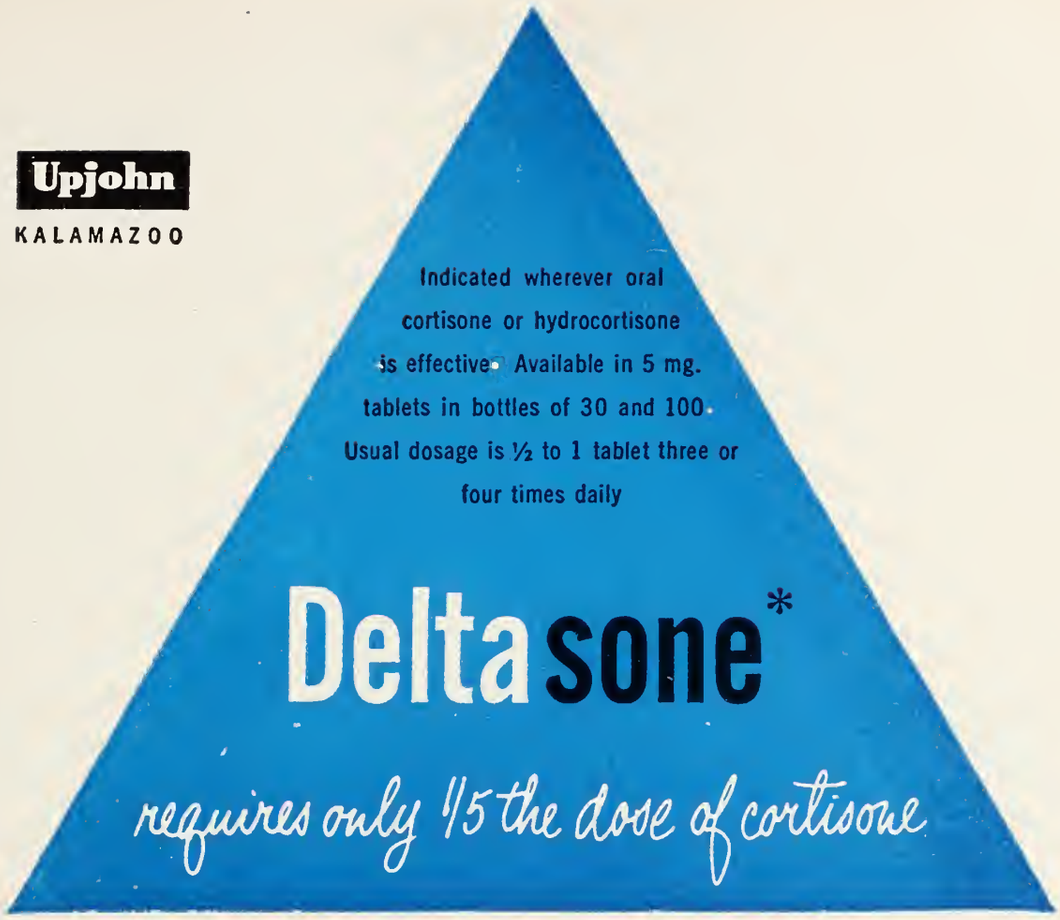
Seventy-six items were presented to the Executive Committee of The Council at its June 15 meeting in Charlevoix. Chief in importance were:

- **Personnel of Committee on Arrangements** for 1956 Michigan Clinical Institute, including the Program Committee, was approved.
- **Salk Polio Vaccine.**—K. H. Johnson, M.D., Lansing, Vice Speaker of the MSMS House of Delegates and a member of the State Advisory Committee on Polio Vaccine Distribution, reported that a meeting of this committee was scheduled in Lansing for June 17; he read a statement drafted for possible presentation. The Executive Committee congratulated Dr. Johnson on his appointment to this State Committee and approved the substance of his statement.
- **Committee Reports.**—The following committee reports were presented and given consideration: (a) Permanent Conference Committee, meeting of May 18; (b) Mental Health Committee, May 26; (c) Study of Periodic Health Examinations in Hospitals, June 1; (d) Arbitration Committee, May 13; (e) Awards Committee, June 15; and (f) Committee on Mediation, Ethics and Grievance, June 15.

MEDICAL MEETINGS AND CLINIC DAYS

A list of known medical meetings and clinic days, sponsored by county medical societies and other physician groups in Michigan, follows:

1955		
September 12-15	Twentieth Annual Congress—International College of Surgeons (United States and Canadian Section)	Philadelphia, Pa.
September 26-27	Annual Session of the House of Delegates (MSMS)	Grand Rapids
September 28-30	MSMS Annual Session	Grand Rapids
September 28-30	Mississippi Valley Medical Society	St. Louis, Mo.
Sept. 30-Oct. 1	American Medical Writers Association	St. Louis, Mo.
October	Clara Elizabeth Fund for Maternal Health and Genesee County Medical Society	Flint
October 14	Michigan Cancer Conference	East Lansing
October 17-19	Eighth Annual Scientific Meeting—Detroit Institute of Cancer Research.	Detroit
Autumn	MSMS Postgraduate Extramural Courses	State-wide
November 1-3	International Symposium: Units of Biological Structure and Function. Henry Ford Hospital.	Detroit
November 9-10	Third Annual Midwest Conference on Rheumatic Diseases. Henry Ford Hospital	Detroit
November 9-10	Ninth Annual Fall Post-Graduate Clinic—Michigan Academy of General Practice	Detroit
1956		
March 7-9	Michigan Clinical Institute	Detroit
April 11	Tenth Annual Cancer Day	Flint



- **Wm. A. Hyland, M.D.,** Grand Rapids, Chairman of Michigan Delegates to AMA, presented report on the June 1955 AMA session in Atlantic City, which was accepted with thanks.
- **Basic Science Act Amendments**—Report was given that HB415, approved by the Michigan State Medical Society as passed by the Legislature, is now on the Governor's desk for signature.
- **Dr. and Mrs. W. S. Jones,** of Menominee, presented to the Beaumont Memorial on Mackinac Island a special hand-made wrought-iron grill to protect the precious Beaumont books previously contributed to the Memorial by President-Elect and Mrs. Jones. The Executive Committee of The Council placed upon its minutes a vote of deep apperciation for the continued generosity of the Joneses.
- **Matters of mutual interest** were discussed with Dr. A. E. Heustis, Michigan Health Commissioner, including legislative program, poliomyelitis vaccine, and Annual Conference of Physicians and Schools. The Executive Committee commended Dr. Heustis for requesting the creation of the State Advisory Committee on Polio Vaccine Distribution.
- **Invitation from the Michigan State Pharmaceutical Association** to send representatives to meet with MSPA and Smith, Kline and French Laboratories to discuss substitution of drugs was accepted—the MSMS representatives being the members of the Liaison Committee with MSPA.
- **H. W. Bird, M.D.,** Detroit and **A. T. Rehn, M.D.,** Lapeer, were authorized to attend the second Annual Conference on Mental Health at AMA, Chicago, November 18 and 19 as MSMS representatives; **B. L. Masters, M.D.,** Fremont, was appointed MSMS representative to attend Michigan Rural Health Conference Planning Committee meetings.
- **Legal Counsel J. Joseph Herbert** presented opinions on two matters, one re salaries of house physicians and residents in hospitals.
- **The thanks of the Executive Committee of The Council** were expressed to Dr. and Mrs. G. B. Saltonstall for opening their home to the Executive Committee of The Council for this meeting.

THE AMERICAN CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION

The 33rd annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held August 28-September 2, 1955, inclusive, at the Hotel Statler, Detroit.

Scientific and clinical sessions will be given August 29, 30, 31, September 1 and 2. All sessions will be open to members of the medical profession in good standing with the American Medical Association.

In addition to the scientific sessions, annual instruction seminars will be held. These lectures will be open to physicians as well as to therapists, who are registered with the American Registry of Physical Therapists or the American Occupational Therapy Association.

Full information may be obtained by writing to the executive secretary, Dorothea C. Augustin, American Congress of Physical Medicine and Rehabilitation, 30 North Michigan Avenue, Chicago 2, Illinois.

PR REPORT

THE MEDICAL ASSOCIATES project of MSMS has attracted nationwide attention, and at the request of the American Trade Association Executives was entered in the 1955 competition for ATAE awards for distinguished service. Steps taken by MSMS in launching and executing the long-range program were outlined in detail as an example of service to both the public and the medical profession, and then the outline was submitted to a distinguished committee of judges headed by the Secretary of Commerce. The project has been successful in several ways, notably in interesting the M.D. in increasing his efficiency and broadening his service to patients, by using medical associates, and in recruiting young men and women for the many fields of medical associates by selling them on the career opportunities through the use of many channels of information and PR techniques.

Winners of distinguished service awards are to be announced at the 35th Anniversary Meeting of ATAE on Mackinac Island in early August.

MICHIGAN RATES MENTION twice in the new AMA brochure "Community Efforts Provide Medical Facilities," produced by the Committee on Medical and Related Facilities of the Council on Medical Service. Ralph A. Johnson, M.D., of Detroit, is chairman of the committee. Robert L. Novy, M.D., of Detroit, is a member.

The Doctors' Clinic at Hillman and the Onaway Health Center both rate two pages as "good examples of successful community activity" in providing medical facilities and securing an M.D. for an area lacking medical care. Six other such projects are cited; two each in South Dakota and Kansas, and one each from Montana and Florida.

The brochure is designed as a "how-to-do-it" booklet for citizens of other communities seeking medical service. It lays out each step taken by the eight representative communities in planning, financing and constructing facilities through community-wide participation, and subsequent activities which brought an M.D. to make use of the facilities. The Michigan Health Council is mentioned prominently for the co-operation of its M.D. Placement Service.

Incidentally, Michigan Health Council, with guidance from MSMS, is preparing a new brochure explaining the operations of the M.D. Placement Service to serve double-duty (1) by helping communities in need of medical service map out a campaign to secure an M.D., and (2) in making the services of the placement service known to M.D.'s seeking a location.

A NEW TELEVISION SERIES presenting "specific accomplishments in the field of medicine brought about by the teamwork of modern medical research, education, and practice" will have its premiere over ABC-TV on September 12. Entitled "Medical Horizons" and sponsored by Ciba Pharmaceutical Products of Summit, N. J., the programs will be seen from 9 to 9:30 P.M. each Monday, with WXYZ-TV, Detroit, the Michigan outlet. Live remote telecasts from medical institutions and research centers throughout the country will be featured in the 26-week series. A tentative line-up of 45 stations is scheduled to carry the program.

The theme of the new show is similar to that of the 1955 Michigan Clinical Institute in Detroit last March, when the teamwork between the pharmaceutical industry, the pharmacist, and the M.D. in promoting medical progress was highlighted in a series of addresses and special events.

A SUMMARY OF PR ACHIEVEMENTS and the PR outlook for the future will be found elsewhere in this issue within the Annual Report of The Council of MSMS.

The MSMS road map for upcoming PR activity will be developed at the semi-annual meeting of the PR Committee, under chairmanship of C. Allen Payne, M.D., Grand Rapids, scheduled for Flint on Sunday, August 28. Plans will be presented for approval to The Council at its September meeting in conjunction with the 90th Annual Session in Grand Rapids.

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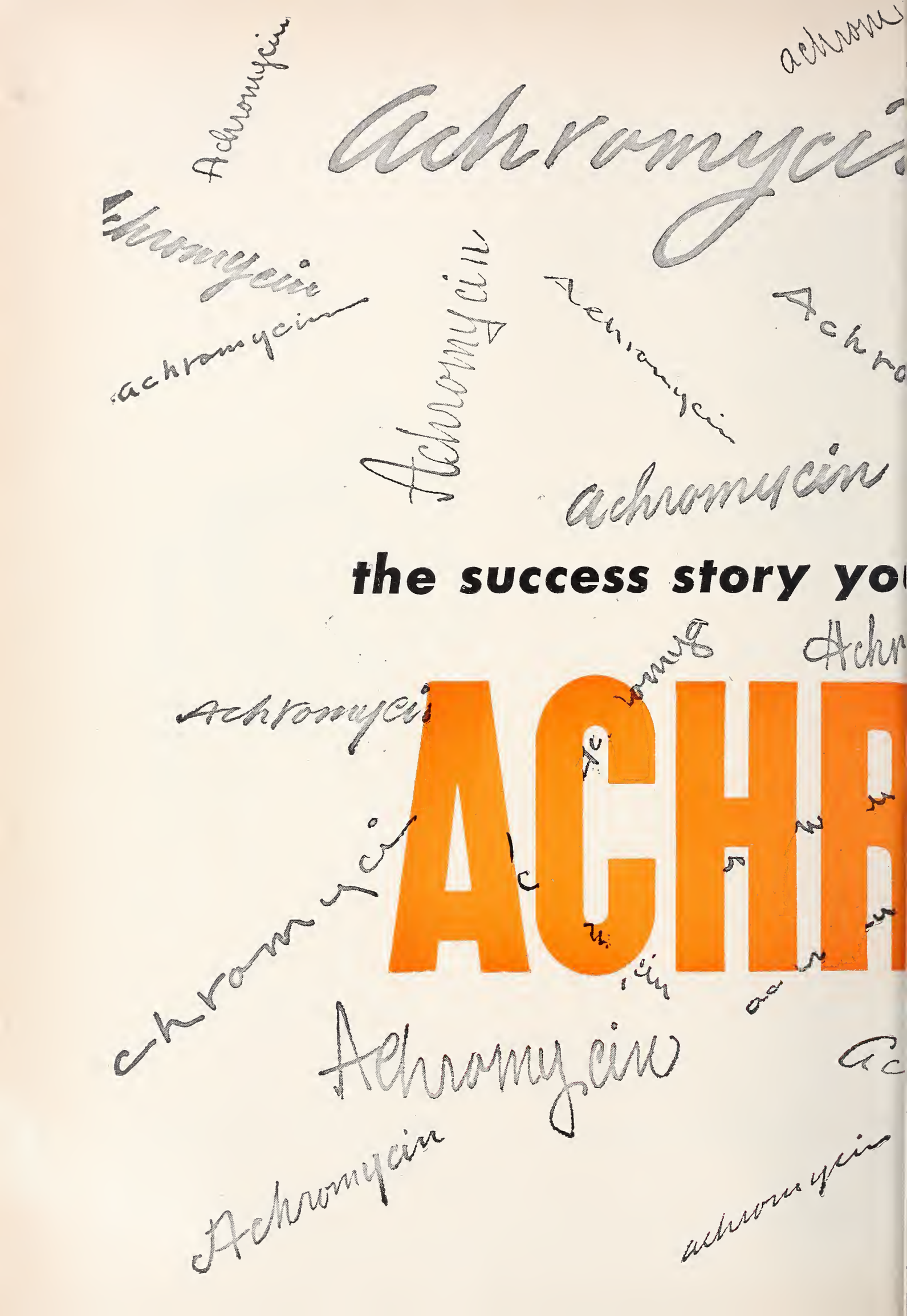
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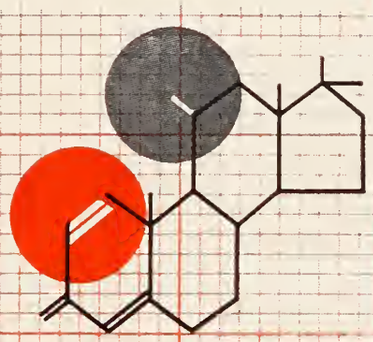
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- replacing the older corticosteroids in
  rheumatoid arthritis[1,2,6-8]
  intractable asthma[9-12]
  eye disorders[5]
  certain skin disorders such as disseminated lupus erythematosus,[13,14] acute pemphigus,[13,15] atopic dermatitis[15] and other allergic dermatoses
- more active than hydrocortisone or cortisone, milligram for milligram
- relatively free of significant water or electrolyte disturbances [5]

METICORTEN is available as 5 mg. scored, white tablets in bottles of 30 and 100.
METICORTELONE,* brand of prednisolone (metacortandralone).
METICORTEN,* brand of prednisone (metacortandracin).

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*T.M.

Editorial Opinion

REOPEN THE DOOR!

America has always been the land of promise and challenge and opportunity. To its shores have come the peoples of the world, literally the world, seeking opportunity—the chance to live in freedom, to raise their families, to speak without fear of punishment, to meet their fellow men without the hazard of an informer and to worship according to their custom. This amalgam of people seeking liberty and a chance has made America.

There are medical schools in other countries. They train young men and women to succor the ill and to seek out the cause and the cure of disease. Many of these graduates look toward our American shores for opportunity. They seek internships in our hospitals. It seems to be recognized that they should be granted this opportunity: the Federal government permits them to enter this country in two special categories for this year of internship. Some enter as Fulbright scholars on funds underwritten by our own tax dollar. Others come to us on a special visitor's visa permitting entry for one year, using their own funds to pay for this chance to increase their sum of medical knowledge.

They have been welcome in many hospitals in many states. As long as our own medical schools are unable to fill the deficit between the number of medical graduates and the number of hospital internships approved by the various accrediting agencies, there will be need for them. There is some evidence that they have been exploited in some hospitals.

The Michigan State Board of Registration in Medicine takes a dim view of the graduate of the foreign medical school seeking an internship in a Michigan hospital. It has formulated an administrative ruling, effective July 1, 1955, to the end that the graduate of the foreign medical school, having gained entrance to America either as a Fulbright fellow or on the special one-year visa for the specific purpose of obtaining an internship, must pay a fee of $50 and be subjected to a special screening examination before he may start an internship in a Michigan hospital.

Several things are to be pointed out. Administrative rules of the Board are not law, despite the efforts of the Board to make them look like law. This screening examination is in no sense the licensing examination provided for in the Medical Practice Act and carries no authorization for the intern to practice medicine, surgery or midwifery. The examination is conducted by savants of the two medical schools in the state with the avowed intent of determining whether the appellant should be permitted to start an internship—obviously using criteria determined by present teaching practice in these two medical schools. The fee works an unusual hardship on the foreign graduate entering on the special visa because it must come from his limited personal purse. The Board is also trying to make its administrative rule retroactive from the published date—that is, to affect interns who have been serving in Michigan hospitals for months prior to the effective date: but the Board has tried to make earlier administrative rulings retroactive also: that's the way the Board works.

An administrative official of the Board has said, in connection with another problem several months ago, that it is improper to criticize an action of the Board. When the time comes that a citizen cannot challenge a decision of an appointive board, then we have lost something in America—not the least of which is extending to the graduate of the foreign medical school the opportunity of expanding his store of medical knowledge during an internship in one of the hospitals of the State of Michigan.—William Bromme, M.D., *Detroit Medical News.*

THE ANAMILO CLUB

"The ordinary things we do immediately, the difficult take more time, the impossible take a little longer."

Not long ago a patient developed an asymptomatic, persistent hoarseness which upon further investigation proved to be carcinoma of a vocal cord. The only hope was to have the larynx removed. This was a heavy blow.

While this patient was in the hospital being prepared for the operation, he was visited by another man who had been through the anticipated surgical procedure. The surgeon had arranged the visit.

This visit proved to be a turning point in the patient's attitude or philosophy about the ordeal. It brought him new hope. To be deprived of his voice seemed very depressing, well nigh defeating. Then unexpectedly a newly found friend had taken enough interest in him to call on him in the hospital and to encourage him by proving that one can go on and that one can learn to speak again.

This gentleman was a member of the Anamilo Club—Greek for "I speak again." The organization in this community was formed by five or six beginners and now has expanded to include 275 members all of whom had cancer of the larynx and been laryngectomised. All of them have

(Continued on Page 916)

NO ONE IS COMPLETELY IMMUNE

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Motion sickness affects people of all ages because almost everyone is sensitive to labyrinthine irritation induced by travel on land and sea and in the air.

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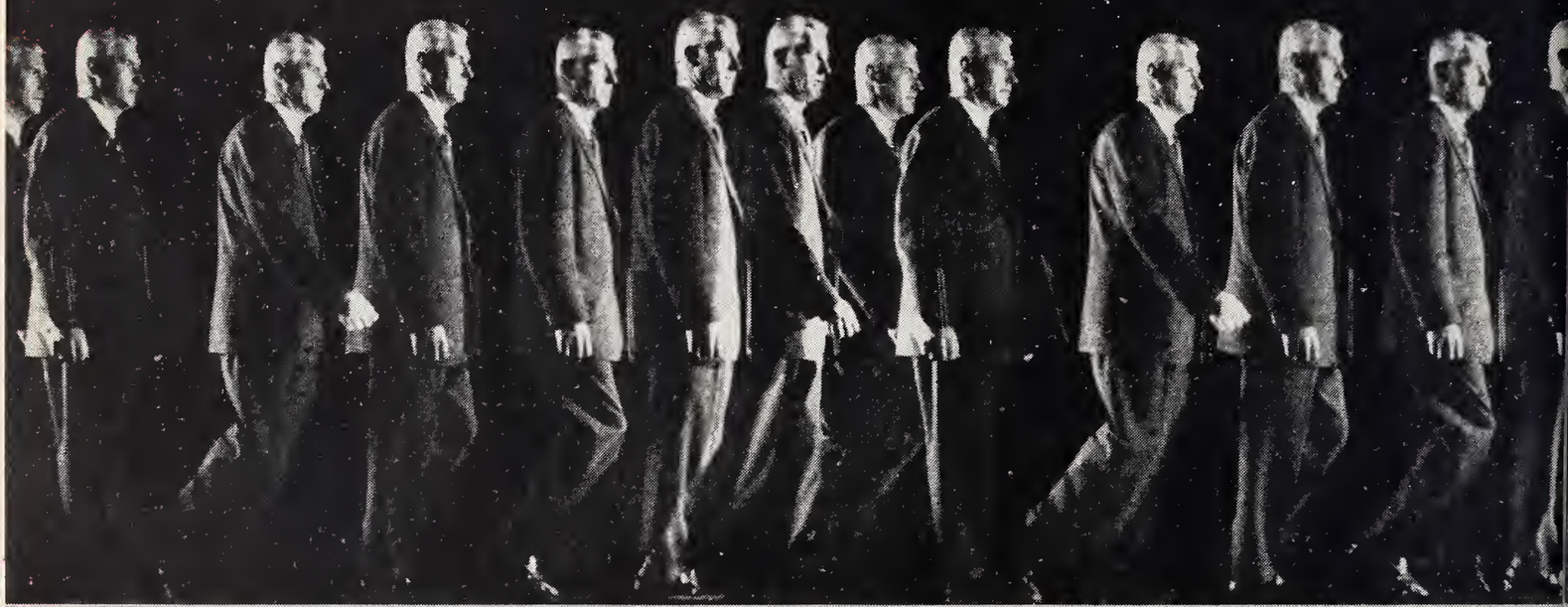
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1. Pomeranze, J. et al.: Angiology, June, 1955.
2. Freedman, L.: Angiology 6:52, Feb. 1955.

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THE ANAMILO CLUB

(Continued from Page 912)

learned to speak again using the esophageal voice which consists of swallowing a small portion of air, not all the way into the stomach but into the upper esophagus, and speaking on this column of air as it is regurgitated.

Some time ago these men got together to help each other learn to use the esophageal voice. The most proficient among them became the teacher and drilled the others including new students as they came into being until "the voiceless men" became almost vociferous when they spoke in unison at class.

At a later date the Detroit Cancer Society became the sponsor of the Anamilo Club as the first full-time speech school in the country for laryngectomised patients and to help them master the slightly complicated technique of learning to speak again by using the esophageal voice. At the present time there are twenty-two schools throughout the United States.

The Anamilo Club speech classes are great morale builders. The previously dejected students really learn to speak once more and soon thereafter resume their previous work or sometimes a different work and enter into a wide range of social life. They visit other patients in the hospital and in their homes. They establish a rapport among themselves. They assemble at the Anamilo Club and learn to be useful citizens once more. This enterprise has great emotional appeal if all the potentialities are considered.

If there is a hospital in this community where the staff members are not familiar with the important rehabilitational work done by the Anamilo Club, they would do well to consider a staff meeting devoted to this subject and see the short film describing their work. It is fascinating.

This is a praiseworthy project—Charles Sellers, Detroit Medical News.

MEDICAL OPPORTUNITIES UNLIMITED

The young doctor finishing medical school today has professional opportunities unlimited. A generation ago, as recent as that, it was the fortunate ones who were able and were given the opportunity of graduate medical training in their own community or even in this whole country. The method of postgraduate study and specilization then was accomplished for the most part by study in one of the then great European medical centers. When we started practice and went to medical meetings all that was needed by a speaker to establish his authority in medicine was to begin with "when I was in Europe."

Today this is reversed. In Detroit, we have residents and fellows in training in our hospitals from throughout the country and from Europe and Asia and Africa. This is duplicated all over our nation; on reading the journals we see contributing men listed as continuing their training whose home residence is given as the major cities and universities abroad.

In the current issue of *Circulation* among contributors from American hospitals and medical schools who came from abroad to study here are a doctor from Florence, Italy; one from Kingston. Ont., another from Johannesburg, South Africa. and one from Bern, Switzerland. This in a single issue.

And in our own city in the Exchange Visitor Program under the State Department there are right now twenty-seven doctors finishing a year of training in Detroit Receiving Hospital, the teaching hospital of Wayne University. These doctors furthering their training in our hospitals are:

Radiology—4; one each from Mexico, Germany. Italy and Austria.

Anesthesia—5; one from China, two Canada. two Japan.

Surgery—6; from West Indies one, two from Japan and three Canada.

Gynecology—5; one each from Iran, Spain, the Philippines, Canada and Lebanon.

Otolaryngology—1; from South Africa.

Pathology—1; from West Indies.

Ophthalmology—3; one each from Iran, Mexico and Canada.

Dermatology—1; from Cuba.

Medicine—1; from Italy.

A medical graduate from either of our two great medical schools in Michigan has his choice of hospital residency and fellowships in teaching hospitals and hospitals with teaching programs and medical school affiliations in his own community giving training in any specialty.

The United States is now the place for postgraduate training. Being close to greatness we sometimes lose perspective.

The young doctor in America, in Detroit, has medical opportunities unlimited.—Dave Sugar. *Detroit Medical News*, July 4, 1955.

END THE DOCTOR DRAFT

Further extension of the practice of conscripting physicians and dentists up to the age of fifty-one would be excusable if the nation were at war, or if it could be clearly shown that there is no other way to meet the medical needs of the armed forces. Neither of these conditions exists.

The real reason for the extension of the doctor draft is disgraceful. Nearly half of the authorized positions for career medical officers are unfilled. Young doctors are repelled from a job which offers salaries below civilian levels, which requires

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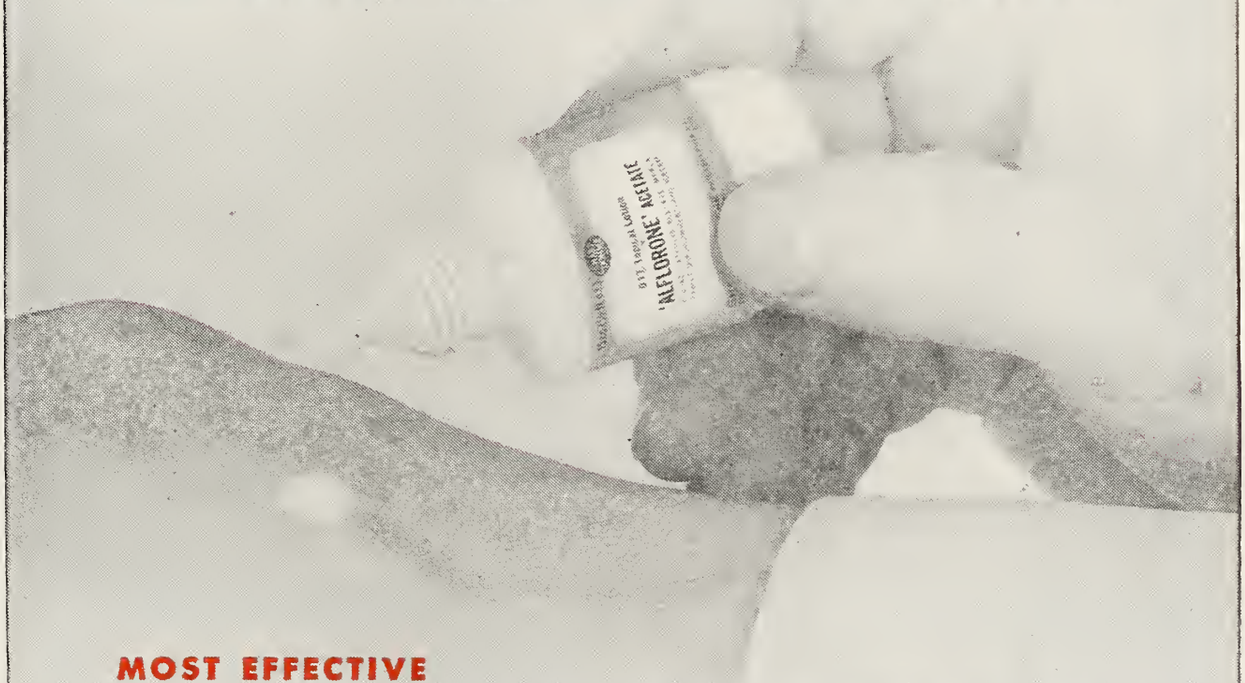
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END THE DOCTOR DRAFT

(Continued from Page 916)

them to waste much time in duties not connected with their profession, and which keeps most of them at work on patients who are not members of the armed forces.

There is no argument about the necessity for having enough physicians and dentists to care for the needs of soldiers, sailors, airmen, and the dependents of servicemen stationed in foreign countries. These needs, however, could be supplied by career officers if the career service were made slightly more attractive and by the new medical school graduates who, like all other young men, are subject to conscription under the general draft law.

The need for drafting older doctors, including some who have already had a tour of duty in the armed forces, arises from the policy of providing free medical service to nearly 3 million dependents of servicemen and more than a million civilian employes of the defense department. Most of these nonservice patients are in areas well supplied with civilian physicians. If medical service must be supplied free to dependents and other civilians, why can't the Defense Department contract directly with local hospitals and doctors, or pay the premiums for health insurance to cover the costs?

The government is not drafting plumbers to work at subunion pay scales in the homes of military men and their dependents, nor has it seized factories to make free clothing for dependents and civilians. The doctor draft is unjust. Its extension would mark the first time in our history that any group of citizens had been singled out for conscription in peacetime because of their professional skill.—*Chicago Tribune.*

STATEMENT ON METHOD OF INTRODUCTION OF SALK VACCINE

Following is a statement adopted by the Council of the California Medical Association, May 4, 1955.

The Council of the California Medical Association has been deeply disturbed by circumstances and events surrounding and following widespread introduction of antipoliomyelitis vaccine (Salk vaccine) in April, 1955. The tragic occurrence of poliomyelitis even in a relatively small proportion of the children injected with the vaccine indicates that the time has arrived to stop, to think, to analyze and to carefully consider how the present situation developed.

As a result of past experience, some of it bitter, with new prophylactic and therapeutic measures, a tacit or explicit policy has long been in force among medical men with regard to general acceptance of a new product or method: The policy entails a sequence of cautious and preliminary exploration, then publication of results in medical journals and gradual accumulation of data bearing equally on efficiency and safety. It was for this purpose that the Council on Pharmacy and Chemistry of the American Medical Association was formed.

Certain examples of the wisdom of this approach and of danger in its neglect can be cited. The development of diphtheria toxoid in its present satisfactory form followed several years of trial and error. On the other hand, the use of yellow fever vaccine, hastened by the exigencies of World War II, was followed by totally unexpected complications of homologous serum hepatitis, affecting more than 20,000 persons, many of whom died. This led to revision of the method of preparing the vaccine and to its present safety. In the case of poliomyelitis, two supposedly safe vaccines (Kolmer and Brodie) were put to human use in the 1930's. With both of these vaccines paralytic poliomyelitis occurred in the ratio of approximately one to 1,000 of the persons vaccinated, and usually the disease involved first the inoculated extremity or extremities.

In the present instance the National Foundation for Infantile Paralysis and advisory groups decided to by-pass a long period of trial and error by making a single, very large-scale field trial in 1954 and having results studied by the best-known methods of collection of data and statistically appraised by experts using fully objective techniques. This study was culminated in the Francis report announced April 12, 1955, at Ann Arbor, Michigan. The field trial of poliomyelitis vaccine was conducted with great thoroughness and care and the results appear to demonstrate that vaccination with killed poliomyelitis virus produces a considerably increased degree of protection against the disease. The study indicated that this protection, while not complete, is sufficient to give promise that the use of the vaccine should reduce the incidence of poliomyelitis. The magnitude and accuracy of the collected data and scrupulous performance of analysis leave little room, if any at all, for criticism; and for this Dr. Francis and his colleagues deserve the highest credit. The same may be said of the preliminary work of Dr. Salk and his colleagues.

Certain features of the program, however, are open to serious criticism. They have already led to serious and unforeseen difficulties and have already interfered to a considerable degree with continuance of the program. The results of the vaccine trials were announced under the aegis of a lay organization to a relatively small number of interested professional and lay persons at the University of Michigan. Simultaneously the results were announced to the general public by radio and television and by the press. Since the basic charts used in the report were illegible on television in some areas and on some television receivers, many

(Continued on Page 920)

NEWS

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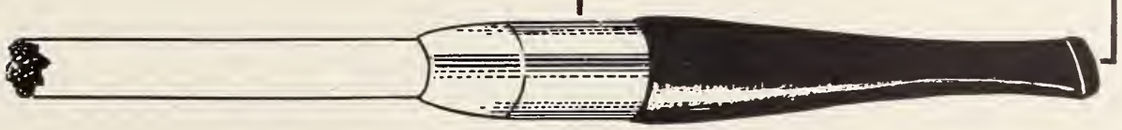
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STATEMENT ON METHOD OF INTRODUCTION OF SALK VACCINE

(Continued from Page 918)

persons in the medical profession had only the condensations of press, radio and television commentators available to them. They did not soon enough or long enough have access to the exact and fundamental data of the full report. Copies of the original report were available for only a few of the many public health officers throughout the country who were responsible for conducting the free vaccination of school children, although the program, as prescribed by the Foundation, was to start at once. This objection also applied with even more force to practicing physicians, who were immediately placed under urgent demands for vaccine by parents of their patients. They were wholly dependent on public media of communication for appraisal of their medicolegal responsibilities.

Nationwide planning was immediately developed to administer the vaccine to first and second grade children in school, and these plans were virtually completed before there was any opportunity for many of those responsible for regional, state and local planning to have any personal knowledge of the exact content of the report of the field trials. This was particularly unfortunate, since it was revealed at the meeting in Ann Arbor that the composition of the vaccine and also the additive used for antiseptic, preservative and enhancing purposes, as well as the time schedule for its administration, had not been fully standardized. Even at the time of the public announcement, some of these factors were still undergoing changes.

Furthermore, there was not available to physicians and public health officials scientific evidence concerning the composition and safety of the vaccine. The decisions concerning the number of safety tests of individual lots and pools were made on advice and counsel of a group of outstanding experts. Tests that must be carried out to establish the absolute harmlessness of any method of immunization before it is put into use are time-consuming and the results must be carefully considered. Hence it is not feasible for the individual physicians or the health officers who are trusted with the health of the people to make such tests and studies as individuals. Responsibility of this magnitude requires profound searching appraisal by national groups of scientists and physicians.

In the present case, it would appear that a desire to bring the vaccine onto the market and to use it before the closing of schools may have created conditions that led to by-passing some of the time-honored scientific steps in professional education and evaluation and to alteration of some of the safety precautions required in the preparation of the vaccine. With a product of a single manufacturer there have been a number of paralytic sequelae to the vaccinations. Present evidence suggests these were, in effect, "inoculation poliomyelitis" rather than spontaneously occurring disease, although full investigation of this question is still to be carried out.

While a committee of virologists and epidemiologists of unquestionable authority has unanimously declared its belief that the vaccine now available for use is entirely safe and satisfactory, it remains to be determined whether the present difficulties with the vaccine are due to a defect in laboratory precautions or to a fundamental defect in the method itself.

In summary, physicians of California are cooperating and will continue to co-operate to the fullest extent with local, state and federal health agencies to safeguard the health of our people and the ultimate control of poliomyelitis.

The Council of the California Medical Association disapproves and condemns the methods of announcing the Salk antipoliomyelitis vaccine. It disapproves the contrived publicity with which the announcement was made and the fact that there has not to date been an opportunity for general scientific discussion of the value of the method. It further disapproves nonprofessional agencies' deciding the time and the means of reporting matters of a scientific nature and it disapproves such agencies' deciding the measures which should be employed in the further use of medical materials or methods.

It is urged that the National Research Council immediately undertake an extensive study of every phase of the manufacture and testing of the vaccine.

The C.M.A. Council believes that, in accordance with traditional scientific standards and practices, the use of this vaccine, as well as all other therapeutic and prophylactic agents, must be left to the judgment of the individual physician.—*California Medicine,* June, 1955.

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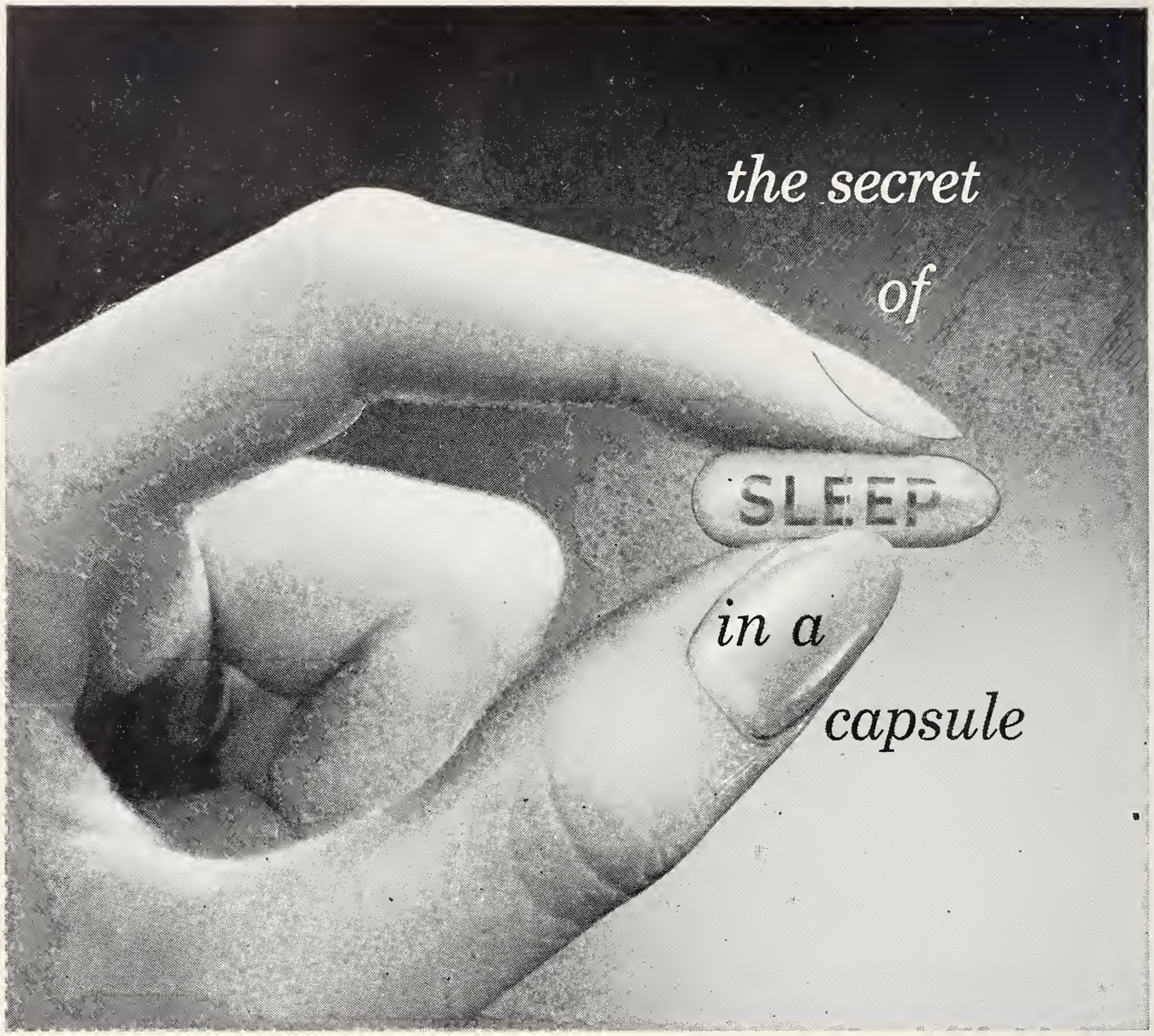
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Relationship Between the Physician and Industry

By Thornton I. Boileau, M.D.
Detroit, Michigan

THE CHANCES are more than even that the patient who seeks the counsel and help of a physician, in this bustling industrial giant of Michigan, is employed in some job with one of the many industries that keep the economic life-blood flowing. Whether this job be large or small, it is of such importance that he must spend half of his waking hours, or one-third of the average day, subject to the environmental, physical and mental stresses that the particular occupation demands.

It matters not whether he is a high salaried executive of a corporation or an hourly rate laborer; the impact of the many factors with which he comes in contact each day, on his physical state, cannot be ignored. In the difficult field of medical diagnosis, consideration of the work history will often lend the key to an otherwise puzzling problem and enable the doctor to serve more surely the most important individual in the practice of medicine—the patient.

Failure to consider the occupation factor in not only the diagnosis but also in the care of our patients, as they return to their jobs, deprives us of one of the most basic instruments in the treatment, rehabilitation and preventive aspects of medicine.

Physical Condition and Occupation

The limitations placed upon physical ability by heredity, development, injury or disease are not quite as easily measured as intelligence. However, whether his work is full-time industrial, a percentage industrial or entirely private practice, the physician is able to give a rather accurate evaluation after a fair opportunity to examine a patient. It is an important opinion to the man, his family and his employer, for it may determine not only the type of work that he may do today, but serve as a guide so plans can be made for the future. The findings properly correlated with his work activity may determine, to a great extent, the useful life expectancy.

It has been the custom in industry, over a period of years, to do pre-employment examinations. However, it must be recognized that early impetus was given, not so much by the medical profession, or by management, as by the advent of the State Workmen's Compensation Laws. With time and experience, it became evident that the routine pre-employment examination, originated as a defensive mechanism, could be a constructive bond between employer and employe. The scope was enlarged, and the pre-employment became the pre-placement examination, where the physical assets were weighed as well as the physical defects. There were fewer men rejected; more and more were now found employable.

Unfortunately, the physical state is a constantly changing one and in order to keep abreast of it, periodic physical examinations are a "must." In the field of industrial medicine, it has been recognized for some time that periodic examinations offer a continuity of records that, by comparison, will permit earlier detection of disease processes and thus earlier treatment. Changes in the physical index may dictate changes in occupation.

The number of cases referred to the family physician by the industrial physician are legion, and they form one of the strongest links of interdependence between the two. The accumulated information from the files of an industrial medical department or the records of the family physician is a basis for co-operation between members of

the medical profession that will benefit all concerned.

Job Placement

The knowledge gained while a man is under the physician's care and treatment would not be fully utilized if it were not applied, in a measure, to the field of preventive medicine, and proper job placement is just that. Fortunately, it is not necessary to restrict the activity of the great majority of our patients, but there are instances when it must be done.

The diabetic patient on insulin, the epileptic, the hypertensive with vertigo, or the patient with postcoronary thrombosis should not be working on high places or on machines where the safety of themselves or fellow employes is endangered. Marked visual or hearing loss would not be qualifications for a crane operator or electric truck driver. A patient with a known history of allergy should certainly be cautioned to avoid contact with solvents, synthetics and certain dusts. Although there are a multitude of applications for job placement in specific cases of physical defect or disease, we have another group that is equally important.

It is the fellow whose general physical makeup or nervous temperament renders him unsuitable for certain types of work. The employe who does not react quickly enough to situations or allows his attention to wander repeatedly will often compile an impressive first-aid record before he is seriously injured. To move the man before serious injury occurs is to save him from himself. The machine age is rather harsh in its treatment of the too-quick or too-slow.

The task that falls upon management to carry out the recommendations of the physician today is not an easy one. The obstacles in its path when it comes to job placement are many. Sometimes the industry has few light jobs available, or the occupational variations are limited. Union contracts generally do not permit job changes out of line of seniority. Occupational or departmental seniority further complicates changes. A reduced production schedule necessitates layoffs that require a man to return to his old job.

The most difficult assignment often is to convince the employe that he should not do certain types of work. This is particularly true of the older man who has done the same job for years and will not concede that he is no longer Olympic material. He will generally believe the family physician, if no one else. With all this, there is usually a job that each man can do with safety, efficiency and due regard for his health.

The Physician and Management

Certainly, there have been times when every doctor has wondered whether his note to industrial management regarding a patient is ever considered. You may be assured—it is. Aside from humanitarian factors, information that allows better job placement also results in fewer accidents, more efficiency and less absenteeism. In a competitive private enterprise economy, these factors are most important.

When we consider that more than three-fourths of all industrial establishments employ less than a hundred people in a plant, it is evident that much of our attention should be directed toward the smaller industries. The small manufacturer cannot afford an elaborate medical setup, but if he is to stay in business, the cost of lost time from the job, due to illness or injury, must be kept down. In many communities, the local physician will find that he not only cares for the families of employes but handles the examinations and injuries for a number of small plants as well. It is in this role that the doctor may first evidence his interest by assisting management in setting up a practical first-aid facility in keeping with the size and needs of the specific industry.

It may be only a simple medical chest, placed in the care of a few selected for training in basic first-aid principles, but nevertheless a start in the right direction. In a larger concern, it could be more practical to establish a First Aid with an industrial nurse in charge, who then may rely on the doctor for advice and guidance as problems arise. Management can be helped in its efforts to look out for the best interests of its employes and at the same time maintain economy in operation. When an industry fails to meet competition, it has little need for medical services. It ceases to exist.

At one time, it was only the production worker who rated an examination, but as the public became more health conscious, it occurred to the heads of corporations that the men guiding their destinies were valuable enough to warrant periodic examinations. And so the first contact with members of management may be in the course of an executive examination. As practical men, they

will quickly see the advantages of a sound medical policy if the doctor will take the time to explain such a program.

Most points of disagreement are based upon a misunderstanding of the other man's problems. And the doctor-management relationship is not immune to such misunderstanding. However, there are few areas where close co-operation will do more good. When a problem case arises, the industrial physician should be contacted if the patient is employed by a large corporation, or the member of management in charge of personnel if the patient is employed by a small industry. The diagnosis, if permissible, and the recommendations of the attending physician, serve as a guide to the employer, who in turn may advise the doctor as to the type of work the man has been doing and jobs available. The interest of the patient has been kept foremost, and he will be grateful to both.

Familiarity with Job Demand

In almost every community, the doctor passes factories, large or small, on his daily rounds and may see the bustling activity or hear the roar of machines, but may have little idea of what actually goes on inside. However, it is within these plants that a large percentage of his patients or members of their families are working. It is necessary to know the physical demands of local industrial jobs if we are to understand what the man really does. It may be surprising to learn that a hog-ring clipper, spearman, doghouse welder, or merry-go-round operator is not exactly the type of job the words imply. A plant tour will not only prove interesting, but will enable the doctor to evaluate more carefully the history obtained from a patient, question with more accuracy and make sound recommendations. To conduct preplacement examinations without some knowledge of job demand is akin to choosing contestants without knowing whether they are to compete in weight lifting or be on the rifle team.

Many patients quite honestly, for want of a better explanation, are inclined to attribute many ills to their job. And, occasionally, they are exactly right. On the other hand, by closer questioning and careful examination, it may be found that the backache is sometimes due to a kidney stone or chronic prostate instead of heavy lifting; the dermatitis began with a wall cleaner used at home, instead of oil used at the plant; and the chronic gastritis may be aggravated by distilled corn rather than welding smoke.

Statistics, taken from the files of insurance companies and large corporations alike, show an alarming increase in "illness" during the Christmas holidays, beginning of the hunting season, the fishing season and at the time for summer vacations. Many such claims are not legitimate. They merely want someone else to pay for their holiday. Unless the practice is curbed by the efforts of the profession, it will raise the cost of sickness-accident insurance beyond the means of those who need it most, and place all insurance a step closer to governmental control.

The requests for letters from the family physician about change of job, leave of absence, report of illness, change of shift, or to cover absenteeism, place him in a very difficult position. Such requests constitute abuse of the doctor's goodwill by a small percentage of employes, who thereby take unfair advantage of the employer, the insurance company and their fellow citizens. They contrive to make him a party to a deceit that is for their own selfish interest. The doctor who has some familiarity with work in local industry is not easily fooled by such as these, and yet can add weight to his opinion for those that deserve it.

The average American workman deserves the close attention of the physician. He is a Very Important Individual!

The possibility exists that cancer often, or even usually, arises in man because of some change of chemical manufacturing activity by the body which results in an output of hormone-like chemicals or cell-growth regulators that stimulate or permit the survival of abnormal cells, rather than the normal group of hormones which maintain normal cell growth.

* * *

Whether it be merely co-incidental or not, there is some remote chemical similarity between the steroid hormones and constituents of tar which cause cancer in man and animals.

* * *

It is difficult to believe, in view of all the facts available, that there is not some very definite linkage between the occurrence of many common forms of cancer in man and abnormal functioning of the glands which produce the steroid hormones

* * *

Some seventy-five different substances which are classified as steroid hormones or related molecules, have been isolated from human urine.

Industrial Health Education in Michigan

By O. Tod Mallery, Jr., M.D.
Ann Arbor, Michigan

THE PRACTICE of Industrial Health and Occupational Medicine passed a significant milestone in April, 1955. On this date, the American Board of Preventive Medicine announced the requirements for physicians who wish certification in the specialty of occupational medicine. The principal purpose of a specialty board is to encourage and improve the practice of a specialty as well as to advance the cause and application of a special branch of medicine. In occupational medicine, the Board has set up the following requirements for new physicians going into the field.

1. Two academic years of graduate study in preventive and occupational medicine which shall follow the completion of an internship.
2. Not less than one additional year of supervised experience (residency) in occupational medicine in an industrial or medical organization.
3. An additional three years of experience beyond the years of training in the practice of occupational medicine.

In the early period of the operation of this Board, some special provisions may be in effect. Certainly, there will be accorded recognition to a "Founders Group" including the older and more prominent industrial physicians. Although it has not been finally established, this group may approach 30 per cent of the original applicants for certification. It is possible, but not yet fully determined, that additional industrial physicians who may not qualify for the charter group and who may not precisely meet the rigid Board requirements referred to, under some circumstances, may be accorded the privilege of taking the examination.

This final recognition on the part of a specialty board reflects many changes which have been taking place in the practice of occupational medicine over many years. Particularly rapid progress and growth of the specialty has taken place since World War II. Over the years, the medical practitioners engaged in industrial medicine have built up their own special body of knowledge. To this, they have added those particular skills developed by related fields of medicine, particularly preventive medicine, which have been focused on the special problems of health and occupation, environmental influences, and toxicology, as well as the science of engineering and industrial hygiene control. In addition to these technical and scientific developments, industry itself has turned increasingly to the medical profession for aid in the establishment and maintenance of industrial health departments. The increased demand for physicians capable of initiating and staffing such programs in industry has led the schools of medicine and of public health to provide training for physicians in this field.

Conferences and Clinics in Industrial Health

In the State of Michigan, the University of Michigan and Wayne University each provide a variety of courses, conferences and degree programs in industrial health. At Wayne, under the direction of Arthur J. Vorwald, M.D., Professor of the new Department of Industrial Medicine and Hygiene, bi-monthly conferences for physicians are to be inaugurated shortly. Specific occupational diseases will be examined, together with diagnosis, prevention and treatment, as well as influences of employment and environmental factors on non-occupational hazards. In addition, academic and in-plant programs are being organized for the teaching and training of students at the postgraduate level. These programs are designed to meet the requirements for certification by the American Board in Occupational Medicine and also to qualify the student for special degrees offered by the University.

The University of Michigan Institute of Industrial Health, the Medical School and the School of Public Health have been holding conferences and clinics in industrial health since 1951. These have been of two types. Some have been devoted to the intensive review of a single topic. For example, a conference on "noise" was designed to provide physicians and others in the health field with the current knowledge of occupational deafness, its causes, diagnosis and prevention. Other conferences have been designed to bring the physician particular knowledge of occupational medicine that

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has application to general practice. Examples of this latter type of conference include "Expert and Technical Medical Testimony in Medical and Health Cases" and a more recent meeting dealing with "Gerontology." These and other conferences are available for physicians in printed form.

Clinical presentations of occupational health problems have been included in the postgraduate programs offered by the University. These clinics have been conducted as part of the weekly course in Internal Medicine which runs throughout the academic year.

Intensive Programs of Study

One-year and two-year programs of study for physicians in Industrial Medicine and Occupational Health are offered at the University of Michigan. The one-year program offers qualified physicians two academic semesters of graduate study and an opportunity for in-plant industrial medical experience. After the completion of the graduate program, the degree Master of Public Health (Industrial Health) is offered through the School of Public Health. A similar nine months' program qualifies the candidate for the Master of Public Health degree.

A variation of this one-year program is available through a co-operative program with industry. This program combines eight months of experience in a designated industrial medical department and one semester, four months, of graduate study at the University. Credit towards the Master's degree is given for this program of graduate study.

The two-year program is a residency in industrial medicine offered at the Saginaw General Hospital integrated with experience in industrial medical departments in manufacturing and chemical companies. The residency has the approval of the American Medical Association and is the only one of its type presently in existence. In addition to the year of residency, two semesters are spent in graduate study at the University. The Master's degree is awarded after completion of the program.

Graduate Study in Prepartion for Specialty Certification

The American Board of Preventive Medicine requires two years of academic graduate study as part of the training required of the physician before the candidate may appear before the Board for examination and certification. During the past four years, some twenty physicians have been enrolled for graduate study in occupational health at the University of Michigan. Now, with the existence of the American Board, one can only speculate how many of this group might have stayed an additional period to advance themselves towards Board qualification. It seems likely that if sufficient interest is shown by physicians for extended graduate study that the medical schools and schools of public health within the State will offer programs to fit these individuals.

Training Offered to Undergraduate Medical Students

Both Wayne and Michigan have incorporated into the undergraduate medical curriculum courses, clinics and conferences to bring to the attention of their students the medical problems of occupation and the work environment. At the undergraduate level, it is not the intent to prepare a student for an intensive career in occupational medicine but rather to bring to his attention this particular field of practice and to integrate these special problems of occupation and environment into his over-all medical knowledge.

Summary

Conferences, seminars and short courses are available for physicians in practice who wish to brush up or extend their knowledge in the field of occupational medicine. For men who are looking at industrial health as a career, intensive programs of study are available, as well as graduate degrees in the field. For those who choose to devote their medical career to occupational medicine, preparation for certification in this specialty undoubtedly will be available in this state. The medical schools in Michigan significantly are bringing to their undergraduate students certain information and technical medical knowledge to assist the graduating physicians in meeting the changing patterns of medical practice. Occupational Medicine and Industrial Health are firmly established as part of the educational responsibility of the universities of Michigan.

Controlling Accident Tendency

By Harry B. Burr
Pittsburgh, Pennsylvania

HUMAN accidents express a relationship between human beings and their environment. In so doing, their frequency is subject to variation from individual to individual and from place to place. That such is the case has been confirmed again and again by both casual observation and systematic investigation.

Further confirmed is the fact that under current circumstances human accidents predominantly are attributable to personal rather than environmental causes. In fact, authoritative estimates of the proportion of accidents due to personal factors range as high as 80 to 90 per cent.[4]

An obvious implication of these findings is that the most important accident prevention techniques should be those which would deal effectively with personal accident factors. Unfortunately, such techniques have not yet been developed adequately. Whereas environmental accident elements are sufficiently tangible and distinct to be susceptible of control, personal accident sources are largely intangible. As might be expected under these circumstances, progress in environmental accident prevention has far outstripped that attained in controlling personal accident causation.

Safety programs dealing with environmental hazards have become intensive and, within their inherent limit, highly effective. However, with accidents so largely attributable to personal causes future progress in accident prevention necessarily depends largely upon finding effective means of controlling accident tendency.

Accident tendency may be construed as the inability of individuals to adjust to environmental circumstances. As such its co-determinants are individual adjustment ability and environmental adjustment requirements. Changes in either of these variables affect the relationship between them and so, the tendency to accident. Under these circumstances, it is not the absolute value of either factor alone which is of ultimate importance but rather the relation between the two.

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When it is said that up to 90 per cent of present accidents are attributable to personal factors, it is implied that under existing environmental conditions accidents would be reduced by this amount if individual adjustment ability and environmental circumstances could be so related that the former would at all times be equal to or greater than the latter. How widely this relationship between individuals and environments may be carried out depends upon a multitude of factors, many of which may be beyond control. However, the principle is such that in the degree to which this relationship is established accidents will be reduced.

Actually, the over-all relationship between personal adjustment ability and environmental circumstances is composed of two component relationships. These are: (1) the relationship between physical ability and environmental circumstances and (2) the relationship between psychological ability and environmental circumstances. Subsequent discussion considers the effect of inadequacies in each of these areas.

Physical Ability and Accidents

When bodily capacity is at best barely adequate to perform task requirements, two types of risk are introduced. First, the unit work act will claim physical capacity so fully that little or none remains for sudden adjustment. Second, cumulative effort may produce physical fatigue and result in a critically diminished ability to adjust to danger.

An example of the first type of risk is that of an individual of slight physique (or poor general health) performing a task requiring relatively heavy unit lifting. Under load, he literally may be weighed down to a point where, quite apart from his ability to apprehend danger, emergency accommodation movement is impossible. Similarly, individuals with specific handicaps who are engaged in tasks which maximize rather than minimize the effect of their handicaps are left without capacity to adjust to sudden environmental changes. An individual with impaired vision, who can drive a vehicle under ordinary circumstances, may react unfavorably in an emergency by reason of the visual defect which limits his perception of spatial relationships.

The second or fatigue type of risk is illustrated inherently by investigations which show that accident rates increase with abnormally long and/or intense work periods.[1] While this result may in part be due to a decline in mental alertness, it is

TABLE I. PHYSICAL EXAMINATION STANDARDS

	PQ	PQX	NPQ
CHEST (continued)		Bilateral pneumothorax without fluid (1). Three or more stage thoracoplasty (arrested) (1). Apparently arrested TB (1)*. Asthma (1). Pneumoconiesis (1). Extensive fibrosis or emphysema (1). Other conditions as classified by Diagnostic Division.	
HEART	Cardiorespiratory (functional) murmurs. Sinus arrhythmia.	Mitral systolic murmurs. Cardiac hypertrophy from any cause (1). Enlarged aorta (1). Aortic murmurs (1). Congenital heart disease (1). Coronary disease (1). Myocardial infarction after 3 months (1). Fibrillation (apical rate below 90).	Active infections. Decompensating heart. Myocardial infarction within 3 months. Fibrillation (apical rate above 90).
ABDOMEN		Pregnancies up to 4 months (1).	Pregnancy after 4 months. Less than 2 months postpartum.
HERNIAE	Impulse only or enlarged rings.	Herniae without symptoms or complications. Herniae with symptoms or complications (1).	
G.U.		Hydrocele. Varicocele. Chronic venereal disease under adequate treatment. Sliding undescended testicle (1). Nephritis (1).	Active venereal disease. Active infections of GU tract including PID.
SPINE	Unlimited motion.	Scoliosis. Lordosis. Non-tuberculous kyphosis of moderate degree. Poker spine (1). TB of spine (1). Arthritis (1). Osteomyelitis (1). Low back pain (1). Slipped disc (1).	Any condition not suitable for light work.

*As defined in Appendix A.

almost certainly attributable in some degree to the reduction in speed and accuracy of muscular movement which accompanies physical fatigue.

In considering the physical factors bearing upon accident causation, the question of sensory-motor co-ordination may be raised. In this regard, it is necessary to distinguish between voluntary or conscious co-ordination and involuntary or reflex co-ordination. Of the two types, only reflex co-ordination is classed as a physical factor—voluntary co-ordination being considered in the psychological category. Experience suggests that only psychological or voluntary sensory-motor co-ordination is of primary concern in accident tendency. There is no evidence to show that sensory-motor co-ordination not involving higher nervous centers has any significant relationship to accident causation.

The over-all importance of personal physical factors in accident causation cannot be stated precisely since there has been little or no measurement of their separate effect in cases where both physical and psychological causes contribute to accident production. Nevertheless, experience indicates that physical deficiencies are of considerable importance in accident causation both directly and because they frequently give rise to psychological impairment.

The Chrysler Program.—Evidence suggesting the importance of minimizing the effect of physical disabilities in occupational placement is exhibited in Chrysler Corporation experience. In this organization employe injuries reported to the company's medical departments have declined over 25 per cent per exposure hour under the lowest rate achieved prior to the commencement of selective employe placement.[3] Enhancing this result is the fact that the company's injury visit frequency prior to commencement of the placement program was not unfavorable to that of comparable organizations.

By relating physical examination measurements to standards (Table I) which have been developed over many years, the Chrysler program classifies individuals according to their physical capacities into three groups. These groups are: PQ—physically qualified for any job; PQX—physically qualified for jobs not involving certain functions and/or certain degrees of function, and NPQ—not physically qualified for any work in mechanized industry.

The PQ and NPQ classifications are self-explanatory and in themselves provide safe bases for placement decision. For PQX or conditionally qualified personnel, however, individual descriptions of physical limitations are required to facilitate comparison of human capacities with job requirements. Only in those instances where human physical capacities clearly are sufficient to cover job requirements may placement be carried out with maximum safety.

Description of physical limitations in conditionally qualified personnel is accomplished by adding placement codings to the PQX rating. These codings are taken from a master placement code (Table II) which permits Chrysler physicians to translate medical diagnoses and findings into terms of work functions. In this way necessary information may be transmitted to placement

TABLE II. PQX-PLACEMENT CODE

GENERAL CLASSIFICATION

A. Heavy sustained labor. B. Moderately heavy labor. C. Light labor. D. Very light labor.

MODIFICATION

1. New hire (except service personnel) is NPQ. 2. Hernia statement advised

General Functions

10. No standing.
11. Standing less than 50% of the time.
12. Standing more than 50% but not all of the time.

20. No sitting.
21. Sitting less than 50% of the time.
22. Sitting more than 50% but not all of the time.

30. No walking.
31. Walking less than 50% of the time.
32. Walking more than 50% but not all of the time.

40. No climbing.
41. Climbing less than 50% of the time.
42. Climbing more than 50% but not all of the time.

50. No lifting or carrying.
51. Moderate or less than moderate lifting or carrying.
52. No pushing or pulling.
53. Moderate or less than moderate pushing or pulling.

60. No stooping.
61. Stooping less than 50% of the time.
62. Stooping more than 50% but not all of the time.

Special Senses

70. No near vision.
71. Some but not good near vision.
73. Some but not good distance vision.
74. No binocular vision.
75. Some but not good binocular vision.
76. No color perception.
77. Has vision in one eye only.

80. No hearing.
81. Some but not good hearing.

Specific Functions

90. No use of right hand or arm.
91. Partial use of right hand or arm.

100. No use of left hand or arm.
101. Partial use of left hand or arm.

110. No use of right foot or leg.
111. Partial use of right foot or leg.

120. No use of left foot or leg.
121. Partial use of left foot or leg.

130. Physical reactions not prompt.
135. No speech.

Environment

140. No danger from dizziness, fainting, or convulsions.
141. Nervous disorder (specify environmental limitations).

150. No exposure to dusts, smokes, fumes, vapors, gases and mists.
151. No exposure to excessive noise.
152. No exposure to excessive heat.
153. No exposure to excessive cold.

160. No exposure to any skin irritants (particularly no wet jobs.)
161. No exposure to specific skin irritants (specify).

170. Certain shift recommended (specify).

agencies while medical diagnoses and findings are retained as privileged communications in the Medical Department.

The master placement code from which individual codings are assigned is divided into five parts, each containing a series of limits. These parts are: (1) *General Classification,* which provides for assessment of relative effort capacity based on general health and physique; (2) *General Functions,* under which restrictions may be imposed on such activities as standing, sitting, walking, climbing, carrying, pushing and pulling; (3) *Special Senses,* in which visual and hearing limits are indicated; (4) *Specific Functions,* which deals with limitations in extremity performance, speech and physical reactions, and (5) *Environment,* which describes limits imposed by some diseases in terms of the places where individuals having those diseases may not safely work. Certain neurological, lung and skin diseases are the principal conditions requiring limitations described in this section.

During the past ten years, over half a million persons have been examined and classified under the Chrysler placement program. Approximately 40 per cent of this number have been individuals who were not physically qualified for every job and who, therefore, would have been rejected by older, more inflexible standards. Under selective placement, over 90 per cent of these persons have been classified as conditionally qualified and coded for physically safe job placement. Thus, selective placement has made more people available for regular employment under safer conditions than was ever before possible.

It should not be construed from this discussion that proper relating of physical factors and task requirements solves the largest part of the accident tendency problem. Important as it is, the scope of such control relatively is limited. Experience regularly shows that accident susceptibility is influenced only partly by efforts which deal with physical factors alone and so additional corrective action is needed.

Psychological Accident Factors

That accident tendency is influenced only partly in the majority of cases by efforts which deal with physical factors alone suggests the importance of psychological elements. Despite their intangible nature, the effect of mental processes upon the ability of individuals to adjust to environmental circumstances is both extensive and profound.

Psychological shortcomings in accident tendency are associated with inability to apprehend successfully the interrelationship of presented facts. In relation to a given environmental situation, mental integrative potential may be insufficient to provide adjustment or be so disorganized as to be inadequate.

Inadequate Integrative Potential.—Certain causes of insufficient integrative capacity are indicated by some of its components. To a large extent, integrative function depends upon the heredity and health of central nervous structures and upon memory. Thus, hereditary limitations may restrict integrative performance. Organic disease and physiologic factors affecting central nervous structures necessarily influence mental processes and may result in insufficient integrative capacity. Memory provides an important means whereby past experience may facilitate the formulation of current adjustment patterns. Conversely, lack of experience and/or memory defects restrict integrative capacity.

The effect of physiologic factors upon the central nervous system and mental acuity is an important object of current research. As elsewhere, the vitality of central nervous tissue is supported by energy derived from the combustion of oxygen and nutrients and by the removal of waste products resulting therefrom. Accordingly, any factor affecting this supply and/or waste removal may influence central nervous and mental performance. Thus, circulatory and/or hemic impairments may limit transport of these elements so as to substantially reduce mental acuity. By the same token, metabolic factors may cause substantial reductions in nutrient supply and result in decreased mental performance.

To illustrate, in some persons dietary ingestion of sugar or sugar-yielding foods so stimulates insulin secretion as to result in a substantial reduction in blood sugar (glucose). In turn, this reduction deprives central nervous tissue of nutrition which reduces its vitality and thereby lowers mental efficiency. Although not yet certain, the "letdown" occurring at such times may be related to accidents.

The importance of remembered experience to mental integrative capacity is that past decisions and conclusions may be applied to facilitate adjustment to current circumstances. To a large extent, such applications take the form of guides in developing behavior patterns which tend to minimize risk. Both the "rashness of youth" and the "caution of age" may be explained on the basis of remembered experience and are exemplified in the frequently observed decline in accident rate with age.[2,6] Too, memory carries the record of personal performance ability and so provides a guide for current behavior. Thus, a physically handicapped person may be more cautious and hence equally as safe as an able-bodied person.

It is difficult to estimate the importance of inadequate integrative potential in accident causation. As yet, there has been insufficient investigation of the relationship between integrative potential and accidents to furnish a basis for firm conclusion. Nevertheless, lack of integrative potential would seem to explain the behavior characteristic known as "clumsiness" and this is ubiquitous.

Disorganization of Integrative Capacity.—It is intuitively true that in the degree to which an individual's integrative capacity is disorganized, it is unavailable for his adjustment to environmental circumstances. Inquiry is thus directed to two major factors which disorganize psychological effort.

In this regard, the special disability of psychoneurotic individuals to work under pressure and distraction is to be noted. It has long been established that persons with psychoneurotic conflicts perform significantly poorer on tests involving sustained attention and directed mental effort than do normal individuals. In such tests, the psychoneurotic's inferiority is evident both in terms of accuracy and, to an even greater degree, in time required to complete tasks.[7] This latter factor is of particular importance in reference to a subject where "quickness" may mean the difference between safety and injury or even survival.

It appears inevitable that any mental conflict, by restricting integrative performance, tends to increase accident tendency. Thus, in addition to the long-standing conflicts of some persons, short-term conflicts which intermittently "infest" the lives of most individuals may be expected to increase accident tendency. This complicates the problem of control, but must be allowed for in any full-scale solution of the problem.

A second factor leading to disorganization of psychological effort is described in the important and relatively recent research of Keenan, Kerr and Sherman among workers at the International Har-

vester Tractor Plant.[5] A principal observation in this investigation was that workers with low "physical frustration tolerance" under adverse environmental conditions probably have somewhat higher accident frequency than their co-workers. "An accumulation of physical frustration tensions leads easily to 'distractive' behavior which often results simultaneously in reduced quality of work and accident." From this, the authors concluded that "major preventative effort can most profitably be expended in working to alleviate as much as possible the over-all physical frustrations which impinge on personnel."

Commentary.—From the preceding discussion, it is apparent that both the possibility of correcting psychogenic causes of accident tendency and the nature of treatment for such causes can be surely established only when specific sources are defined. For example, where accident tendency results from an uncorrectable lack of integrative potential the alternatives are: (1) to restrict individuals to environments requiring lesser integrative performance or (2) to reduce the integrative requirements of their environments. On the other hand, if inadequate integrative performance is due to curable organic disease or to mental conflict, the final objective should be the elimination of these disabilities. This latter action not only reduces accident tendency but improves capability generally.

There is no question of the ultimate importance of specific diagnosis and treatment. However, current application of such measures must be weighed against the practical limitations which they now face. Present psychoanalytic techniques require highly specialized personnel, relatively long periods of time and relatively great financial charges. In addition, it is doubtful if they could be applied effectively against the great problem presented by short-term mental conflicts. All factors considered, it would appear that the limitations are such as to preclude widespread utilization of psychoanalytic techniques at this time.

It may also be observed that treatment measures calling for reduction in the integrative requirements of environments can, in general, be relied upon only in the long run. Costs involved in altering and/or replacing present buildings, equipment and processes are such as to provide a substantial restriction on such treatment.

Finally, it must be remembered that accident tendency involves the *relationship* between environmental adjustment requirements and human adjustment capability so that improvements in either factor alone do not guarantee a solution. Unless capability is equal to requirements, the problem still exists. While attempting to improve both of these factors, the primary need is to insure that in each individual case they are related properly.

Conclusion

Accident tendency occurs when human adjustment ability is inferior to environmental adjustment requirements. It is thus the product of two variables rather than the independent effect of either. From this it follows that the only certain solution lies in *controlling the relationship* between these factors in such a way that adjustment capacity is always equal to or greater than environmental requirements.

Independent improvements in the physical and mental factors governing individual adjustment ability and/or reductions in environmental requirements will simplify the problem and in some instances may eliminate it. However, such actions cannot assure regularly that adjustment capability will be equal to environmental demands when the two factors are brought together. Again, then, the only certain solution lies in controlling the relationship between these elements.

Since the relationship between individuals and their environments involves both physical and mental factors, control measures may consist best in two parts. On the physical side, control requires that each individual's ability provide a margin for emergency adjustment over and above his routine environmental requirements. A practical method for establishing this control exists in selective physical placement procedures such as those in the previously described Chrysler program.

On the mental side, control requires that individual integrative performance be adequate to environmental demands. In turn, this requires that the integrative needs of environments be established, that the integrative performance level of individuals be determined and that these two components be related regularly.

As yet, there is no well-established method for carrying out the latter type of control. Nevertheless, the elements necessary for projecting a means of control appear to be present.

When the necessary relationship between in-

dividual physical ability and environmental physical requirements has been established—as in selective physical placement—subsequent accident experience may be ascribed more surely to psychological factors. Under such circumstances, the number of accidents per capita occurring in each environment may be used to measure the need for integrative performance in those environments. At the same time, accident tendency may be attributed more surely to inadequate integrative performance.

Now, if individual and environmental accident records be maintained, a means is present for identifying those who are psychologically prone to accidents and for relocating them in environments requiring lesser integrative performance. In other words, there is a basis for restricting psychologically unsafe persons to psychologically safer areas.

It is not claimed that this method alone provides the degree of control which ultimately is to be desired. In dealing with the results of psychological insufficiency rather than its causes, there is still the necessity for suffering the adverse effects of experience before correction can be made. Nevertheless, this method does permit those adverse effects to be mitigated, and this is a desideratum.

Ideally, this method should exist as a safeguard secondary to control measures utilized prior to exposure. There is no full substitute for a practical preplacement program which would determine individual integrative status and properly relate it to environmental needs.

In this regard, one approach may be that of testing adjustment capability by the rapidity with which accurate motor response follows sensory stimulation—as for example, in exercises of hand-eye co-ordination. Performance on such tests gives no clue as to causes which may deter the process of perception and response but does indicate the fact of deterrence. The well-known work of British investigators[1] indicates that such testing, to some extent, will measure individual accident tendency in skilled occupational groups but as yet is unable to measure accurately the tendency among unskilled groups. Possibly, improvements can be made by increasing the sensitivity of this type of testing.

In any event, there is one consideration which should always be present. Both personal adjustment ability and environmental circumstances are fluctuant in each case rather than constant. In relating these factors, all possible allowance should be made that an individual's basic ability—in contrast to his best ability—will be adequate to the most severe demands which may be imposed upon him.

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It is never too late to treat a cancer at least locally.

* * *

More cancer patients than ever before are willing to undergo surgery; this raises the odds in favor of cure.

* * *

In breast cancer, attention should be directed to the entire mammary system; since eight per cent of the patients who survive the first mastectomy develop cancer of the other breast.

* * *

In all diagnosis and treatment of cancer, the time element is still the most important factor if cure is to be obtained.

* * *

The most important symptoms of primary cancer of the liver are right upper quadrant pain, anorexia, and weight loss accompanied by ascitis, jaundice, and hepatomegaly.

There is no distinction between diagnosis and detection of cancer; both are procedures for identification of the disease when present in the patient being examined. They are not some mechanical or technical process that can safely be relegated to lay persons.

* * *

Unless and until a far greater percentage of the population learns some of the simple basic facts about cancer, the amount of money spent on service to the cancer patient, will increase instead of decrease as it should with increasing emphasis on cancer education which is the cornerstone of cancer control.

* * *

Decision by a layman as to whether he has or ever had cancer and whether he had been cured is "entitled to little if any weight."

* * *

Wilms' tumor is now treated by immediate transperitoneal nephrectomy and postoperative radiation.

How the Physician Can Obtain Help from the Industrial Hygienist

By Frank A. Patty
Detroit, Michigan

SINCE the general practitioner is doing about 85 per cent of the industrial medical work in the State of Michigan, it should be of considerable interest to him to know how the industrial hygienist can help him do his job easier and, in some instances, better. Whether the physician serves as a part-time plant doctor employed by management or as the family doctor for his working patient, his diagnostic and health maintenance problems for employed men and women are essentially the same.

The physician who is concerned with the health of the employes of only one industrial plant has a much simpler job than the private practitioner who may be concerned with a cross section of the working force of a large community. In this case, many of his working patients may come from small industries that have little or no health maintenance supervision.

Although it was nearly 250 years ago that Ramazzini pointed out the necessity for the physician to inquire into the occupation of the patient, it is still good advice, as far as its goes.

When the possibility of an occupational illness presents itself, the first source of information to be exhausted is, of course, the patient, determining exactly what he does and with what materials he works. His opinion of their harmfulness, though of interest, is frequently grossly erroneous and often colored by personal reasons such as, for instance, a desire for transfer to a more attractive job. It is well to ask him why, if he thinks he is exposed to an injurious environment, and how he thinks it should be corrected.

Up until we were well into the twentieth century, unhealthful conditions were believed to be inherent in certain trades. During the last few decades, however, these trades have been studied to detect and evaluate their harmful exposures, and much engineering skill has been brought to bear upon methods of controlling or preventing exposure to toxic materials. It is no longer sufficient to inquire into a man's occupation, but it is also necessary to know all of the questionable materials or conditions to which he is, or may be, exposed. Not only must the physician know what these conditions are, but he also must know the quantity or intensity of any exposure and what the probable human reactions to this environment are. This information is essential to the physician in order that he may, first, correctly diagnose the illness and, second, remove the cause of illness so that his patient can get well. Obviously, if the man has not been exposed to harmful materials, his ailment did not result from his working environment, but if there was a known or possible injurious exposure, then further investigation to establish the specific cause of illness can be made. This is the industrial hygienist's territory, and here he can be of immense help to the diagnostician.

As an example of how this works in practice, suppose we consider lead—the oldest recorded cause of an occupational disease, but widely and, for the most part, safely used today. Many men who regularly work with lead or its compounds are never exposed to harmful amounts, while others with incidental contact may have a serious exposure. Essentially, all industrial lead poisonings except some of the cases concerned with tetraethyl lead, result from inhalation of lead or its compounds rather than from ingestion or skin absorption.

The patient may come to his physician rather obviously ill, but with none of his symptoms specific. It may develop that he is a metal finisher in a plant where he uses power tools to grind, sand, and buff steel having lead-soldered joints. The possibility of a lead exposure is established because the man is working with lead. A diagnosis of lead intoxication based on those two facts alone would require either unusual skill or temerity, but by enlisting the aid of the industrial hygienist, additional factual evidence can be obtained that will facilitate the decision of whether the illness is related to exposure to lead. The job should be observed before an attempt is made to evaluate the exposure. The observation should establish whether leaded surfaces are ground, sanded, or buffed sufficiently to present the possibility of inhaling lead dust. The possibility of ingestion of significant lead in an operation of this nature would be remote, indeed. If the operation is judged to involve a possible inhalation exposure,

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three courses are open for establishing whether the exposure is significant.

1. Air samples taken in the breathing zone where the patient worked may be collected and analyzed for lead. If the lead content is found to average more than 1.5 milligrams lead per 10 cubic meters (353 cubic feet) of air for an eight-hour day, or correspondingly less for longer work periods, an excessive exposure has been established.

2. Where air samples, for one reason or another, are judged to be not representative, as for instance where the exposure varies widely, nor a sufficiently reliable index of exposure, urine specimens may be collected and analyzed for lead. Several spot samples or at least one twenty-four-hour sample are necessary to be significant. When repeated results are less than 0.2 milligram lead per liter of urine, cause and effect relationship for men working up to near the time of sampling may be excluded. They may be assumed to exist when the results are 0.2 and above.

3. The most reliable diagnostic aid, however (as well as the best index of exposure to any form of lead except tetraethyl lead), is arrived at by analysis of a sample of the patient's blood to determine its lead content. A verified result of .08 or less milligram lead per 100 grams of whole blood casts serious doubt of causal relationship between a workman's non-specific symptoms and the work he has performed in the preceding day or days. A verified result of .09 and above indicates excessive exposure and may be assumed to establish cause and effect relationship.

These analyses require the services of a competent analytical chemist, and the collection of suitable samples must be under the direct guidance of persons familiar with the working conditions, whose understanding of the physiological and technical background of sampling procedures is complete. The amounts of lead involved are tremendously small, and any uncontrolled sources of a trace of lead contamination render the results useless.

No single unverified result carries a large amount of significance until confirmed by an additional test. Results indicating excessive exposures (air, urine or blood leads, even in the ranges somewhat above the figures stated) indicate neither illness nor impending illness, but are only indications of exposure and of absorption.

The lead storage-battery industry may be cited as an industry that necessitates continuous industrial hygiene service. However, where good mechanization, enclosed processes, and well-designed process ventilation are provided, atmospheric lead concentrations can be held down to acceptable levels in all but a few operations in this industry. In these few circumstances, the workmen still have to be provided with respirators. Employment in the modern battery plant cannot be assumed to involve exposure to significant amounts of lead.

Painting is another occupation in which it used to be assumed that excessive lead exposures were the rule rather than—as at present—the exception. There was a time when any painter who developed cramps was likely to be diagnosed as having painter's colic or plumbism. Nowadays, there is relatively little lead used in paints except in house paints, and painting as an occupation in factories no longer carries any implication of harmful lead exposure unless supported by analytical data of lead in the atmosphere or in the biological fluids of the exposed workman. If a painter is found to have plumbism, it is frequently necessary to inquire into his outside activities in order to trace the source of his exposure, which may prove to be house painting or the more hazardous job of removing old paint in preparation for a paint job.

An interesting case of lead absorption was brought to light recently in a factory by a routine blood-lead check-up of all employes having a potential exposure to lead. This man was engaged in applying solder as a filler over welded seams, and he had visited the medical department with non-specific complaints of gastrointestinal disturbances. Atmospheric tests indicated that the environment was safe, no excessive lead exposure, but an analysis of the blood of this man revealed an unusually high lead content. Since the work exposure was believed to be within accepted hygienic practice, inquiry was made into his outside activities and it was found that he was repairing automobile fenders at home by filling dents with lead solder, smoothing it off with a grinding disc, and inhaling lead dust during the process.

Another classic example of an occupational disease is silicosis, and here again the co-operation of the industrial hygienist is essential for complete diagnosis. The employe's history and some symp-

toms may suggest that he is a silicotic and this may even be supported by the characteristic nodular type x-ray photograph of the lungs, but unless it can be established that the workman has been exposed for a sufficient period of time to the inhalation of dust containing a significant amount of silicon dioxide, positive diagnosis is difficult to establish. In this instance, the industrial hygienist would collect and count under a microscope the dust particles from a measured quantity of air. Where doubt existed about the nature of the dust or where the silicon dioxide content of the dust is very significant, he would need to collect sufficient air-borne dust to analyze for its silicon dioxide content. The dust concentrations, silica content and exposure time for all work stations would need to be weighed in establishing the extent of the individual's exposure. Also the man's exposure to other contaminants (as, for instance, iron fume) that are known to cause a non-disabling lung condition exhibiting a nodular type of chest x-ray resembling that of the silicotic, could be important.

It is rather obvious that where the patient is a foundry employe, with an x-ray of the chest that shows nodulation, without the typical symptoms of silicosis, factual information regarding the environment is most desirable. The same would apply to the porcelain enameling industry and glass manufacture where dusts of widely varying silicon dioxide content are encountered. Some of the raw materials used in making glass and enamel contain significant amounts of free silica, and in the grinding or handling of these materials, such as feldspar and sand, there may be opportunity for excessive exposure to silicon dioxide dust, unless the ventilation is well engineered. When the raw materials are fused together to form a frit or glass, however, the silicon dioxide combines chemically to form silicates, and the free silica remaining, if any, is never in significant amounts. It is not possible to develop silicosis from exposure to dust or mist from the grinding or polishing of glass, unless sand is used as the abrasive. Likewise, the grinding or spraying of enameling frit in the process of making porcelain enamel does not present an exposure that can cause silicosis.

Solvents are another class of materials that present inhalation exposures in industry, where they are used for various purposes such as metal cleaning and for thinning paints and lacquers. These materials are nearly all fat solvents and, as such, they defat the skin upon contact, but absorption through the skin is usually not a matter for serious concern. The fast-drying solvents, by their very nature, evaporate into the air to be inhaled and absorbed unless they are controlled by ventilation. Most industrial solvents are either low in volatility or are of moderate toxicity; petroleum solvents such as mineral spirits or Stoddard's solvent are widely used. Occasionally, or possibly I should say too frequently, however, volatile and toxic solvents are carelessly used. These include benzol, carbon tetrachloride, tetrachloroethane, methanol and others.

Carbon tetrachloride is a very popular but dangerous solvent. It is popular for several reasons. It dissolves oil and grease readily and dries quickly, which makes it useful as a spot remover. Its odor is not offensive and is even considered pleasant by some persons. It presents no fire and explosion hazard, since it is nonflammable. It is, however, toxic, and prolonged inhalation of relatively low concentrations can cause serious poisoning. It deserves respect both in the plant and at home. The amount of exposure of the individual is usually best determined by relating the breathing-zone concentration to time. In some instances, however, the amount of the solvent or its metabolic products found in biological specimens from the workman are a more reliable index of an individual's exposure.

There are a few industrial chemicals known as aromatic nitro and amino compounds, however, that are very hazardous upon contact with the skin. Two rather common ones are nitrobenzene and aniline. These materials can cause serious poisoning from skin contact with soiled clothing, gloves, or shoes. Phenol is another common chemical encountered in and out of industry that is dangerous when in contact with the skin in significant amounts.

Other environmental contaminants or problems include x-rays, alpha and gamma rays, radioactive isotopes, heat, illumination, noise and others that for want of space cannot be detailed here. In all of these instances, the industrial hygienist can offer valuable assistance to the physician.

So much for recognizing and measuring the degree of exposure. If the patient is to respond properly to treatment, the most important thing is to terminate the exposure, and here is another way in which the engineering skill of the industrial hygienist can be most helpful. There are many

ways of controlling an exposure: for instance, substitution, isolation, changes in the operation, ventilation, et cetera. The engineers in the plant where the patient works may not properly understand the situation nor be in a position to provide satisfactory and prompt control, but the industrial hygienist by working with the plant people can usually develop a prompt and mutually satisfactory solution of the problem. The physician, in this way, can make certain that any exposure the patient may have had is terminated during the period he is undergoing observation or treatment.

By co-ordinated effort, the physician and industrial hygienist, under favorable circumstances, can relate plant air contamination to the health of groups of workmen. When medical findings, whether positive or negative, are combined with industrial hygiene information, such as the nature and amount of air contamination to which an individual or group has been exposed for months or years, valuable data for future guidance have been accumulated. In this manner, also, tentative air contamination bench marks or hygienic standards are either supported or refuted and corrected.

We see, then, five ways in which industrial hygiene aids the physician:

1. Recognizing harmful work exposures.
2. Evaluating the exposures.
3. Providing information the physician can use as a diagnostic aid.
4. Controlling the exposures.
5. Providing information regarding safe practice standards.

A brief discussion of where and how to obtain the assistance of industrial hygiene people is in order. The larger industrial plants may have an industrial hygienist in the plant or available on call. The State Health Department at Lansing has a well-staffed group with regional offices throughout the state. The Detroit Health Department has its own Bureau of Industrial Hygiene available for duty within the city. Some insurance companies provide industrial hygiene service to their assureds upon request. There are several private consultants in the field, and some of them carry announcements in the quarterly publication of the American Industrial Hygiene Association. The officers of this Association or of its Michigan section will provide the names of local consultants.

Some physicians may wish to obtain firsthand information from a personal visit to the plant and the work station. This can usually be arranged through the plant physician, the nurse, safety engineer, personnel director or other representative of plant management. It is very important that the physician in general practice keep abreast of developments in the field of industrial hygiene and toxicology, because many new chemicals and many new processes are currently introducing new harmful exposures. The designation of non-occupational diseases as occupational and the failure to recognize occupational diseases are both too common. If offhand misdiagnosis of occupational disease is to be avoided, it becomes necessary to inquire not only into the patient's occupation, but more especially into the factual data regarding possibly harmful work exposures.

It appears appropriate to close by paraphrasing Dr. Robert A. Kehoe. Human nature being as it is, there is an inevitable tendency for the workman, members of his family, his legal advisers and, yes, sometimes even his sympathetic family physician, to attribute any obscure illness to the effects of the man's working environment. Therefore, the physician finds it necessary to put forth his every effort in the light of current medical knowledge to confirm or exclude the patient's work as an etiologic or contributing factor in the illness of an industrial employe.

The administration of testosterone propionate as a therapeutic agent for any condition is inadvisable in men over fifty years of age, as it might activate a quiescent prostatic cancer.

* * *

In spite of encouraging results obtained with chemical agents, radiation therapy still remains the treatment of choice in most of the lymphoblastomas and chronic leukemias.

* * *

Most cancerphobiacs do not have cancer.

The cancerphobiac is a psychiatrically ill person, a person suffering a fear, the cause of which resides in his unhappy past experience with certain significant people. Such patients differ symptomatically very little from the excessive hand washers, the germ fearers, the syphilophobiacs and even the all-too-frequent hypochondriacs.

* * *

Cancerphobia is merely a symptom, a symptom of an anxiety-ridden person who has latched his otherwise vague fears onto cancer.

From Carpet Tacks to Cargo Ships

A Program for the Prevention of Occupational Diseases

By Albert E. Heustis, M.D., and
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WE have a rule in occupational health that any industrial operation can be performed, providing we know the hazards associated with it and set up a system to control them. As a public health agency, our major interest and objective is the prevention of occupational diseases through such control systems.

It should be pointed out at the outset, that occupational disease is not confined to the obviously hazardous industries. Experience has shown that no industrial process exists which is absolutely immune from occupational disease. The wide variety of processes and materials used in manufacturing and the individual susceptibility of every worker make every operation significant.

To illustrate the point, consider the materials and processes which go into the production of a few common articles in general use:

A Desk, finished with lacquer, which contains amyl acetate and butyl acetate and can cause headache and vertigo, oppression in the chest, nausea, coughing, and irritation of the mucous membranes of the eyes, nose and throat;

A Telephone, whose outer casing is made of synthetic formaldehyde resins—a severe skin irritant;

Windowglass, high in silica content, causing silicosis and radiant heat burns;

Asphalt Tile made from stripping in the petroleum industry, a carcinogenic material;

Cloth produced on looms which produce a noise of high intensity and frequency, causing loss of hearing in certain ranges;

Buttons made from melamine formaldehyde which is highly irritating to the skin.

These are just a few of the more common manufacturing processes and materials which involve the possibility of serious occupational disease. They illustrate another significant point. The control problem is not solved by elimination. If we eliminated all hazardous operations, there would be no industrial progress—in fact, no industry. Occupational disease prevention is a matter of controlling operations to the point where they are kept below hazardous levels.

The Michigan Department of Health has now completed twenty years of experience in carrying on an occupational health program. During that time, responsible management has become interested in sound health measures. But, in practice, there is still often a long rough road between the acceptance of a principle and the action necessary to carry it out.

An example will illustrate our method of approach.

A few months ago, a routine investigation was made by our field staff in a manufacturing plant employing about 1700 workers. It was found that the plant had just begun operations on a new contract involving the leading of metal panels. Some 500 workers were assigned to the new project.

In leading operations, preventive measures are an integral part of the production process. From their method of operation, it appeared that the plant had no previous experience in this type of production and no concept of the potential hazard involved. In our first conference with the management, we were told they had not anticipated the financial outlay necessary to install and institute engineering and medical control procedures, and they expressed grave doubts as to their necessity.

Three weeks and several meetings later, we had made little progress. We did arrange, however, to obtain urine specimens on about 120 workers directly exposed to lead and dust fume. Analysis of these specimens revealed high lead absorption among 65 per cent of the workers. A lead poisoning outbreak was a certainty in from four to six weeks. Quick action was essential.

From its establishment in 1873, Michigan's state health agency has been authorized to determine the effects of employment upon health. As early as 1874, a Governor's Special Study Commission recommended that a separate division be set up in the State Board of Health to promote better health conditions in the mines, mills and factories, thus antedating by sixty-two years the actual formation of the Division of Occupational Health in the Michigan Department of Health. In 1912, Michigan passed a law requiring compensation for industrial injuries, and in 1943, all occupational diseases were included. The reporting of occupational diseases was required in 1937, and the Department was authorized to take appropriate measures to prevent them.

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All the authority of the Michigan Department of Health was placed behind our demands for installation of controls within a twenty-day period. The prospect of shutting down production and the possibility of future high compensation costs brought immediate results. Within fifteen days, most of the engineering controls were installed and the management retained a physician and employed two nurses. We had averted a situation with serious potentialities, both for the workers and management.

It is the function of the Division of Occupational Health to deal with occupational hazards and to do so in time to prevent occupational diseases. Generally speaking, we have been able to accomplish this by working hand in hand with management to assist a plant in overcoming its difficulty.

Pneumoconiosis

A significant occupational health problem in Michigan is the prevention and control of pneumoconiosis and more specifically, silicosis. Silicosis is traditionally associated with the foundry industry, and Michigan's iron and steel foundries are an important and basic part of the state's economy with more than 50,000 workers employed.

In recent years, improvements have been made in equipment and procedures which have done much to reduce the incidence of silicosis in foundries: steel shot to replace sand as an abrasive material; positive pressure air helmets; improved methods of ventilation; and substitutes for silica in parting sand. These are but a few of the effective innovations. In large production foundries, automation is being rapidly introduced which will eliminate the silicosis potential on many individual operations. Unfortunately, most of these improvements apply only to large production foundries. The methods of operation in many of the small hand and floor molding foundries still leave much to be desired.

The pneumoconiosis potential is by no means confined to the foundry industry. We have hundreds of industries where toxic dust exposures exist. Mining and quarrying are in this classification. The Occupational Health Division's Upper Peninsula office works closely with the mining industry, not only in the control of silicosis, but in other problems of occupational health significance.

Of special interest in the mining field is a new copper mining development project at White Pine, Michigan, the largest project of this kind in the United States. In the past three years, the mining company has sunk shafts, built mills and smelters as well as a complete and modern town site. The copper is extracted from a low-grade chalcocite ore containing about 26 per cent silica. Since early development stages, we have worked with the company on all operations of health significance. After a study of Canadian experience, a large-scale aluminum therapy procedure has been installed. It is the first major installation of this type in the state and it should give a first-hand opportunity to determine the effectiveness of this procedure in combating the silicosis problem in mining operations.

In practically all cases of dust-producing industrial operations, the installation of proper engineering control procedures is an effective measure in maintaining dust-free air and thus reducing the incidence of pneumoconiosis.

Dermatitis

Diseases of the skin constitute one of the most frequent and persistently annoying occupational diseases and are responsible for a high percentage of compensation claims. While individual allergy may be an important factor, certain operations and materials are responsible for the major number of occupational skin diseases. Briefly, these are: cutting and drawing oils used in machine shops and metal stamping plants; chemicals used in the plating industry; natural and synthetic solvents used in metal cleaning; synthetic adhesives and glues; as well as a whole series of oxidants and reducing agents.

The whole occupational dermatitis situation is aggravated by the progressive introduction of new types of plastics and resins, especially when these resins have specific properties which can be used to advantage. Recently, a new group known as epoxy resins has appeared in many industrial operations and processes. These epoxy resins have high adhesive strength, and are self-polymerizing. When used with polyester resins in fiber glass, the resulting material is high in tensile strength and can be used in making tools and dies and as a substitute for wood patterns. These same materials are used in making plastic automobile bodies.

When this epoxy group first appeared, it caused many persistent cases of dermatitis. As we accumulated experience in handling the material, protective measures were developed to reduce the incidence considerably.

Radiation

Radiation exposures in industry from x-ray machines, radioactive isotopes, or from natural sources have increased markedly in recent years. The largest increase is in the use of x-ray machines. Most large metal-working industries are equipped with large x-ray machines, radium, or radioactive cobalt. Two of the largest x-ray machines in the world—15 million volt betatrons—are located in Michigan. The carcinogenic properties of ionizing radiation make it imperative that these installations be monitored on a frequent and regular schedule. A section in the Division of Occupational Health supervises the work in this expanding field. In addition to monitoring, we are actively engaged in setting up specifications for proper shielding of x-ray installations in hospitals and clinics as well as in industry.

We also work closely with the Atomic Energy Commission on licensing radioactive isotope users in the state. The Atomic Energy Commission forwards the lists of radioactive users in the state to the Michigan Department of Health, and these installations are monitored on a routine basis. At the present time, we are working on two large installations—one a radioactive research laboratory and the other a planned nuclear power reactor plant.

In the immediate future, we expect to see an accelerated use of radioactive isotopes and a number of states are now considering legislation to protect those working with the radioactive materials as well as those living in the immediate area. The use of radioactive isotopes on a large scale also brings up pertinent problems in pollution of lakes and streams.

Lead Poisoning

The toxic effects of lead have been known for centuries, and plumbism is one of the earliest recorded occupational diseases. In spite of its toxicity, the unique chemical and physical properties of lead make it a valuable metal for a wide variety of industrial and commercial applications. Automobile bodies, batteries, bearings, brass and bronze castings, production soldering and the printing industry account for extensive uses of lead in Michigan. The advent of the sedan type body in the 1930's resulted in one of the most serious lead poisoning outbreaks of modern times. As a result of this experience, extensive research developed effective engineering and medical control procedures. Lead workers in automotive plants are under constant medical supervision. Atmospheric lead, blood, urine and porphyrin tests are routine procedures. The worker is immediately transferred and immediate study is made whenever any of these tests show an increase or abnormal lead absorption.

These same tests are used by the Division of Occupational Health to determine the need or effectiveness of engineering controls in all plants using lead. The analysis of lead in blood and urine requires skilled and exacting techniques, as well as specialized laboratory equipment. With hundreds of employes working with lead, the large automotive plant can maintain technicians and special laboratories, but this is impractical or impossible for the smaller plant.

To further our objectives in the control of lead hazards, the Division of Occupational Health maintains a biochemical lead analysis laboratory service. This service is available to the physician who suspects lead poisoning in an individual patient or to the plant physician with a few lead workers under his supervision. Micro amounts of lead are involved in the analysis and the slightest contamination in the specimen will give high and misleading results. It is therefore necessary to use special lead-free containers and lead-free needles and syringes. These are supplied on loan by the Division of Occupational Health to the physician on request. In cases where frequent routine examination is indicated, arrangements should be made with private laboratories equipped to run lead determinations on body fluids.

Solvents

The cleaning of metal surfaces preparatory to painting or plating is an extensive and important part of metal working operations. Acids, alkalies and synthetic solvents are used for this purpose. While the acids and some alkalies are of interest to us, our first concern is in the synthetic solvents used for cleaning and degreasing. The three solvents commonly used are carbon tetrachloride, perchlorethylene and trichlorethylene.

Carbon tetrachloride, of course, is the most toxic of the three solvents and its use is limited to a few specialized cleaning operations and, infrequently, by industries who are not aware of its toxicity. Machines have been designed which will reduce the synthetic solvent hazard to a minimum when they are properly operated and maintained. Often, however, the machines are overloaded and

poorly operated, resulting in a high solvent vapor concentration. This toxic condition can be aggravated when degreasing operations are located in the same area with welding operations. The heat from the welding flames breaks down the chlorinated solvent into phosgene and water.

This situation has occurred in three plants in the past month, causing severe illness among the workers in the area. It is most likely to occur during the winter months when air circulation is confined within the plant. We attempt to keep welding operations completly segregated from degreasing operations, but in some instances we have found air currents carrying chlorinated solvent vapors underneath doors to points 100 feet away from the degreasing operations.

While carbon tetrachloride is used to a limited extent in industry, it is unfortunately used to a great extent in commercial applications, such as home dry cleaning, and in fire extinguishers. Several deaths occur each year as the result of the home use of carbon tetrachloride. In conjunction with our educational efforts on the use of chlorinated solvents in industry, we have been actively engaged in making the general public aware of its dangers.

The Division of Occupational Health has prepared a list of substitutes that can be used in place of carbon tetrachloride. This list gives the name of the solvent, the composition, the flammability and the recommended specific use and is available for general distribution.

Noise

Industrial noise is a critical problem facing industry today. For years, loss of hearing was considered a part of the normal risk involved in working in industry. As a result of recent court decisions in some states allowing claims for industrial hearing loss without disability, the problem has become one of serious concern to management. There are numerous industries in our state having noise levels sufficiently high to produce permanent hearing loss. We have experienced a progressive increase in the number of requests for assistance in the evaluation of noise potential in the past two years.

Two projects recently completed by the Division of Occupational Health may provide some interesting data on hearing loss at specific frequency and intensity levels. In addition to our sound level studies, the medical department of both plants made audiometric examinations on all employes. When these results were evaluated and correlated with our work in the plant, it was found that a number of employes had a hearing loss at noise levels considerably below the damage risk level of 110 decibels now being proposed. This gives us reason to believe that noise levels well below 110 decibels may cause hearing loss in some individuals.

Motivated by the recent court decisions and the financial implications involved, many industries have instituted pre-employment audiometric examinations and occasional screening programs to determine the extent of the risk. Much can be done in the control of industrial noise, and the Division of Occupational Health has assisted many industries throughout the state in surveying their operations and controlling specific noise sources.

In-Plant Medical Services

Cultivating full-time or part-time in-plant medical services in industry is an integral part of the occupational health activity. The opportunities of the industrial physician and nurse to elevate the health and well-being of a large segment of the adult population are so real and positive they excite the imagination of all public health people. However, from our twenty years of experience in promoting industrial medical services, we have encountered some substantial difficulties.

In large industries with 5,000 or more employes, the need and advantages of an in-plant medical service are self-evident. In fact, full-time or some form of part-time medical services already exist in these plants with very few exceptions. But this type of plant represents only a small percentage of the total number of manufacturing plants and a still smaller percentage among the 29,000 employers in the state. In Michigan, over 94 per cent of the industries have less than 250 employes, and 81 per cent have less than fifty employes!

The large industry is in a position to use in-plant medical service to practical advantage, and the costs can be spread over a large number of employes and production operations. Increased production levels through better health and low incidence of absenteeism are weak arguments to a small employer who already maintains a high production level and controls his absenteeism by personal selection, retaining only the "steady" employe.

In promoting in-plant medical service, we have

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Responsibility of the Surgeon in the Restoration of the Industrially Injured Patient to His Maximum Earning Power

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IT has long been recognized that complete recovery from injury depends not only upon accurate and adequate treatment of the injury itself, but also upon the successful enlistment of the active participation of the patient in obtaining restoration of full function of the injured part. It is likewise accepted that the surgeon is responsible for the effective application of both these elements of therapy. With the advent of present-day rehabilitation, with the added techniques for restoration of function and numerous experts for their application, wider horizons of aid in attaining more efficient end results have been developed. It would seem timely, then, to review the effectiveness of the recovery program of trauma casualties and to re-evaluate the position and responsibility of the surgeon toward complete recovery of the injured.

Information as to the efficiency of the overall treatment of the injured and how ideally it has been pursued is difficult to ascertain. There seem to be but few reports of comprehensive end results, except in the case of certain specific injuries, such as fractures, dislocations, head or abdominal trauma. Certainly, the experience of experts in physical medicine indicates that reference of patients for aid in recovery of function is still often late at a time when contractures of joints have already occurred.[5]

End results, as viewed in casualty insurance clinics, which check over cases of delayed or prolonged recovery, tend to demonstrate that the contributing factors to poor results are:

1. Inferior surgery—frequently by men inadequately trained in the treatment of Trauma-coupled with:
   (a) Insufficient immobilization of fractures
   (b) Prolonged splinting without concomitant muscle training.
2. Lack of early active motion and exercise
3. Fixed neuroses.

One large casualty company, the Liberty Mutual, reports 34 per cent of patients referred late (seven months or more after injury) to their clinic cannot be fully rehabilitated. The injuries are too old, the soft tissues too fixed, and nerve injuries too long unrecognized. Some may be improved by additional surgery, and others have continuing disability, largely because of delay in rehabilitation as a result of litigation.[1]

In 1951, 4,430 persons injured on the job while under Workmen's Compensation were returned to work under the federal state program of vocational rehabilitation. The average time, however, between injury and referral to the vocational rehabilitation agencies was seven years.[6]

On the other hand, the care by large industrial corporations of its injured may be close to ideal with a well-co-ordinated group of medical experts, prepared to carry out the entire recovery program from treatment of the injury and recovery of function to the return of full earning power. Good team work of the participants is easy. High percentage of satisfactory recovery can be expected. The institution of early return to work can be a powerful factor toward success. Carefully supervised return to a job after injury is the most effective psychological stimulus toward maximum and enthusiastic participation of the injured in his own recovery. Under these circumstances, litigation largely concerns those with permanent injuries to appraise the degree of disability upon which to base the amount of compensation deserved or justified.

For casualties occurring in small industries or as a result of accidents on the highway or in the home, the assembly of sufficient ancillary services to complete rehabilitation of the severely injured may tax the ingenuity of the surgeon. An expert in physical medicine or occupational therapy may not be available or rehabilitation centers not within easy reach.

It would seem, therefore, that to date, the application of a regime for satisfactory treatment of the injured in some areas still leaves something to be desired.

The deficiencies, as revealed, may be listed as follows:

1. Actual inept primary or inferior definitive surgery.

Presented at the annual session of the Michigan State Medical Society, Detroit, September 29-October 1, 1954.

2. Delay in active use of the injured part by the patient accompanied not infrequently by neuroses.
3. Delay in consultation with physiatrist or in employment of physical medical or rehabilitation techniques.
4. No direction or oversight for eventual regain of full earning power.
5. Lack of team work between surgeon and the restoration of function services.
6. Delay in recovery of function because of litigation.

To eliminate these deficiencies in present-day practice should be the object of any plan of action. The procedure must be patterned after that established by many large industrial corporation medical departments where the team work of a group of experts, presided over by the surgeon, handles the injured from the actual time of trauma to the return to his job or maximum earning power.

The overall plan should include:

1. Excellent primary surgery.
   It should be axiomatic that surgeons undertaking the care of trauma must be competent in the techniques and therapeutic management of severe injuries. Many opportunities to obtain adequate training in the surgery of trauma, particularly at the postgraduate level, now exist. In larger hospitals, care of the injured should be channeled to those who have demonstrated efficiency in the therapy of trauma.

2. *Early* active participation of patient in recovery of function.
   Active use of muscles of the injured part may often be begun on the day of the accident itself. The patient's enthusiastic co-operation may be stimulated by:
   (a) A brief explanation that he himself is the active agent by which recovery of function is obtained and an outline of the nature of the injury and the method of recovery.
   (b) Information that in severe injuries and prolonged convalescence every effort will be made:
      (1) To obtain maximum return of function and earning power.
      (2) To help solve any family problem resulting from his injury.
      (3) To enlist a corps of experts if necessary to effect recovery.
   However, many injured may be successfully restored to full function by excellent surgery and well-directed active use of the injured part with little need for any other ancillary aid.
3. *Early use* of physical medical techniques when necessary for recovery of function. The longer the disability the greater the maladjustment.
4. Social service when indicated for aid in family problems.
5. Early planning of a team of experts, needed for aid in the patient's recovery, to include any of the surgical specialties, a psychiatrist, or experts in vocational training, prosthesis fitting et cetera.
6. Use of the rehabilitation center.
7. *Overall oversight* of the injured by the *surgeon* until final return to work in order to:
   (a) Judge the efficiency of the recovery program.
   (b) Decide whether late surgery may be indicated.

In many permanently injured, to obtain the best functional result, the late stage of recovery may require largely rehabilitation supervision, but even here the surgeon should never lose complete contact.

There should be an opportunity for consultation of the experts involved in difficult cases. Review of progress of all cases should be routinely checked. When possible seminars for the demonstration and discussion of problem cases should be instituted.

At times, there may be difficulty in obtaining needed experts or facilities, such as vocational training or psychiatrists or rehabilitation centers. State medical societies, through specific councils or commissions, may be sources for access to *needed* services. In Pennsylvania, the Council on Physical Medicine and Rehabilitation of the Pennsylvania State Society stands ready to act as consultant or Bureau of Information to the individual surgeon on any specific problem. The State Medical Society can also lend its influence toward the establishment of rehabilitation centers organized under proper ethical and efficiency standards.

It is obvious that the advent of new techniques for the restoration of the injured has placed a greater and increasing responsibility upon the surgeon. Not only must the patient's injuries be mended, his co-operation enlisted to regain use of the injured part, but all the modern facilities for

restoration of the man himself to gainful employment must be understood and applied, "The surgeon must learn how to administer the most efficient type of after-care or to utilize the services of those capable of so doing."[2] The aim is not merely the recovery from injury with the greatest possible return of function, but also the return to the injured of maximum earning power.

The responsibility of the surgeon should extend, therefore, over the entire period of disability to the end that the patient is restored to gainful employment at his highest attainable skill.

Change in Workmen's Compensation Laws

An important factor that militates against the full use of modern rehabilitation for the injured worker is the workmen's compensation laws of today. These laws emphasize the remuneration of the injured for loss of wages while recovering from injury, the care of the injured until recovery, and payment of compensation for any permanent disability incurred. Often, if litigation is involved, years may pass until final payment or full remuneration is obtained, during which time rehabilitation ceases until settlement is made—a time that might more profitably be employed in treatment for full recovery of maximum function, an interval that if lost for rehabilitation frequently cannot be regained, an interval in which fixation of joints and atrophy of muscles without therapy becomes permanent. "The injured so often winds up with a much desired sum of money which he spends and a disability which he keeps."[2]

Under present compensation laws, the potentialities of present-day rehabilitation are ignored and find no place. Little thought to any phase of rehabilitation is given by most persons connected with workmen's compensation. A general lack of interest in the problem prevails at the level where interest could be most effective.

The need for unremitting efforts until maximum restoration of function and earning power has been obtained is completely blotted out by the false goal of maximum remuneration for injury incurred as the primary desideratum for the injured. In fact, it has been said, "True rehabilitation of the injured worker, with a few real exceptions, is from a practical point of view virtually non-existent under our present workmen's compensation system."[2]

Rehabilitation of the injured is certainly the responsibility of the medical profession. If existing compensation laws interfere with the complete application of modern rehabilitation techniques and prevent the full potential of modern rehabilitation, should not the surgeon assume leadership in setting machinery in motion to obtain a change in the compensation laws to include as a basic concept the maximum rehabilitation of the injured worker?

The American College of Surgeons, through a sub-committee of its Committee on Trauma, of which sub-committee, Dr. Alexander Aitken of Boston is chairman, has discussed informally with representatives of labor and industry and insurance carriers, fundamental principles upon which changes in the laws should be based.

These principles have been listed as:

1. Rehabilitation of the injured worker and his return to gainful employment should be the basic concept in an improved workmen's compensation system. It is recognized that the disabled worker wants to be rehabilitated and restored to gainful employment. Settlement of cases on a basis of cash awards alone does not meet the continuing needs of the injured worker and his family.
2. The need for higher standards and broadened benefits in workmen's compensation is recognized; such standards and benefits should be developed against the background of presently known advances in physical restoration and vocational rehabilitation and adequate standards of individual and family need.
3. Full utilization of all our potential manpower is essential to the welfare and strength of the country at all times. The discarding of disabled workers is an economic extravagance detrimental to the welfare of our country, wholly aside from the personal effect on the worker and his family. Solution of the problems of trauma requires co-operation and not competition, between all interested groups and agencies. We must therefore, improve and expand all activities, public and private, that aid in rehabilitation of the disabled worker.
4. The medical profession should adopt the concept that the responsibilities of the treating physician extend over the entire period of disability to the end that the patient is restored to gainful employment at his highest attainable skill.
5. Rehabilitation and restoration to gainful employment of the injured worker must begin with first aid and continue throughout the period of disability. In order for a physician to carry out this responsibility, it is essential for him to recognize the total medical problem of the patient in addition to his injury, as well as his personal problems. The physician must bring to bear on these problems all the skills and disciplines that science and society can offer, and utilize all community resources which can assist him in the accomplishment of these objectives.[3]

Attainment of these basic principles can be accomplished only by changes in the administra-

tive rules of procedure or in the compensation laws themselves.

Provision must be made for:

1. Complete and continuous medical care from the date of injury or disability to maximal restoration of function.
2. Complete medical rehabilitation
3. Adequate compensation to insure family security during the entire period of disability and rehabilitation.

The medical profession with its knowledge of the far-reaching potentialities of rehabilitation should continue leadership in obtaining the co-operation of labor and industry in acquiring compensation laws under which the injured may receive the maximum benefit of modern rehabilitation techniques.

Conclusions

The responsibility of the surgeon in the care of the injured must include:

1. Excellent surgery in repair of the injury itself.
2. *Immediate* enlistment of the patient's active participation in the recovery of function.
3. A study of the patient himself and search for any economic or social problem that concerns his or his family's welfare.
4. The *early use* of the techniques of physical medicine when necessary for muscle training and co-ordination.
5. Consultation with experts in vocational and occupational therapy or with other surgical specialists or psychiatrists, for a planned regime of rehabilitation to restore maximum earning power.
6. Extending the responsibility of the surgeon over the entire period of disability to the end that the patient is restored to gainful employment at his highest attainable skill.
7. Change in compensation laws to recognize the potential of modern rehabilitation procedure for restoration of the injured, and to avoid litigation that interferes with or prevents complete recovery of function.

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FROM CARPET TACKS TO CARGO SHIPS

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attempted to concentrate our efforts in that segment of industry amenable to it; that is, we consider such factors as size of plant, type of operations, location of plant, et cetera. Other industries may be served to better advantage through private industrial physicians and in some areas by the small industrial clinic.

The foregoing is a brief summary of a few common and persistent occupational disease problems in our state. As previously pointed out, the extent and variety of manufacturing in Michigan approaches encyclopedic proportions, running all the way from carpet tacks to cargo ships and from polio vaccine to wall-paper paste. This variety and the ever-increasing industrialization of the state make the occupational disease prevention program complicated and difficult to promote.

Michigan's Division of Occupational Health compares favorably with similar units throughout the country in organization, personnel, laboratory facilities and industrial coverage. The field staff of the Division will make close to 4500 industrial visits this year. Due to the magnitude of the problem, it is essential to have the co-operation of practicing physicians and all other groups interested in occupational health. The reporting of occupational diseases, as required by law, is a source of valuable information in directing our efforts. As provided by statute, the specific cases of occupational diseases reported are confidential, but the statistical data they provide are of inestimable assistance in directing our organization and efforts in the most effective channels. The Michigan Department of Health, upon request, will provide information and occupational disease reporting blanks to those physicians who wish them.

Vocational Rehabilitation in Michigan

By Edward F. Sladek, M.D.
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THE CONCEPTION that there was a possibility of increasing the earning power and changing the status of a severely handicapped individual from dependency to independence was developed following World War I. Offices of Vocational Rehabilitation were established in each of the states financed by equal matching state and federal funds. The program was entirely educational, training the handicapped individual in some vocation through which he could re-establish earning power and support himself and his family instead of depending upon public charity.

In 1943, it was realized that many of these individuals were handicapped by physical conditions which could be corrected and removed by modern medical science. As a result, the Office of Vocational Rehabilitation embarked upon an additional program of physical restoration with each state office developing a plan of standards, requirements, and procedures which were submitted to Washington for approval. In Michigan, a series of meetings between a committee of the Michigan State Medical Society and the officials of the Office of Vocational Rehabilitation, Department of Public Instruction, greatly assisted in establishing the Michigan Plan on a sound, realistic and workable basis, and the physical restoration services were instituted.

Objective

The ultimate objective of medical services is to restore the handicapped individual to his maximum physical function. If necessary, additional services are offered either in placement in a job he can do, the supplying of occupational tools or equipment, or training in some occupation best fitted to minimize the deleterious effects of that individual's physical handicap. Thus, the door is opened for opportunities for patients who formerly were considered to be "hopelessly helpless."

The Office of Vocational Rehabilitation definitely is not another governmental agency through which physicians can be paid for surgical or medical services to patients who are not able to pay for these. The individual who becomes a recipient of Vocational Rehabilitation services must first establish the presence of some physical defect which has been and still is a vocational handicap and which either prevents him from earning a living, obtaining employment, or greatly reduces his earning capacity. Where correctable physical restoration is recommended, it must be established that the individual is unable to pay for the procedure.

Processing an Application

The initial requirement in the processing of an applicant is a complete general medical examination. Preferably, this is done by the family physician who must be a doctor of medicine. This general medical examination should bring to emphasis, (1) the physical condition which is an occupational handicap and an opinion as to why this interferes with the individual working; (2) a recommendation for corrective professional services, surgical, medical, x-ray, laboratory, specialist examinations, or prosthesis; (3) an opinion as to whether the individual is able to work full time or part time in his present physical condition and whether medical correction of the handicapping condition is possible and would result in the individual again becoming employable; and (4) the presence of additional physical conditions which might have a bearing on a future planned program of either physical restoration or training for occupational employment.

The general medical examination report is referred to the medical consultant of the district office for study and analysis. If he feels that the report is sufficiently clear to establish the presence of a physical handicap which is stable and correctable and not chronic and progressive, he may immediately approve the recommended physical restoration services. If, from his study of the general medical report, he is uncertain as to the diagnosis or the correctability of the handicapping condition, he may order additional studies by certified specialists (this usually results from incomplete reports by the examining physician). If the applicant does have a physical handicap which is not correctable but which definitely interferes with earning ability, the medical consultant may approve a training program in a new occupation commensurate with the limitations of the handicap. Payment for medical services is based on the Uniform Fee Schedule for Governmental Agencies.

In the meantime, a field agent of the regional

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Legal Situations Confronting Industrial Physicians

By Carey P. McCord, M.D.
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IT is not known that there are laws or official regulations exclusively directed to industrial physicians. Yet, there are some legal situations more likely to confront the industrial physician than others in the medical profession. Three unrelated items are here presented, all serving to remind the industrial physician that their activities are attended by legal requirements and on occasion, legal jeopardy.

Malpractice Claims Against the Industrial Physician

Over the years, a point of law bandied about relates to the vulnerability of the industrial physician to malpractice suits on the part of medically treated workmen who have received the appropriate benefits of workman's compensation. The consensus developed among skilled attorneys long has been that rightly the disgruntled or clearly maltreated workman-patient once having elected the coverage of compensation is without further opportunity at law. Through legislative enactment in the State of Michigan (1952) (with the possibility of similar interpretation of existing laws in some other states), all uncertainty is removed on that score. Regardless of acceptation of compensation benefits, the industrial physician or any physician carrying out treatment as provided under compensation enactments is subject to malpractice suits. In some quarters, this smacks of being in the nature of an additional fringe benefit. Thus, it becomes patent that even on the basis of whim or caprice, any industrial physician may be sued at the will of any workman-patient on the slightest pretext of misfeasance, malfeasance, or non-feasance. To make the matter even more complex and threatening to the industrial physician, it comes about through current legal interpretation rather than through any known statutory enactment that although the physician be employed on a full-time basis by industrial management or otherwise on salary, his position as to malpractice claims is not one of agent of the employer. The physician alone becomes responsible for his medical acts. The theory behind such interpretations springs from the well-established dictum that a corporation may not practice medicine. Some uncertainty attends the position of the full-time employed industrial nurse and the degree of responsibility of the physician in charge of industrial nurses and other assistants employed by industry. However, there may be less uncertainty that the corporation employer of a nurse may itself be saddled with financial onus as to malactivities, real or fabricated, of the industrial nurse. Professionally, she may not act as an agent of management. By any reckoning, the industrial physician finds himself holding something besides his emergency bag. By way of protection, it is suggested that industrial physicians may do well to consider the desirability of seeking as a part of the financial arrangements as to employment, paid-up malpractice insurance year by year. In lieu of this possibility, the physician himself in order to sleep well at night might obtain at his own expense, suitable protective coverage. In this day, the traditional $5,000 to $15,000 policy is a driblet. The $100,000 policy is closer to the jeopardy. In any case, keep quiet about it. Known malpractice coverage is a direct invitation to lawsuits. The usual and oftentimes misguided jury, when it brings in a verdict favorable to the plaintiff, has the quaint practice of making the award never less than the amount of known protective insurance. Of course, mention in the courtroom of knowledge of existing protective insurance may then and there become the basis of demand for mistrial. (Based on an editorial in *Industrial Medicine and Surgery*, May, 1954).

Occupational Disease Reporting

Within the State of Michigan, there exists a legal requirement necessitating the prompt reporting of all occupational diseases. One paragraph of that enactment is quoted:

"Section 17.431. Occupational diseases; reports by physicians, et cetera, contents; use as public records. '. . . every physician, hospital superintendent, or clinic registrar having knowledge of a case of occupational disease shall within ten (10) days report the same to the state department of health on a form provided by the state department of health, giving. . . . All such reports and all records and data of the state department of health pertaining to such diseases are hereby declared not to be public records. The department of labor and industry shall have access to any such record in any case where any complaint or suit shall have been brought before.' "

It is regrettable that this law is not heeded by all physicians. Similar laws exist in most other states and, with one or two exceptions, are not enforced. The current statistics for Michigan (March, 1955) reveal only fourteen instances of occupational disease during that month. It may be believed that from any one large, general hospital within the state that number of reports of occupational diseases might have derived. Likewise, many individual physicians within the state in a single month have within their care at least that number of occupational disease conditions. In the United States, there do not exist and never have existed any reliable figures as to the incidence of occupational diseases. If, faithfully, all occupational diseases were reported, this defection promptly would disappear. Among other deterrents to the living-up to this legal requirement of occupational disease reporting are:

1. Many occupational diseases are not immediately diagnosable as such and thus are dissimilar to the readily determined traumatic injuries. Some occupational diseases are not adjudged so to be except by court action and even then the physician may not acquiesce in the diagnosis.

2. The usual occupational disease frequently is so diagnosed, not by the plant physician but by some consultant or by some hospital staff. The plant physician may assume that the consultant or hospital will make the report, while the consultant or hospital group may assume that the plant physician will accept the legal responsibility.

3. Some occupational diseases, such as the pneumoconioses, may be detected among work applicants or employes with full evidence that the condition originated in other employment and perhaps in other states. Thus, an ex-coal miner from Pennsylvania, on application for new employment in Michigan, may present an early and non-disabling stage of silicosis. The plant physician, recognizing this state, usually elects "no report" lest in some manner the prospective new employer acquire some degree of responsibility. This attitude is almost certain in case an applicant is refused employment for any cause. Of course, the real reason for scanty occupational disease reporting is the same physician lethargy that curtails all disease reporting.

It is unlikely that any Michigan physician runs any risk of fines or imprisonment because of failure to report occupational diseases. Notwithstanding, as a professional and ethical duty, it will prove most helpful if all physicians faithfully report occupational diseases so that there may come about a more exact knowledge of the true incidence of these trade diseases.

Physicians' Legal Duties Regarding Deaths on Plant Premises

Fortunately, death among workmen is so infrequent that any routine of procedures is likely to be lost sight of because of this rarity. Still, there are legal requirements not precisely imposed upon the industrial physician, but he it is who becomes chiefly responsible. By law or regulation, it is requisite first that the victim be pronounced dead, and this may be done only by a physician. This is a legal requirement, even when the victim obviously is dead. Legal requirements necessitate reporting to the police department all sudden deaths, even though there be no evidence of violence or crime. A third necessity is an immediate report to the office of the coroner. It is often presumed that if the police be called, that agency will call the coroner, or just the reverse, that the coroner's office will notify police. This assumption does not meet legal requirements in most jurisdictions. Both agencies must be notified. The above may meet the strictly legal demands, but there are other acts not necessarily within the domain of the industrial physician but often falling to his lot. These are:

1. Although not always possible, the body should be left at the point of discovery of death until its removal is directed by the coroner or police official.

2. If the victim be known to be of Roman Catholic faith, a priest should be called.

3. Prompt arrangements should be made to notify the family of the victim and preferably through a visit to the home rather than by telephone.

4. Promptly, effort should be made to safeguard the personal belongings of the dead party. Over and over, claims are made by relatives of all manner of losses of money, tools, clothing, et cetera. However, unwarranted these claims may be, much can be gained by collection of all items of personal property, even such trivial items as lunch boxes.

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Acute Pericarditis Associated with Serum Sickness Due to Injection of Tetanus Antitoxin

By Douglas Donald, M.D., and
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IN FEBRUARY, 1954, Goldman and Lau[1] reported two cases of acute pericarditis associated with serum sickness following the injection of tetanus antitoxin and reviewed the literature, which was scant. Since then, no further cases have appeared in the literature. The following case is presented because the patient gave a previous history of sensitivity to tetanus antitoxin and the typical pericarditis noted here with friction rub and later fluid in the pericardium seems without doubt to be due to serum sickness.

A white man, aged forty-one, was admitted to Jennings Memorial Hospital on April 20, 1954, because of a traumatic amputation of the fifth digit of the right hand by an automatic shear. History was negative for any serious illness. On physical examination, the only abnormal finding was the almost completely severed digit. Temperature was 98° F, pulse 80 and regular, respirations 20 and the blood pressure 140/80. Urinalysis was normal. Examination of the blood showed a red cell count of 4,500,000 with a hemoglobin of 13.3 gm. per 100 cc. and a white cell count of 16,750 with 90 per cent neutrophils, 7 per cent lymphocytes, 2 per cent monocytes and 1 per cent eosinophils.

On the day of admission, a plastic repair of the traumatic amputation was performed by Dr. J. B. Hartzell under general anesthesia. Atropine gr. 1/150 was given intravenously as premedication. Anesthetics used were Thiepentothal, 2.5 per cent intravenously, and nitrous oxide and oxygen.

Postoperatively, the patient was given tetanus antitoxin 1,500 units in divided doses because of a history of a mild reaction to an injection of tetanus antitoxin some years previously. He was also started on Benadryl 50 mgs. every four hours prophylactively and on procaine penicillin 400,000 units and streptomycin 0.5 gm. every four hours.

On April 21, his temperature was 101° F, pulse 100 and respirations were 20. He had no specific complaints. Penicillin and streptomycin were discontinued.

On April 22, his temperature was 101° F, pulse was 100, and respirations were up to 26. He complained of stiffness in his jaws, which he said was similar to the reaction he had to the previous injection of tetanus antitoxin. Later in the day, he had fairly severe substernal pain made worse by respiration. Physical examination resulted in no unusual findings.

On April 23, his temperature was 101, pulse rate 120, and respirations were 30. He still had intermittent soreness in the chest. Roentgenogram of the chest disclosed normal heart and lungs. White blood count was 15,000 with 82 per cent neutrophils, 16 per cent lymphocytes, 1 per cent monocytes and 3 per cent eosinophils. Electrocardiogram (Fig. 1) showed definite elevation of R-T in I and II and in V leads, suggesting an acute pericarditis.

On April 24, his temperature was 102° F, pulse rate 100, and respirations 28. On physical examination, a loud precordial friction rub was heard all over the precordium.

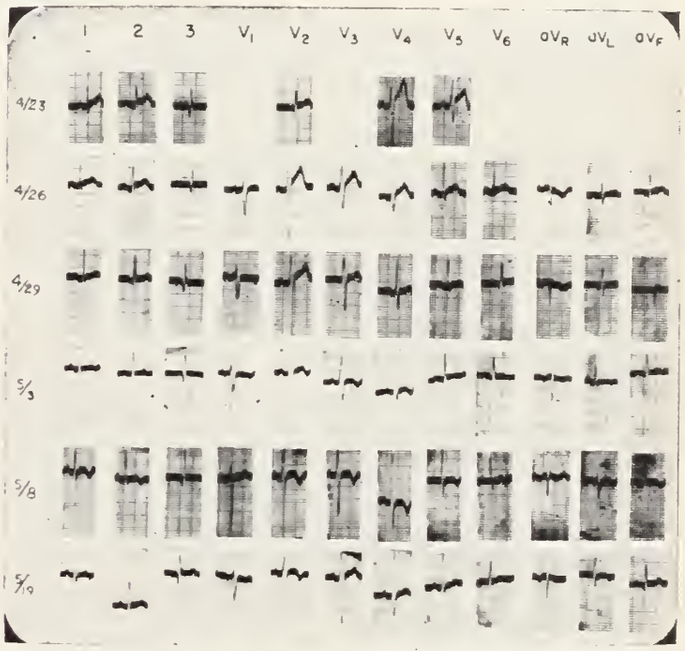


Fig. 1. Serial electrocardiogram showing tracings taken on the 3rd, 5th, 9th, 13th, 18th, and 29th days after the injections of tetanus antitoxin were given. Elevation of the R-T segments in leads I and II and the precordial leads is noted. This elevation later disappears and T inversion appears in I, II and the precordial leads.

The white blood count was 13,500 with 79 per cent neutrophils, 11 per cent lymphoctyes, 6 per cent monocytes and 4 per cent eosinophils. Fluoroscopy of the chest revealed a beginning pericardial effusion. Electrocardiogram revealed slightly less elevation of S-T segment in I, II and V leads.

On April 25, temperature was 102° F, pulse rate 110, respirations were 30. The patient continued to have intermittent episodes of chest pain and generalized aches. Precordial friction rub was present. He was started on Chloramphenicol 0.5 gm. every four hours.

On April 26, temperature was 101° F, pulse rate 100, respirations 22. He had generalized aches and anorexia, nausea and precordial pain. Friction rub was no longer heard. He was given 40 units of ACTH, I.M.

On April 27, temperature was 98° F, pulse was 90,

From Jennings Memorial Hospital, Detroit, Michigan. Dr. Crotty is now serving in the Armed Forces of the United States.

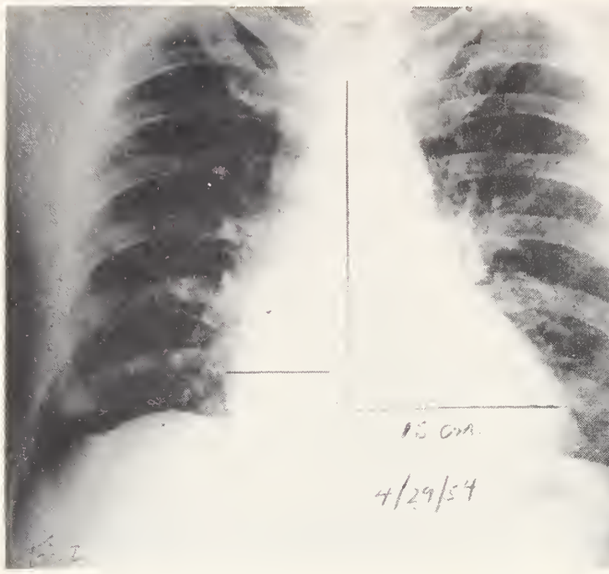


Fig. 2. X-ray showing some precordial effusion. Transverse diameter of cardiac silhouette 16 cm.

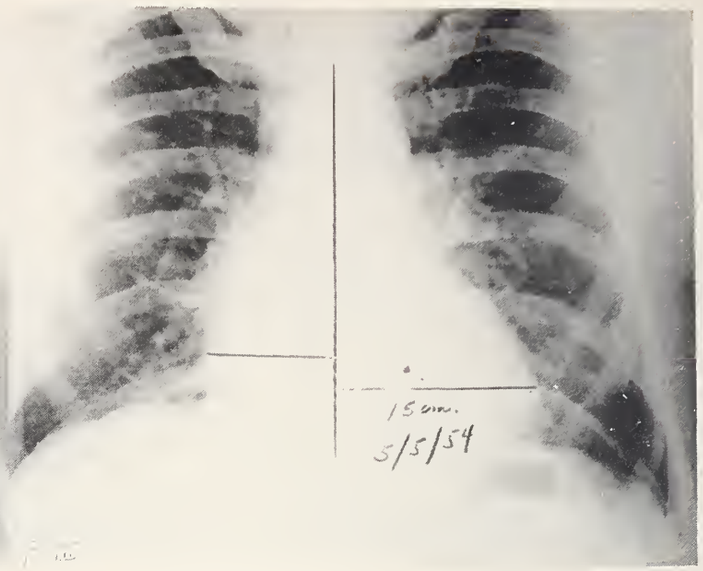


Fig. 3. X-ray showing transverse diameter of cardiac silhouette to be 15 cm. and some change in the configuration.

respirations 20. He had much less pain. He was given 25 units ACTH. I.M.

On April 28, temperature was 98° F, pulse 80, respirations 20. He felt very well. ACTH was discontinued. He maintained the clinical improvement and remained afebrile until May 1.

Serial electrocardiograms revealed changes reverting to normal (Fig. 1). Serial roentgenograms of the chest revealed decreasing size of cardiac silhouette consistent with resorption of the pericardial fluid. The leukocytosis also fell gradually. On April 30 Chloramphenicol and Diphenhydramine were discontinued.

On May 1, there was a recurrence of the symptoms, severe substernal pain, anorexia, vomiting and with temperature elevated to 101. Pulse rate was 100 and respiration rate was 36. Physical examination revealed widening of the area of cardiac dullness, heart tones were soft, no friction rub was heard. This was interpreted as a rebound phenomenon due to the too abrupt or too early discontinuance of ACTH. ACTH 25 units, I.M. daily was given, and after two days there was a complete subsidence of the symptoms, and the patient became afebrile again. The further clinical course was uneventful, and the patient was discharged on May 9, 1954.

This case is presented because, though there is little in the literature regarding the incidence of pericarditis as a part of serum sickness, it must occur more often than recognized.

As Goldman and Lau pointed out, it seems logical that the pericardium, a serous surface, may as well be involved in serum sickness as other serous surfaces, such as the joints.

Reference

1. Goldman & Lau: New England J. Med., 250:278, (Feb. 18) 1954.

LEGAL SITUATIONS CONFRONTING INDUSTRIAL PHYSICIANS

(Continued from Page 954)

5. Manifestly, the physician's office or some other suitable agency, such as the Safety Department, should investigate and provide records as to the time, place, circumstances of the death and, if possible, list witnesses thereto. The experienced industrial physician will have readily available in his office a schedule of the prompt action to be taken in the instances of death on the premises.

Few industrial physicians are fully aware of the wide variety of legal measures that attend their activities. The three described are but representative.

A Simple Adjunct in the Treatment of Inguinal Hernia

By Lloyd F. Teter, M.D.
Pekin, Illinois

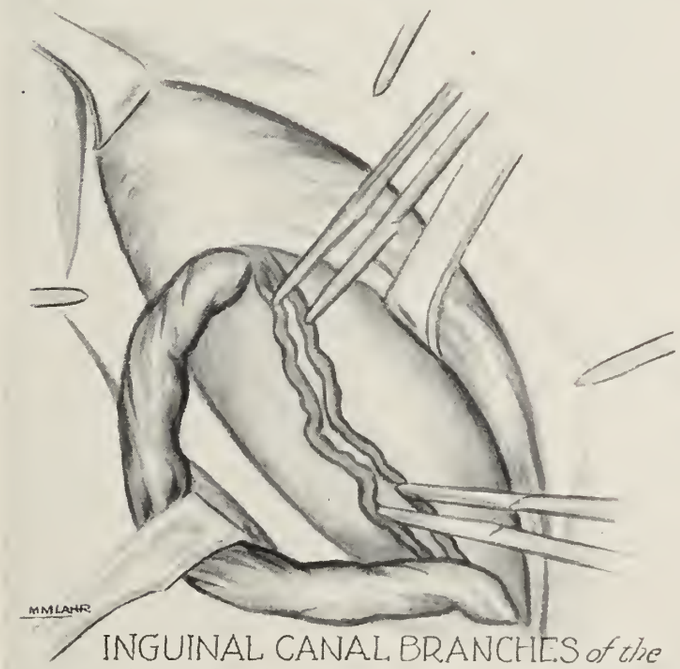
HISTORY relates that the treatment of hernia began with the Phoenicians in 900 B.C.[2] Since that time, many hundreds of operations have been described for the treatment of this condition, and all have had their relative successes and failures. It is not the purpose of this paper to claim a new and startling operation for the treatment of inguinal hernia. It is, however, the thought of the author that by including the following simple procedure, the surgeon will obtain better end results and less recurrences in the routine repair of inguinal hernia.

The author for many years has advocated that the inguinal canal branches of the external spermatic veins be ligated and excised routinely in the treatment of inguinal herniae. It is his opinion that this vein (or veins as vessel is found in multiples of two to four at times) should be clamped ligated, excised its entire length along the floor of the inguinal canal. Unless ligated and excised as described, this vessel could be a factor in hernial recurrence by interposition of soft tissue between facial layers. This procedure prevents troublesome bleeding and releases many adhesions between the spermatic cord and the floor of the inguinal canal. In cases where a short cord persists, the freeing of adhesions increases mobility of the cord and its structures and thus facilitates hernial repair.

Anatomy

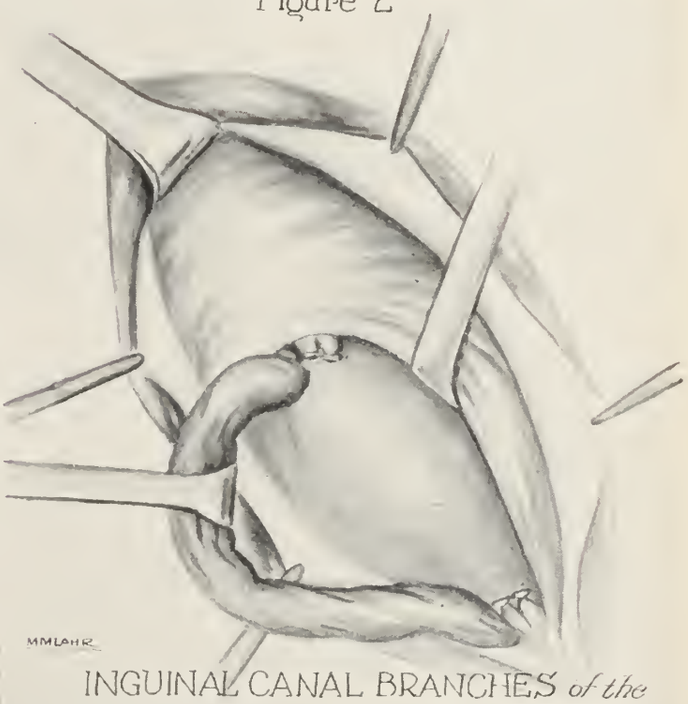
The inguinal canal branch or branches of the external spermatic vein are found behind the spermatic cord coursing obliquely over the ventral surface of the conjoined tendon which forms the posterior wall of the inguinal canal, and there the vessels communicate with the pampinform plexus in the region of the external inguinal ring. This inguinal canal branch is exposed and frequently torn during an inguinal herinorrhaphy, when the spermatic cord is retracted forward and downward to expose the conjoined tendon and posterior inguinal canal. These branches can be easily ligated above, below, and behind the retracted cord and the veins should be excised "en masse" in their entirety along the floor of the canal.

Figure 1.



INGUINAL CANAL BRANCHES *of the* EXTERNAL SPERMATIC VEINS CLAMPED

Figure 2



INGUINAL CANAL BRANCHES *of the* EXTERNAL SPERMATIC VEINS LIGATED *and* EXCISED

Operative Procedure

The surgeon carries out his regular incision for inguinal hernia and routine procedure for expo-

From the Department of Surgery, Leila Y. Post Montgomery Hospital, Battle Creek, Michigan.

sure of the inguinal canal. The inguinal branches of the external spermatic veins are visualized by retracting the cord forward and downward as shown in Figures 1 and 2. The vessels are clamped, ligated, and excised as shown in Figure 2. The operator then proceeds with his routine inguinal hernial repair.

Comment

Zimmerman[3] has stated in his excellent article that the lower borders of the cremasteric muscle should be divided at the internal ring to obtain better exposure at the site but to divide the muscle carefully between ligatures because of the presence of a good-sized vein. This vein is the inguinal canal branch of the external spermatic veins, which should be ligated above and below as previously described.

Summary

A review of the venous supply of the floor of the inguinal canal is presented. By ligation and excision of the inguinal branch of the external spermatic veins as described, there is less bleeding, greater mobility of the spermatic cord and less recurrences of inguinal hernia. This procedure applies to both direct and indirect type of inguinal herniae. Casual search through the literature and textbooks failed to reveal a description of the above procedure.

Acknowledgment

The author wishes to thank Dr. Darvan A. Mooseman, Department of Anatomy, University of Michigan, and acknowledge the description of blood supply of the inguinal canal as presented in this article. Acknowledgment and thanks to Mrs. Marian Lahr, Librarian, Leila Hospital, for the excellent illustrations shown in this article.

References

1. Mooseman, Darvan A.: Personal communication, October 29, 1953.
2. Thorek, Max: Modern Surgical Technique. Vol. 4, 2nd ed., chap. 39, p. 2473.
3. Zimmerman, Leo N.: S. Clin. North America, p. 144 (Feb.) 1952.

VOCATIONAL REHABILITATION IN MICHIGAN

(Continued from Page 952)

office contacts the applicant, obtains a work history, analyzes the family relations, needs, financial status, and particularly the impact of the applicant's handicap on these factors. He often administers intelligence, aptitude and interests tests and counsels as to possible future occupational endeavors which would fit the physical handicap. This counseling, in an attempt to fit the individual's handicap and ability to a suitable occupation, is a most important function of the field agent.

After it is determined that an applicant qualifies for services from both the medical and sociologic aspects, a "plan" is formulated. This plan may consist of an order for physical restoration services to be rendered by the doctor of medicine of the client's choice, or arrangements made for training in a new occupation, or in many instances both of these services. Final approval of the plan is given by the state office in Lansing.

Experience

Vocational rehabilitation services are available in all counties of the state through eight district offices. Also, there is an office at the University Hospital which, with the general hospital staff and the new Division of Physical Medicine, is developing a program of rehabilitation for severely disabled individuals. A medical consultant is available at all times at each district office.

During the fiscal year 1952-53, 3,100 individuals qualified for and were given vocational rehabilitation services. The average weekly earnings before services were $5.34; after service, $47.48. This represents an increase in purchasing power of the rehabilitated of approximately $6,000,000 at a total cost to the state and federal governments of $1,358,000. Of these, 935 received surgical, medical, psychiatric and dental services; 1,017 were supplied with appliances, artificial limbs, braces, hearing aids, or glasses; 489 were hospitalized. About 2,900 received some form of educational training in occupations best fitted to their physical handicap.

Summary

Because of recent increased interest in vocational rehabilitation at the federal level, it is felt that the doctors of Michigan should become better acquainted with the program and its objectives, thereby being in a position to render better service and co-operation to handicapped citizens.

The Administrator's Place in Psychiatry

By Arthur P. Noyes, M.D.
Norristown, Pennsylvania

THE title selected for this paper suggests that discussion will be limited to a consideration of the functions of directing either a hospital for the care and treatment of the mentally ill or some other agency concerned more or less directly with such a function. This will be the principal topic of discussion, yet perhaps some brief historical references may be permissible. In discussing the role of the administrator, I wish to emphasize that his policies should be determined by considerations of therapy rather than by those of economics and discipline, inescapable as these may be in the public mental hospital.

Apparently Hippocrates and his followers believed that mental disorders, like physical illnesses, were strictly natural phenomena. His medical psychology was based on the assumption of a disturbance of physiological processes. He strove to liberate psychiatry from mystical prejudice and toward a unified, biological point of view. There are few records available, however, to show how mental patients were cared for during the Hippocratic era. There is some evidence that would show that asylums did exist. Five hundred years later, A.D. 195, a Greek writer, Coelius Aurelianus, recommended measures that, for the most part, did not find general acceptance until sixteen centuries later. In speaking of the treatment then in vogue, he was apparently justifiably quite critical of physicians: "They seem," he said, "rather to lose their own reason than to be disposed to cure their patients when they liken them to wild beasts who must be tamed by the deprivation of food and the torments of thirst. Misled, doubtless, by the same error, they advise the inhuman use of chains, not considering how their members may be lacerated or broken and how much better it is to control by the hands of men than by the often useless weight of iron . . . means of repression employed without judgment increase and may even give rise to furor instead of repressing it." (Zilboorg)

Gradually many forces led to patterns of culture and thought in which the goal of life became a personal, mystic salvation and led to a demonological psychiatry. Thus the field of mental diseases was diassociated from medicine and continued so for nearly twelve centuries. The medical man dared not look independently into either normal or abnormal psychology. Physical illnesses might be natural but mental illnesses were supernatural. For the most the mentally sick continued to be considered as not only hopeless but bad people who came from evil, carried evil in themselves and brought evil on others. Demonology continued therefore to bring down upon the mentally ill the full weight of human cruelty. The mentally sick who escaped the fate of being burned or hanged as witches were scarcely more fortunate. They were the outcasts of society and wandered over the countryside seeking shelter in stables and pigsties. People mocked at them, beat and tortured them. If apprehended and interned, the mentally sick were placed side by side with murderers and other criminals in chains. The criminal would serve his term or be liberated by execution, but the insane could not secure liberation even by fire at the stake.

Until near the end of the eighteenth century this was the status of the majority of the places where the insane were confined. To be sure there were places where the mentally ill were kept, but there were no places properly organized for the purpose of taking care of or treating them. In the early colonial days of America no attention was paid to mental illness until persons thus afflicted required supervision or confinement. Some practical measure was then taken to protect the community from a public nuisance. The insane, therefore, soon became identified with criminals and paupers and, when violent, were put in jails or confined in cages in poorhouses. It is a matter of pride to Pennsylvanians that a hospital, the first in America, was established in Philadelphia and that its charter provided not only for the relief of the physically sick but also for the "reception and cure of lunaticks." To be sure the provision at the Pennsylvania Hospital consisted merely of cells in the basement and was only intended for persons who required custodial care. To Virginia, however, belongs the honor of providing in 1773 the first public hospital in America used exclusively for the insane. Very little else was done in America during the remainder of the eighteenth century in making constructive provision for patients who should have received institutional care.

Presented before the MSMS Section on Nervous and Mental Diseases, Detroit, Michigan, September 30, 1954.

Perhaps I shall be pardoned if I digress to call attention to the fact that it was a period, however, that produced three persons who occupy very significant places in the history of psychiatry —Benjamin Rush, Phillipe Pinel and William Tuke. Perhaps they were the natural result of the social forces of the last quarter of the 18th century. It has been pointed out by historians and sociologists that the American and French Revolutions with their resulting social and political changes and the Industrial Revolution with its effect upon economic and social life greatly influenced the whole system of interpersonal relations. The spirit of humanitarian treatment of individuals and the growing consideration of their rights as human beings characterized the period. The contributions of these three men who channeled these social forces into greater solicitude for the mentally ill were in some respects quite different in their nature. We are all familiar with how in releasing the patients in Bicêtre from their chains Pinel answered his own question, "Does not the mentally deranged need to breathe pure and healthy air?" In this act and in his dissatisfaction with the old-fashioned and irrational architecture of the mental hospitals he showed himself, one might say, an administrator in psychiatry. His interest in clinical psychiatry was well illustrated by his question, "How are we," he said, "to distinguish between the exasperation caused by the chains and the symptoms caused by the illness"?

As the first American physician to manifest an interest in psychiatry, Rush is deservedly known as the father of American psychiatry. His contributions, especially those in his most important work, "Medical Inquiries and Observations upon the Diseases of the Mind," were of extreme importance in the study of mental disease. Not for thirty years or more did any American psychiatrist attain his stature, although his favorite therapies —emetics, purgatives, bloodletting and intimidation—offered nothing that proved constructive.

Since he was not a physician the contribution of the third of this great triad, William Tuke, the first of the Tuke dynasty of four generations, was in providing more enlightened care for the mentally ill and not in the science of psychiatry. With his establishment of the York Retreat he demonstrated the important role of the hospital devoted solely to the care of the mentally ill with personnel specially trained for its task. He also demonstrated the effectiveness of moral and humanitarian treatment in contrast to restraint and punishment on the one hand, bloodletting and the all too liberal use of drugs on the other. Following the establishment of the York Retreat, and doubtless influenced to no small degree by it, hospital organization and hospital reform became one of the major interests of psychiatry. It was this new concept of a mental hospital that led to the establishment in America of such institutions as Friends Hospital, McLean Hospital, Bloomingdale, the Hartford Retreat and later Butler Hospital. Presumably, too, it influenced, directly or indirectly, the development of the mental branch of the Pennsylvania Hospital.

Probably it is not too much to assume that the solicitous and humanitarian attitude and the methods of treatment advocated at York plus the crusade of Dorothea Dix influenced the strikingly able physicians who had become superintendents of the asylums in the early 1840's to establish in 1844 the Association of Medical Superintendents of American Institutions for the Insane. Through change of name but without interruption of continuity this association has now become the American Psychiatric Association. The stated objectives of the new association were consultation and discussion of matters related to the conduct of institutions rather than the advancement of psychiatry. Perhaps on the whole their contributions to the science of psychiatry were not large. To be sure, Isaac Ray, one of the founders, had in 1838 published "Medical Jurisprudence of Insanity," the first treatment of the subject in United States. It ran through six editions, and nearly twenty years after its publication it was said, "It does more credit to America than aught in relation to insanity that has been produced." In spite of the fact that state hospital superintendents had done little or no research in the science of psychiatry, this branch of medicine in America remained largely in their hands for forty or more years. It was in the state hospitals nevertheless that research in psychiatry began. In 1868 a pathological laboratory was established at the Utica State Hospital, and in 1893, Adolf Meyer established a pathological laboratory in the Illinois Eastern Hospital for the Insane at Kankakee and began the most productive career which has been contributed by American psychiatry.

Medicine grew up under the apprentice system. The young doctor learned how to diagnose and treat illness by watching the experienced man with whom he was associated. What a contrast with

the instruction received in the present-day medical school! Apprenticeship has, however, been largely the training of the mental hospital superintendent even up to the present time. As long ago as 1938, Arthur Ruggles, speaking at a symposium on Mental Health conducted by the American Association for the Advancement of Science, expressed the opinion that, as with medicine, the apprenticeship method of training of a superintendent is an outmoded procedure and should be superseded by a more educational program. Ruggles called attention to the fact that national organizations interested in improved qualifications for the practice of psychiatry and neurology had established the American Board of Psychiatry and Neurology, which had set up educational standards and developed methods of examination to certify physicians in the clinical practice of these specialties. While he did not suggest the establishment of a special board for the certification of qualified mental hospital administrators, he did outline methods of formal administrative training to be pursued for two years by psychiatrists who had already become diplomates of the American Board of Psychiatry and Neurology. Doubtless it is a matter of much satisfaction to Dr. Ruggles, a former president of the American Psychiatric Association, that this organization has now established a committee on Certification of Mental Hospital Administrators. It is also developing plans whereby accredited training in hospital administration may be secured.

For many years the American Psychiatric Association was primarily an organization of administrators. Gradually, as was quite fitting, it became more and more a scientific society. That it still recognizes the importance of the administrator is demonstrated by the fact that it has now established the committee mentioned. It is the hope and expectation that certification as a qualified administrator by this committee will improve the professional qualifications and raise the status of the mental hospital administrator.

Because of his dramatic liberation of the inmates of the Bicêtre, Pinel became the symbol of the humanitarian treatment of the mentally ill. Perhaps, too, he should become a model for all mental hospital administrators, not only for his humanitarianism but for his vision, courage, initiative and his advocacy of many administrative procedures now used in many present mental hospitals. He recognized that the primary purpose of administration is to make available the most efficient means possible for the treatment and care of the patient. He realized what every mental hospital superintendent now recognizes: that the general therapy of patients and hospital management are inseparable. Unfortunately boards of trustees and central boards of control still occasionally fail to grasp this fact. In France the separation of administrative responsibility has, after many decades of trial, been abandoned. Assuming this premise that the therapy of patients and hospital management are inseparable, a great responsibility is placed upon the administrator. For many years the most important place of the administrator in psychiatry was that of the public—usually state—hospital superintendent. While there are now many other administrative positions that have acquired great importance this still remains one of much responsibility.

At first thought it may seem that the administrator's place in psychiatry may not call for his counsel and advice in the construction of a hospital for mental diseases. Such, however, is far from the case. The pioneer in America in developing construction of mental hospitals was, of course, Dr. Thomas S. Kirkbride. For over thirty years he was the acknowledged authority in this subject. That in addition to his contributions to hospital construction and hospital administration he had also a keen interest in psychiatry and in psychiatric instruction is shown by the resolution which he presented at the 1871 meeting of the American Psychiatric Association. "In every school conferring medical degrees," the resolution read, "there should be delivered by competent professors a complete course af lectures on insanity and on medical jurisprudence as connected with the disorders of the mind." The resolution also urged that these lectures be compulsory and accompanied by clinical instruction. The contributions of Kirkbride, who probably achieved a wider fame than did any other of the Original Thirteen, were by no means limited to construction and administration.

To return to the administrator with special reference to his function as director or guide in the construction of a public mental hospital. The designer of such an institution must know, of course, what means of study of the patient may be required both at the physiological and at the psychological levels. He must know, too, what kinds of treatment may be needed and therefore what facilities must be provided. The guidance of

the experienced administrative psychiatrist is therefore necessary from the first. Since every experience of the patient in the mental hospital may be therapeutic and constructive on the one hand or morbific on the other, the construction of a building for such patients should, so far as architectural arrangements are concerned, tend to promote influences and experiences that are therapeutic. We now believe, for example, that the interpersonal relation between patient and patient as well as the relation between patient and nurse may be of psychological significance. The administrative psychiatrist who is concerned with construction and accepts that the group may be a factor in treatment will provide, so far as is feasible, that patients be grouped in small numbers and according to age, personality, illness and treatment. He must impress upon the architect the fact that essentially the treatment of mental illness is the treatment of the individual patient and that his environment will not be such that the staff will feel frustrated in its attempt to treat the individual person. The therapeutically-minded administrator, and this characteristic is one of the most essential qualifications of the superintendent, will realize that modern intensive treatment requires a friendly, encouraging atmosphere with facilities that permit self-expression in work, recreation and relaxation.

The administrator, too, is the individual who determines whether the major interest of the hospital shall be professional or economic. Experience has clearly shown that the leadership of the institution must be professional. The administrator must, of course, operate within the limits of the budget received, yet through attitude and policy he can determine whether or not the emphasis shall be on therapy, teaching and research. If the latter objectives are the major ones and funds are judiciously expended for them, this fact is often recognized by the central board of control or appropriating agency, and budgets are gradually increased. The psychiatric administrator must not permit his interests to be diverted from the real purpose for which his institution was established. If he holds this objective constantly in mind and strives to make the experience of the younger physician an educational one, then professional performance of the staff will almost certainly be on a high level.

During a considerable number of years as an observer or as a participant in mental hospital administration, I have noted what I believe to have been a desirable trend in administrative policy. Administrative officers have become less authoritative, with the result that usually department heads show more initiative, develop a greater capacity for leadership and assume more responsibility. It is highly desirable that objectives be attained not so much by authoritative orders to others as by so influencing them that their own desires harmonize with those of the administrator. He should rule less and reign more. Department heads and others take over as their own the purposes of the leader. It is his task to integrate his assistants toward a common goal, to build a group animated by satisfying common purposes. He must convey qualities that will tend to weld all groups together. Among these qualities are enthusiasm, imagination and initiative. He should not only have the ability to visualize a plan which may take years to mature but also to apply the data of past experience and with discretion make use of the knowledge which the research and experience of others have made available. Since in public activities, particularly, there is a lag between the acquisition of knowledge and its practical application, courage and persistence are indispensable for the administrator.

The administrator's policies in the selection of his professional staff are of extreme importance. I am convinced that with rare exception the appointees should be young persons. To be sure, the present plan of organized psychiatric training, in which a young physician upon completion of his internship begins a definite program of specialized training, naturally results in the selection of young men for junior positions. Even in positions of greater responsibility relatively young men, if they possess plasticity of mind, are to be preferred. What is lacking in maturity of judgment is more than compensated for in creativeness. Long-continued service in the same institution is not always for the best interest of either individual or hospital. A reasonably rapid turnover of the professional staff is healthy. New blood should be injected into the organization if it is not to become static. The administrator, too, who has the reputation of placing his men in better positions will tend to attract young people. Not to promote men of long service when vacancies occur troubles the administrator and is frustrating to the individual whose seniority has not led to selection. To advance men into higher grades for the sole reason

that they have served a certain length of time is, however, poor administration and may lead to stagnation.

Having secured a desirable staff, the administrator must, as already suggested in the case of department heads, consider carefully the kind of organization under which his staff will work best. A staff does not function well in an atmosphere of autocratic dictatorship. The staff composed of young, relatively inexperienced physicians may create administrative problems that would not be present with a more experienced group, but the contributions which it makes to the hospital will outweigh these considerations. An attitude of autocratic dictation will result in a continuous disintegration of staff.

In certain important respects, there have been more significant changes in the training of the medical staff in the public mental hospital and in the objectives of its individual members during the past twenty years than in the preceding seventy-five. Prior to 1934 the training of the staff was, as has been indicated, largely by the apprentice method. A few members, perhaps irked by routine and by tradition, resigned to enter private practice. Rarely, on resignation, one combined private practice and teaching. There was no organized training in the study or in the treatment of mental disorders. Those physicians who were industrious, eager to learn and did so without direction and had an aptitude for administration received relatively rapid promotions in administrative responsibilities. For those lacking in incentive for personal and professional growth and those evasive of responsibility, promotions were slow. Not infrequently the administrative leader of the hospital partly through aptitude and partly through experience, became thoroughly competent in matters of hospital administration and saw that patients received excellent care and as much therapy as the more limited resources of the period permitted. Frequently, however, he had but limited knowledge of psychiatric literature and lagged in acquaintance with a developing dynamic psychiatry.

A hospital for mental disease is primarily an institution for treatment, but perhaps of almost equal importance it is a place for training and research. Because of its size the public mental hospital has abundant material for teaching, training and for research, preferably, perhaps, for clinical rather than for pure research. General medicine established the value of hospital training long before psychiatry became recognized as a medical discipline or psychiatric education along medical lines was attempted.

Since the establishment of the American Board of Psychiatry and Neurology in 1934, the situation in respect to the staff of the public mental hospital has undergone great changes and placed great responsibilities on the superintendent in the matter of providing training opportunities. No longer can a staff of young men be recruited as formerly, nor their training be left to their own devices and to apprentice methods. The superintendent who does not or cannot arrange for a formal and accredited training program for residents is hopelessly handicapped in securing a staff. The requirements of the American Board of Psychiatry and Neurology are therefore now providing the greatest stimulus for the instruction and training of young staff members ever experienced by the public mental hospitals. Unfortunately relatively few young psychiatrists who have passed the American Board examinations plan to remain associated with such hospitals indefinitely. For the most part they plan to follow private practice. They are prone to consider administration to be concerned merely with economic and disciplinary considerations and to believe that it is of little relevance or importance in clinical or scientific activities. As has been mentioned, it is hoped that the approaching opportunity for certification as a qualified mental hospital administrator will add to the attractiveness and prestige of administrative work.

Neither in matters concerning staff administration nor in other hospital departments will the administrator abrogate his authority, but he will be willing to discuss practices and policies and give respectful attention to suggestions. Because of their more intimate knowledge of the problems with which they are confronted, department heads, especially if they have been encouraged to assume responsibility, may have suggestions to increase efficiency of operation. They should be encouraged to solve problems at their own level. When the administrator closes his mind to the suggestions of assistants, he loses a valuable means of building morale and increasing loyalty. In general, the organization of his institution should not be too hierarchical.

A psychiatric administrator worthy to hold such a position will, of course, bear constantly in mind that the institution has only one justification for its existence—the treatment and care of the pa-

tient, the best treatment and care which the personnel of the hospital and the budget alloted to him will permit. It is not difficult for members of the allied professions—the psychologist, the social worker, the nurse, the biochemist, the clergyman and the occupational therapist—to realize this. These can usually be fused into a team, be imbued with the idea and spirit of an end to which each is helping from his own particular angle and in the light of his own special skills and knowledge. If a spirit of what may be called co-operative competition exists among departments, efficiency is increased. Others—the businessman, the construction foreman, the chief engineer and the farm manager—may verbally acknowledge this fact but it is not always easy for them to see that the work they are doing is a contribution to the treatment. If the administrator commands the respect and confidence of these necessary lay groups, a loyalty engendered by constructive leadership on his part, and a loyalty toward them based on their abilities and their willingness and desire to follow his policies, every administrative process will be recognized as serving the hospital's goal.

As has just been suggested, the mental hospital differs from other organizations in one very important respect. Every administrative act, every system set up, every method used in carrying out the purpose of the institution has a relatively profound effect upon the mental state of the patient. It is unquestionable that the administrative routine of the mental hospital plays a significant and important part in the progress of many patients. If this be true the administrator bears a special responsibility in relation to therapy. Practically all administrative policies have a potential or actual effect upon the mental state of the patient. The administrative service, therefore, has as one of its most important functions that of structuring the environment as a positive therapeutic agent. Doubtless Adolf Meyer had this in mind when he commented fifty years ago: "I am quite convinced that administrative duties deserve foremost attention." The general therapy of patients and hospital management are inseparable. The more nearly the hospital becomes an active living community, the more will its patients leave the institution. Hospitalization is no longer viewed as primarily a means of removing the patient from society or of keeping him busy in the hospital but as an opportunity to give him a sheltered milieu in which specific therapeutic experiences can be provided. These experiences will to no small degree depend upon the attitude of the hospital personnel toward him. This attitude will in turn be determined to no small extent by the institutional atmosphere created largely, and perhaps unwittingly, by the administrator.

The harmony which exists between hospital and patient may mean the difference between success and failure of treatment by the individual psychotherapist. If the psychiatrist comes to the patient as the representative of an institution which functions smoothly and with a minimum of friction, the rapport between its representative and the patient becomes stronger and more lasting. On the other hand, if the patient has been constantly irritated by tactless handling, exasperated by petty tyrannies and annoyed by inflexible rules enforced by poorly informed attendants and improperly trained nurses, he soon feels convinced that his welfare is not the first consideration. The attitude and quality of the nursing service is therefore a matter of great importance. Although the administrator may be hesitant to accept the responsibility for the attitude of the nursing and attendant personnel toward the patient, it is nevertheless his to a large degree. Thirty-five years ago Dr. William A. White, a superintendent who had a unique understanding of the troubled human personality and was also an administrator of rare sagacity, wrote: "An attitude on the part of the institution that sees in a restless irritability something to be repressed is not only unintelligent but invites a continuation of the very condition it is trying to do away with. It helps by the very repressive measures used to effect this end to create and continue that patient-institution disharmony upon which it is frequently based. In an institution dominated by the ideal of scientific knowledge, this ideal will so permeate the atmosphere and its effects will be so profound upon the staff, upon the employes, upon all in fact, that there will gradually grow out of such a standpoint a hospital finally and everlastingly free from the shackles of fear and ignorance, a hospital in which the patient will be received with an understanding attitude."

In organizing hospital procedures, one of the administrator's objectives should be to see that efforts are made to promote the patient's self-respect, sometimes characterized as the backbone of one's personality. For many reasons mental illness often involves the loss of self-esteem. Not only may this loss be a cause of mental illness

but it may also be the result. The unfortunate stigma still often attached to being in a mental institution may be communicated by thoughtless relatives, employes and friends, with the result that the patient may be deeply ashamed of his "nervous breakdown." Frequently one of the important tasks for the hospital is to aid the patient in re-building his self-respect. Essential to this is a gaining of the patient's confidence and trust, first in the personnel and ultimately in himself. As with the hospital's personnel, so with patients, the administrator's attitude should tend to one of selective permissiveness. Such an attitude may operate constructively and help to promote ego strength. It is desirable that the administrator shape his institutional policies so that the emphasis of the hospital should be more on health and less on fighting disease.

An extremely important duty to which the administrator should devote constant attention and in which he must secure the collaboration of all hospital personnel is that of promoting good public relations. This highly desirable attitude will usually follow if the public is treated with respectful consideration, with the little courtesies that promote good-will and if the patients receive the informed and solicitous attention which the professional status of physician and nurse presupposes. With regrettable frequency, however, the administrator has the unpleasant experience that after having assiduously sought to establish feelings of good-will and of confidence in the institution on the part of patients' families, a tactless assistant or employe may by ill-advised statements alienate these desirable attitudes. Expressed somewhat differently it may be said that one of the duties of the administrator is to seek to create a constant awareness of the value and meaning of the hospital to the community and vice versa.

Reference has just been made to the place of the administrator in the care and treatment of the institutionalized patient. Another place in which the psychiatric administrator may exert a profound influence upon both institutional and community psychiatry is in determining policies in the office of a central board of control to which state functions relating to mental health are assigned. The type of organization of that office and the authority given to a psychiatrist holding official position in it vary greatly from state to state. In recent years there has been a gratifying tendency to establish a department co-ordinate with other major departments in the organization of a state government. In some cases functions concerned with mental health are centralized in one of several bureaus, all of which operate under a department concerned with various public welfare activities. There are also numerous other ways of organizing these functions. It is pretty generally agreed, however, that in the larger states, at least, the state mental hospitals are most efficiently managed and mental hygiene education and activities best organized when there is a special department of mental health directed by a psychiatrist who has had long and varied administrative experience. In certain states, notably Massachusetts and New York, the central board of control uses its office as an agency for training selected senior physicians for administrative positions.

In many states the administrative code provides not only for a central board of control but also for boards of trustees for individual hospitals. The degree of authority delegated to these boards varies. In some states these boards have wide administrative authority while in others they are merely boards of visitors whose authority is largely limited to inspection and the submitting of recommendations to the central office. These boards represent the community from which the hospital draws its patients. Members of these boards are usually appointed by the governor. Some are selected because of their known interest in health and community welfare. In other cases the appointments may represent the payment of political debts. In either case the appointees have rarely had any experience in mental hospital administration and no special knowledge of the problem of mental disease. In that case the administrator in the matter of educating the board is confronted with both a challenging opportunity and a personal responsibility. If this task is adequately met, the administrator will have valuable coadjutors in interpreting the hospital to the community and in protecting it from possible political exploitation.

Perhaps it is permissible to indulge in a few scattered reflections concerning the public mental hospital administrator. Except for the teacher of psychiatry (and the latter operates in a somewhat different field) there is perhaps no one whose total contribution, direct or indirect, to psychiatry is potentially greater than that of such a person. His acts and his policies may profoundly influence the part which many hundreds of persons become able to play in life and what these persons come

to mean in the homes and lives of their families. The administrator cannot think of his position as a job but as one in which he has been entrusted with critical responsibilities, and that the manner and skill with which he discharges these may most intimately and extensively touch the lives of many persons. He should not permit a mass of administrative details to cloud his social consciousness and cause him to forget that the maladjustments to which we apply the term mental disease constitute one of many major social problems which should be studied from the standpoints of many disciplines. Psychiatry is not only a medical specialty but in various ways touches many departments of thought and experience.

To such an extent as is possible, the administrator creates, provides and maintains a physical and psycho-social environment which should as nearly as possible approximate home and community life. He encourages personal intercommunication with its frequent contribution in facilitating recovery and the eventual re-integration of the patient in society. The administrator should look upon the institution as a therapeutic community. While he recognizes its limitations in that respect, yet he should realize that there are many resources of therapy that are not fully obvious and that he should make all the various professional and subprofessional staff aware of these. While he must recognize the realities of institutional functioning, yet he should radiate a philosophy of optimism. He will make his personnel conscious of the fact that the existence of some rules is a necessity in any form of life, yet he must not make the institution a rule-ridden one having a master formula for everything. If the aim is one of conformity, there is a loss of individual initiative. There should be a flexible basis for recognition and encouragement. In the public mental hospital one may, as in so many other places, find lethargy or even intransigence to change. Sometimes this can be met by efforts to raise the confidence level in personal competence and by remembering that the acceptance of policy changes requires not only an intellectual but an emotional understanding. Perhaps some must be reminded that the hospital is not a business, the purpose of which is self-perpetuation, but that its product consists of human beings who have found new reservoirs of strength to face the stresses and to enjoy the pleasures of living.

Above all the administrator must remember that the institution will be the lengthened shadow of his own personality. More than any other one factor this will determine the atmosphere of the hospital. Perhaps this is why one sociologist, not a physician, yet intimately acquainted with mental hospitals through an unusually close association with many, spoke of some hospitals as being repressive, others as regressive, others as creative, and others, unfortunately, as paranoid. Partnership of administrator and personnel should be one of the aims of mental hospital management. Loyalty cannot be engendered by fear or by dictatorship but only through mutual loyalty and on mutual belief in abilities.

To return to discussion more relevant to the place of the administrator, especially the mental hospital administrator, in psychiatry—to a large, perhaps even to a major, extent the function of the administrator is to provide the environment, the organization, the equipment and the administrative procedures that promote the welfare and recovery of the patient. Most important of all, he must provide such professionally trained personnel as will understand emotionally sick personalities and by appropriate techniques, including psychological ones, bring such relief to the patient's emotional problems and disorders as will permit him to be a happy, mature and independent person.

Perhaps these very discursive remarks may be concluded by the statement that the administrator has fulfilled his function if he has provided conditions that will enable patients on leaving a mental hospital to reply as did a certain woman. This former patient, after complete recovery from a protracted mental illness, was asked what had helped her so much in the hospital. Her answer consisted of two words: "They understood."

With ovarian cancer, the first intimation of trouble is likely to be the presence of a lower abdominal mass with no pain or bleeding.

* * *

In the study of the common cystic and solid carcinomas of the ovary, not enough attention has been paid to the histologic grading which has been a useful, though not infallible, prognostic aid with malignant tumors in general.

* * *

The incidence of prostatic cancer at autopsy in men over fifty years of age is approximately 24 per cent.

An Evaluation of Changes in Test Behavior Following Psychosurgery

By John A. Larson, M.D., Leslie R. Witsaman, Ph.D., and S. B. Mitsos, M.S.
Logansport, Indiana

THIS report summarizes some of the results of a continuing study on the effects of lobotomy as measured by certain psychological tests. This research is not completed, but it is felt that some of the trends evident in the data are interesting and merit reporting.*

The procedure utilized in gathering the data was as follows: Patients were tested just prior to undergoing psychosurgery and tested again at three months, six months, and one-year intervals following the operation. The psychological tests used were the Wechsler-Bellevue Intelligence Scale for Adolescents and Adults, Rorschach Ink Blot Test, Bender-Gestalt, Draw-A-Person, and the Seguin Form Board, II. Each of these tests was given to each patient prior to and at each of the intervals following surgery.

Although testing was attempted on a great number of patients, it must be noted that many of these were inaccessable prior to the operation or their performance was so poor that it made objective scoring impossible. Such patients had to be dropped from the study.

Analysis of Data

For purposes of analysis it was decided best to report each test separately. Table I presents the quantitative data for all tests. Since there were virtually no patients for whom all four protocols were complete, the report is limited to the pre-surgery, three- and six-months post-surgery tests.

Wechsler-Bellevue Intelligence Scale.—Wechsler-Bellevue data are available on a group of patients who were tested prior to surgery and at the three-month and six-month postoperative intervals. The table illustrates changes in Full Scale, Verbal Scale and Performance Scale I.Q.

An interesting trend is manifested here in that there is an increase in Full Scale I.Q. from the preoperative test to the six-month postoperative test. This increase is due to an increase in Performance Scale. There is actually a decrease in the Verbal Scale I.Q. in this time interval, although this decrease is only a matter of 3 I.Q. points. The increase on the Performance Scale is 9 points and may be attributed to practice or learning.

Rorschach Ink Blot Test.—The Rorschach was administered and scored according to the method outlined by Beck. On this test there is a continuous but small decrease in R, the total number of responses. There do not seem to be any appreciable changes in any of the Rorschach scoring categories. Even the F + %, which may be interpreted as a measure of reality contact, is not evidenced as changing.

Draw-a-Person Test.—The Draw-a-Person Test consists, very simply of having the patient draw a human figure of each sex. Its purpose is that of yielding information concerning personality and adjustment.

In order to evaluate the test objectively, three experienced clinicians rated the three drawings of each patient (preoperative, three-months post, and six-months post) on a three-point scale. A rating of 1 indicated poorest adjustment as reflected by the drawing and a rating of three reflected best adjustment. The judges did not know the order of the tests, the dates administered, or the names of the patients.

Inspection of the mean ratings presented in Table I indicates a moderate, but consistent trend toward better adjustment, as viewed by the judges, in the postoperative drawings. This trend is present in both the drawings of the male and the female figure.

Bender-Gestalt.—This measuring device consists of copying certain standard geometric forms such as circles, squares, diamonds, et cetera. The data were evaluated in the same manner as the Draw-a-Person using three-point ratings made by three expert judges with the same conditions of anonymity applying to the drawings. Here again is found a moderate, consistent trend toward better adjustment, as viewed by the judges, in the post-operative drawings.

From the Logansport State Hospital, Logansport, Indiana.

*The test protocols on which this report is based were gathered at Logansport State Hospital from 1949 to 1953.

TABLE I. SUMMARY OF QUANTIFIABLE TEST INDICES

	Pre	Test Intervals 3 month	6 month
1. Wechsler-Bellevue (N-12)			
A. Full Scale I.Q.	92.2	92.0	97.4
B. Verbal Scale I.Q.	99.5	92.8	96.7
C. Performance Scale I.Q.	89.3	92.2	98.1
D. Sub-Tests			
1. Information	9.25	8.67	8.75
2. Comprehension	6.92	5.83	6.67
3. Digit Span	7.50	6.00	6.92
4. Arithmetic	7.17	7.08	8.50
5. Similarities	7.50	8.08	9.08
6. Vocabulary	10.00	9.25	9.08
7. Picture Arrangement	5.67	4.17	6.50
8. Picture Completion	6.50	6.33	7.25
9. Object Assembly	6.83	9.75	10.25
10. Block Design	6.83	7.42	7.75
11. Digit Symbol	4.83	5.42	6.17
2. Rorschach (N-14)			
A. R (total no. responses)	17.93	16.79	15.70
B. W% (% whole responses)	27%	33%	32%
C. D% (% large detail resp.)	67%	57%	58%
D. Sum C (sum color resp.)	3.32	2.04	2.11
E. M (human movement)	1.93	1.79	1.43
F. F + % (good form %)	62%	72%	66%
G. Sum T (sum texture resp.)	.61	1.07	.75
H. Sum Y (sum shading resp.)	1.18	1.07	.86
I. H (human resp.)	3.43	3.36	2.57
J. A (animal resp.)	7.86	8.00	8.36
3. Draw a Person (N-16)			
A. Female	1.62	1.98	2.39
B. Male	1.77	1.96	2.27
4. Bender-Gestalt (N-18)	1.59	2.01	2.38
5. Seguin Form Board (N-11)			
A. Mean time of fastest trial	26.91 sec.	23.09 sec.	21.45 sec.
B. Mean range between fastest and slowest trial	30.00 sec.	19.18 sec.	7.91 sec.

Seguin Form Board, II.—This test consists of placing a number of wood blocks of various sizes and shapes into their corresponding holes in a board. Three trials were given and time was recorded for each trial. This is one of the more common tests of visual-motor co-ordination.

Two methods of analysis were used with the Seguin Form Board data. Both are presented in Table I. First, the time in seconds of the fastest trial for each subject at each test interval was recorded. Then the mean for each interval was computed and recorded in the table.

The second method of anaylsis involved the recording of the difference between the fastest and the slowest time for each subject at each testing interval. The means of these differences were computed and are also reported in the table.

These data are among the most striking herein reported. There is a consistent decrease in mean time which is only moderate. However, the mean range—or variability—shows a substantial decline. This seems to indicate that although the decrease in time is only slight, there is a substantial increase in efficiency of performance on this task.

Discussion

On the basis of the test data we can draw the following conclusions about this group of patients:

1. There seems to be a few gross changes reflected in the measuring devices used following lobotomy.

2. In those cases where changes are manifested, such changes may be due to factors other than surgery, such as practice.

3. At a qualitative level, however, experienced clinicians seem to be able to discern an improvement in adjustment level in this group of post-lobotomy patients.

The difficulties of design and execution of research studies regarding the psychological changes concommitant with frontal lobe surgery are recognized in the study here reported. Certainly, the significance of test indices remains vague in the absence of a well-defined group of control subjects. The results have stimulated a re-appraisal of procedure and research design, and a further study is being undertaken which will utilize an improved test battery, a control group of subjects, and a more objective procedure for the gathering and recording of test and behavioral data.

To the degree that the projected study meets the often enumerated, but seldom fulfilled, scientific criteria applicable to such investigations, the measurement of changes following lobotomy will be accomplished.

The initial symptom in tumor of the testes is almost always a painless swelling of the testis accompanied by a sense of weight in the scrotum.

* * *

Every mass in the scrotum should be considered malignant until proved otherwise.

On bimanual palpation, a malignant tumor of the testicle feels heavier than other masses.

* * *

Orchiectomy, with resection of the spermatic cord, spermatic vessels and retroperitoneal lymph nodes should be carried out for all malignant tumors of the testis, a cure is anticipated.

Periodic Health Appraisal

Oral Cancer

By B. E. Luck, D.D.S.
Lansing, Michigan

TO CAVITY of the body is as accessible to complete examination as the oral cavity. Visual, digital, and roentgenographic examinations are readily performed. Examination of the stomach, rectum, bladder, and the uterus is much more difficult and requires specialized techniques.

Considering this, one might logically conclude that oral cancer should be detected earlier and therefore be more readily controlled than cancer occurring elsewhere. Unfortunately, many cases of oral cancer are seen late. Early recognition is the responsibility not only of the patient but of the dentist and the physician. The oral cavity and the tissues which are involved in its make up have long been a "no man's land." To the physician the mouth too frequently is a cavity through which he observes the tonsils and the throat. To many dentists the mouth is largely the gateway to the teeth and the jaws.

Cancer in the oral cavity is so favorably located for an early diagnosis that the condition may even be suspected by the informed patient. Such a diagnosis, however, must be confirmed by microscopic study of the biopsy specimen by a qualified pathologist. In such cases the dentist is in a unique position of being able to diagnose oral cancer even earlier than the physician for dental or oral problems brings the patient to him sooner than he would have occasion to visit his physician.

An examination of the oral cavity by either the physician or the dentist should be complete in every detail including extraoral regional examination since cancer of the oral cavity, like other cancer, tends to spread and metastatic masses may be found, most frequently in the submental, submaxillary and lower cervical regions. In a recent study in the state of Connecticut, metastases to the neck were noted on the first examination of 36 per cent of patients having head and neck cancer. Less than 5 per cent of oral cancer spreads below the clavicle. The presence of nodular masses or tumors in the neck is an immediate indication for a search for the primary lesion in the oral cavity or face.

A proper oral examination, both extraoral and intraoral, should proceed according to the following systematic sequence in order to assure completeness:

Extraoral Examination

1. Face.
2. Parotid and submaxillary salivary glands.
3. Submaxillary and submental lymph nodes.
4. Jaws and tempormanibular joints.
5. Neck and cervical lymph nodes.
6. Lips and corners of the mouth.

Intraoral Examination

1. Mucous membranes of lips and cheeks and papillae of the parotid ducts.
2. Floor of the mouth, sublingual gland and submaxillary duct.
3. Tongue, all surfaces.
4. Palate (hard and soft).
5. Tonsils and tonsillar pillars.
6. Posterior pharyngeal wall.
7. Retromolar area.
8. Gingiva and alveolar bone, peridontal pockets, and interdental areas.
9. Teeth.

Danger Signals of Oral and Facial Cancer

With few exceptions there is no pain at the beginning of any cancer. By the time the pain is evident the growth is usually far advanced. There are a few signals which may indicate the possibility of a cancerous growth which we should have in mind. They are as follows:

1. Any painless lump or thickening.
2. Any sore that does not heal and remain healed after two to three weeks.
3. Progressive changes in the color or the size of a wart, mole or birthmark.
4. Chronic progressive thickening of either the lips or oral mucosa.
5. Bleeding or discharge.
6. Swelling of the jaws, asymmetry of the face.
7. Difficulty in opening the mouth.
8. Sudden appearance of a swelling of the neck.
9. Difficulty in swallowing, persistent hoarseness or unexplained cough.

These signs indicate that something is wrong. It might be cancer.

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Editorial

MICHIGAN STATE MEDICAL SOCIETY ANNUAL SESSION
Civic Auditorium—Pantlind Hotel, Grand Rapids
Wednesday-Thursday-Friday, September 28, 29, 30, 1955
YOU are invited to attend the Ninetieth

INDUSTRIAL MEDICINE

MICHIGAN is a highly industrialized state, and with the projected increase in population we may expect that there will be a comparable increase in manufacturing. If the pattern of the past is followed, this increase will be predominately in small plants which obtain their medical service from physicians in private practice. Unless there is a reversal of form, first aid and treatment of injuries will be the only attention small plants will receive.

There appears to be no other field of medicine that has been given so little consideration by the medical profession as the well-rounded preventive program for small plants. Regardless of the reasons why physicians have shown so little interest in industrial health, the situation can be improved. Many plants are openly receptive to more complete medical service. It is with this in mind that the Committee on Industrial Health of the Michigan State Medical Society has asked its members, in co-operation with the Councilors, to stimulate interest in this field throughout the state. The devoting of this issue to the subject is for the same purpose.

Industrial health service in small plants can fulfill all of the purposes to promote the health and physical well-being of employes. According to the Council on Industrial Health, these objectives should be accomplished by (1) prevention of disease or injury in industry by establishing proper medical supervision over industrial materials, processes, environments and workers; (2) health conservation of workers through physical supervision and education; (3) medical and surgical care to restore health and earning capacity as promptly as possible following industrial accident or disease.

Certification of industrial physicians as specialists is an accomplished fact. There is a section on "Occupational Medicine" within the American Board of Preventive Medicine. These developments will interest younger physicians in this field in the future, but the present demands must be met by those now in practice.

As great as the need is for physicians to render more preventive medicine to industry, the public relations value cannot be overlooked. By becoming acquainted with problems of placing and utilization of personnel to the greatest benefit for the worker and production, there will be better understanding between industry and the medical profession. As a result, the labor force as well as management will be enlisted on the positive side of the public relations program MSMS has been putting into effect.

MEDICINE AND PSYCHIATRY

THE ever-widening horizon in the study and treatment of mental illness has focused public attention upon the psychiatrist. This publicity is a mixed blessing and has resulted in much confusion in terminology in newspapers, magazines, and television programs. The most important area of confusion appears to be in the professional titles of those persons working primarily in the field of mental illness. This applies particularly to the limitations of activity imposed by the professional training of ancillary personnel in the field. Controversy and complication develop as a result of those attracted to this field, who are medically untrained.

Recently, a national news service carried a statement, "Three psychologists were appointed by the Court to examine the 'accused.'" In a newspaper story, a psychologist well known in educational circles was called a "child psychiatrist." Frequently, a person who is referred to a psychiatrist for treatment of an illness objects to this referral with some such statement as, "I need a medical doctor—someone who can write prescriptions." Occasionally, a patient with a serious men-

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The Annual Session

Another year of progress of the Michigan State Medical Society will be completed at the Annual Session in Grand Rapids, September 25-30, 1955. The location of this meeting again provides a convenient meeting place accessible to the membership, especially those in the western and northern counties.

As usual, The Council meets Sunday, the day before the House of Delegates assembles for its annual business session (Monday-Tuesday). The Council, at this meeting, reviews last minute committee reports and prepares its supplementary annual report for the House of Delegates.

On Monday, the House of Delegates opens its annual session. The business conducted by the Delegates should be of prime importance to our entire membership. Officers, Councilors and AMA Delegates elected by the House constitute our official leadership for the coming year. Our Delegates, representing the membership of the various counties, provide the truly democratic representation in the affairs of our Society.

The House, by resolution and debate, will decide the policies of our Society. All Delegates are urged to report back to our componet societies the decisions reached at this annual session.

Following the two-day meeting of the Delegates, the profession is then offered a great postgraduate opportunity. Three days of scientific sessions, covering a variety of topics, are presented and discussed by outstanding medical leaders of national repute.

Doctor, how can you pass up this opportunity? Can you afford to stay home and deprive yourself of this stimulating presentation of current medical progress? Your patients will not only grant you leave, but they expect you to keep up to date in the interest of better medical service.

Keep abreast—Keep alive—Attend MSMS in '55!

President's Message



Robert H. Baker

President, Michigan State Medical Society

MEDICINE AND PSYCHIATRY

(Continued from Page 970)

tal illness seeks help from the "marriage counselor" instead of from the psychiatrist, and this on the recommendation of his lawyer or even his family physician. Treatment of psychosomatic disease or of psychogenic symptoms by the psychiatrist may be misunderstood or criticized by his own medical colleagues.

It is important for the medical profession to undertake a program of better public education. The medical profession should take the initiative rather than permit the only avenue of information to be through the medium of television, newspapers and magazine articles. We, as physicians, need to know the capabilities as well as the limitations of our non-medical professional confreres (psychologists, social workers, counselors, et cetera) who are extremely helpful in the field of mental health if they work under the supervision and guidance of the psychiatrist.

The public should have a better knowledge of the training and capability of the qualified psychiatrist. The psychiatrist, like any other physician, is trained in scientific medicine. He must satisfactorily complete a full medical course and a rotating internship in a recognized hospital. His specialty training requires three years of approved residency in a recognized training hospital and an additional two years of experience limited to the practice of medicine in the field of psychiatry before he is qualified to take the certifying examination as a specialist. This basic training must include physiology and pathology of the central nervous system as well as the study of psychology and psychotherapy. The use of such physiological treatments as insulin, electroshock, and many of the new drugs by the psychiatrist requires much more than a superficial knowledge of general medicine. The numerous advances in medicine require that the psychiatrist serve in his capacity as a physician, especially in his readiness to recognize the signs and symptoms of any disease process. Psychiatric research is closely integrated with physiological and pathological studies. The medical educator is keenly aware of need for comprehensive medical training. It is the responsibility of the physician to help his patients to understand the importance of the psychiatrist who is medically trained in the treatment of mental illness. The wise practitioner of medicine will observe and alert his colleagues and patients to the dangers of the nonmedical approach to a serious medical problem—mental illness.

RAY W. WAGGONER, M.D.

DOCTORS' SURPLUS MONEY

WORKING on the theory that doctors are likely to have some surplus money, almost every special interest tries to help him spend it. Chambers of Commerce in many of our cities urge their members to make no contributions except after a complete survey to be sure the project is really worthy.

The medical profession has its peculiar demands and should have certain individual determination to assure that our donations are rightly placed where we know the need is justifiable. For years, Michigan doctors of medicine have generally recognized certain outlets for the money they may donate. Many years ago, the doctors of Michigan established the Michigan Foundation for Medical and Health Education, Inc., and many gifts were made—some in large amounts, others very modest, all well received and all well used. Lately, the Foundation has been loaning money to students who apply. Since G.I. aid appears to be about ended, there is need for more available money which can be distributed to students needing help.

In a recent editorial, we commented on the suggestion of William LeFevre, M.D., Councilor of the Tenth District, that we each recognize an obligation to help in this worthy cause, and give a "ten spot" on our birthday. If each of our 5800 doctor members would do so, quite a sum might be used in educating at least a dozen other doctors for rural service. Earl I. Carr, M.D., of Lansing, President of the Foundation, told the Editor that the Foundation could also handle sums given for specific purposes; for instance, memorials for special research for cancer, tuberculosis, multiple sclerosis, the money being added to sums now available in the nature of augmented help for students who are doing such research.

Another Michigan interest is the completion of the Beaumont Memorial on Mackinac Island. The old American Fur Company building has been restored, the original foundation still being part of the building. The Michigan State Medical Society has completed the restoration and placed it in the custody of the Mackinac Island State Park Commission. We are all proud of what we have

accomplished, but there is still about $10,000 to be gathered to make final payment of the costs. Many of our members have given once, some of them estimating what the proportional amount would be for each member and giving that amount, but not enough to cover those not giving. We are short, and wish every member would again subscribe a little so the project can be paid for, and so as many names as possible, preferably all, be inscribed on the rolls.

Other Objectives

We have listed two of our Michigan projects worthy of support whenever our individual members can spare a few dollars to further a good cause. There are also two activities of the American Medical Association. First is the American Medical Education Foundation. We have seen the willingness of our federal government to acquire control over many activities on the national level, which soon become so nationalized that the independent nature is forgotten. We are especially fearful of the field of medical education. The Supreme Court, in a famous case, ruled that whatever the Government subsidizes, it may control. For many years, the medical schools have been struggling to expand, meet the demand for more doctors, give improved educational advantages, and expand the teaching staff. These all cost immense sums of money, many times what the students pay in tuition. Most of our medical schools are supported by the states or cities and find additional money limited. A long time ago, intimation was made that subsidies might be available from the federal government. The American Medical Association, fearful of ulterior results, has urged our medical men to contribute to their Alma Maters as a gesture of loyalty, a means to conserve the job of medical education as private enterprise, and a repayment of obligations inherent in their partially donated medical training.

It has been estimated that about thirty dollars a year from each doctor would not be an unreasonable burden, but would place the medical schools on an independent and well-equipped plane of operations. Why not accept this added responsibility? Our medical schools have provided our own education, can we not reciprocate?

Much effort has been made to counter the efforts of the World Health Organization of the International Labor Organization which is a socialistic group receiving support from the United States Government, but actively promoting the establishment of socialized medicine throughout the world. The American Medical Association has consistently opposed that concept.

The World Medical Association was organized through the AMA and has spread very satisfactorily about the world. There is an American Committee or group working with the world group, sponsored by the American Medical Association. Every Doctor of Medicine is privileged to join. The fee is ten dollars, and can be sent direct to the Executive Secretary, Louis J. Bauer, M.D., Hampton, N. Y., or through the headquarters of the AMA at 535 N. Dearborn, Chicago.

We have invited to the attention of our members four worthwhile causes which, in all, could be covered by sixty dollars, just about the amount the automobile labor unions have been collecting from every one of their members in preparing for a strike to enforce their demands. Think it over—the unions, being prepared, have won their objective with not too severe a struggle. Were we prepared in the same manner, the medical profession could do many works of good, here in Michigan, and throughout the nation and the world. These gifts are remarkably small, considering the tremendous import.

AN EVALUATION

NEARLY 50 per cent of the members of the Michigan State Medical Society have entered the private and independent practice of medicine within the past twenty years. They have no personal knowledge of the problems and difficulties in the practice preceding that time. We were just emerging from a period of post-World War I depression, with empty offices, long hours, every day, evenings and Sundays—so as not to miss a single call. Years were needed to build a stable and livable practice.

That was followed by the great depression of the thirties—years which tried men's souls. Never before had the Federal Government taken over the relief problems. We saw fabricated work, men raking weeds and then raking them back, digging, road building. Men with no regular work were set at something and being paid $16.00 a week as an established minimum, but adequate wage upon which they were to support their families. Those who had regular jobs got very little more.

Doctors were glad to take care of every patient

who called them, hoping to get some pay from the more fortunate souls, and relief doles for the others. Patients needing hospitalization never had money left for the doctor. These days of stress and uncertainty lead inevitably to the solution the world awaited, the non-profit, hospital and medical plans. Our far-seeing leaders begged the insurance companies for help, but were told medical and hospital care was uninsurable. Being unconvinced, our medical pioneers established our own plans and made them work. Nature seems always to have a solution for each intolerable condition which develops. The Blue Cross and Blue Shield went far to re-establish the practice of medicine as a healthy avocation.

After fifteen years of depression—starvation wages accepted as adequate for the support of families, our Service plans for families earning up to $2500 a year were luxury. The practice of medicine came out victorious over its doldrums. The days of 50 per cent and at most 70 per cent collections, and the doctor considering himself fortunate, were passing. Insurance was paying increasingly larger percentage of our patients' bills and with no collection effort.

A CHALLENGE

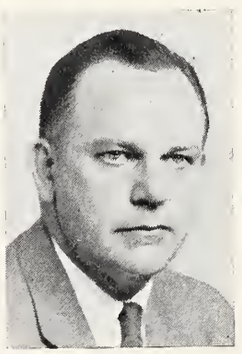
CURRENTLY, every doctor who wishes to be is busy, and his patients are in general very considerate of his spare hours. From 60 to 70 per cent of the people have some form of insurance which pays the most part of their medical and hospital costs. Blue Cross and Blue Shield, alone, cover half of our Michigan patients—we should be and are thankful, but a new prospect faces us, a change is in store.

Every member recently received a letter from Robert L. Novy, M.D., President of Michigan Medical Service, outlining the new contracts with the large automobile industries' employes. Other industries will surely follow. These contracts were demanded as a part of the recent guaranteed annual wage settlements, and call for a $6,000 ceiling of complete coverage—"full payment." Our members must follow through, and make the contracts work. They are now on trial. The business will go to the commercial companies, if our service is not according to the book. We have no control over such companies, and their allowances for service will be determined by their actuaries.

Our time of trial is before us. We can continue the glorious progress we have made, or we can wreck the whole structure by alienating the automobile industry and probably also the steel industry. We thoroughly believe that the doctors should accept the new rates as full payment. New rates must necessarily be established, and they should be adequate. Organized labor will raise no question, because industry is expected to foot the bill.

The new schedules must not price us out of business. The smaller concerns must also use these plans and will have to pay the premiums out of limited profits. We are definitely in a squeeze. If we do not co-operate in this new concept, we could conceivably return to the regimen of the older times before insurance. Fifteen to twenty years ago, the medical profession solved our problems to satisfaction, and we can do it again. We believe the coming problems just as significant—it's up to us!

NEW COUNCILLOR



G. THOMAS McKEAN, M.D., Detroit, has been appointed by the President and confirmed by the Executive Council to fill the vacancy on The Council caused by the resignation of W. D. Barrett, M.D., Detroit. Dr. McKean was born in Detroit in 1908, received his A.B. degree from the University of Michigan, and his M.D. from Harvard Medical School. Internship and residency training were received at Boston City Hospital and University Hospital, Ann Arbor. He was licensed in 1936, and was certified by the American Board of Internal Medicine in 1942.

Dr. McKean is Clinical Associate Professor of Medicine, Wayne University College of Medicine; attending consultant, Dearborn Veterans Administration and Herman Kiefer Hospitals; staff member, Harper and Receiving Hospitals, Detroit.

From 1948-1950, he was Secretary of the Wayne County Medical Society, in 1949, Chairman of the Medical Section, Michigan State Medical Society, and in 1950, he was appointed to the Michigan State Sanitorium Commission. He is a Fellow of the American Medical Association and the American College of Physicians, a member of Wayne County Medical Society, Michigan State Medical Society, American Trudeau Society, Detroit Academy of Medicine, Detroit Surgical Association, and Detroit Medical Club.

George J. Curry, M. D.

An Incomprehensible Enigma

George J. Curry, M.D., is an enigma even to those who know him best. His is an elusive personality deeply imbedded with principles and tradition, and he is as unpredictable as the March wind. When one begins to feel that he knows George Curry, he suddenly discovers a stranger. He is dynamic and intensely aggressive, yet paradoxically mellow with a wealth of sentimentality.



George was reared in Michigan's Upper Peninsula by his grandmother. Although she was pitiably poor, she possessed boundless philosophical riches. It was from her that he inherited and developed those traits of character which a male must possess in order to be a man.

His early education was made possible by working at odd jobs and later in the iron mines.

He developed a strong love for music. At fifteen he was so proficient with the trumpet that he was known as "The Boy Wonder" of the Upper Peninsula. He was sent to Chicago where he auditioned for John Philip Sousa. Because of his youth, however, the eminent musician advised him to resume his studies rather than proceed with a musical career. He still maintains a strong love for music. Given a good pianist or a barber shop quartet he can listen to his favorite songs for hours. Until a few years ago he sang as a member of a quartet called "The Four Horsemen."

His trumpet supported him through the University of Michigan Medical School. After graduation he interned and received his general surgical training at Long Island College Hospital, Brooklyn, New York.

George Curry's interest in the surgery of trauma began many years ago when he felt that the management of the injured person, particularly those with fractures, left much to be desired. Since then he has been intensely interested in improving the care of the injured.

Over twenty years ago he organized the Section for the Surgery of Trauma at Hurley Hospital in Flint. This Section has gradually expanded so that at present it is the second largest in the state and has attained national recognition. Under his direction as Chief of the Section, it is effectively utilized for teaching.

One of his finest contributions to the care of the injured resulted from his interest in their transportation. This arose when he saw accident victims carted to the hospital without splints and with dangling fractured extremities. With relentless vigor and with the enthusiastic direct assistance of George A. Hays, M.D., City Health Commissioner, he sought and obtained an ordinance requiring ambulance attendants to be certified as to their proficiency. Administration of the ordinance is enforced by the City Health Commissioner. Specialized instruction is given by the local Red Cross. A dramatic improvement has resulted. The *Saturday Evening Post* will publish this story in a forthcoming issue.

George Curry is a member of the American College of Surgeons and has been active in its affairs for many years. He is now serving his third term as a member of the Board of Governors and was recently elected president of the State Chapter.

He has been influential with various committees on trauma of the American College of Surgeons for two decades. He has been Chairman of the Flint and State committees on trauma and Chief

of Section Five which includes Ontario, Michigan, Ohio, and Kentucky.

Six years ago he was made a member of the National Committee on Trauma of the American College of Surgeons. He is now Chairman of the Subcommittee for Regional Committees on Trauma of the United States and Canada. He is also Chairman of the National Subcommittee on Transportation of the Injured.

He is a founder member of the Central Surgical Association, a founder member and Past President of the Flint Academy of Surgery, and he belongs to the American Association for the Surgery of Trauma and the Detroit Academy of Surgery.

He has published many articles and devised several surgical instruments and appliances.

For many years George Curry has had a dream concerning Hurley Hospital and graduate medical education. He felt that graduate medical education should be decentralized because of the many opportunities for this type of training in hospitals other than large teaching centers. It was through his sustained efforts in co-operation with the University of Michigan Medical School that an approved residency for the training of young surgeons was established at Hurley Hospital ten years ago. This not only produced well-trained surgeons but also elevated the quality of patient care. He has been Chairman of the Committee of Graduate Training in Surgery since its inception at Hurley Hospital.

George Curry is an inspiration to many who have known him. Because of his enthusiasm, which is both chronic and contagious, he stimulates young men to learn the art and science of surgery. His genuine warmth and humility coupled with his intense aggressiveness endear him to the hearts of these young men.

He believes that one must know more than just science to earn the title "Surgeon." The mechanics and techniques of surgery can be learned rapidly and easily by any reasonably intelligent person, but the morals and ethics of surgery can only be acquired through a painfully prolonged process.

He states, "We do not train young surgeons. We merely create the opportunities and a state of inquiry by which they train themselves under organized supervision."

George Curry's teaching has emphasized more than just the techniques of surgery. He believes there are certain intangibles, those nebulous things in the human equation which are so difficult to describe, which make a good surgeon.

He has taught his residents about the educational hand. The thumb is the most important digit and stands for work. This makes up half of the value of the educational hand. The index finger stands for honesty without which the work would be worthless. As the index finger works with the thumb, so do work and honesty go hand in hand. The other three fingers which stand for loyalty, enthusiasm, and initiative complete his picture of the traits of a good surgeon.

Because of their contact with this man, the surgical residents at Hurley Hospital have founded The George J. Curry Surgical Society. This society is dedicated to preserve and promote the principles and ideals which he has instilled into the young men with whom he has come in contact.

He enjoys his home with his lovely wife, Ruth, and he has two charming daughters. Among his hobbies are golf, fishing, and gardening.

With all of these achievements George Curry still remains a mysterious, unpredictable person. There is a tool shed in his back yard which bears looking into.

—Sydney N. Lyttle, M.D.

ORAL CANCER

(Continued from Page 969)

I would be remiss if I did not take this opportunity to ask for a continuance of the co-operation which has existed between the two professions of dentistry and medicine. It has been said that the problem of treating and diagnosing cancer is the exclusive problem of the medical and dental professions. The dentist's knowledge of the oral cavity and the surrounding supporting tissues can be of inestimable value in the prevention of, the detection of, and in the treatment of these lesions. An interchange of knowledge will do much to reduce the mortality rate of this type of lesion.

Floor Show Entertainers — MSMS 90th Annual Session

State Society Night *Pantlind Hotel - Grand Rapids* *September 29, 1955*



MARVIS — A very lovely and talented girl accordionist.



CLARENCE SLOITER—a most novel and unusual comedy attraction recently presented in the Empire Room of Chicago's Palmer House with outstanding success. His interpretation of comedy magic act in which the magician is enjoying his "night out" results in many guffaws. This is an outstanding act.



SONNY MARS — Master of Ceremonies and Outstanding Comedian. In the style of Danny Thomas, he's always a big hit. Just closed Chicago Theater and has been featured on coast to coast television in the Comedy Hour.



TULARA LEE AND COMPANY—Man and girl hilarious comedy attraction in which comedy singing and comedy acrobatics are utilized to the enjoyment of the audience. Audience participation makes this act a riot of laughs.

The illustrious James S. Kolkowski and his Orchestra will entertain during this floor show and for dancing (10:30 p.m. to 1:30 a.m.).

You and Your Lady Are Invited!

Annual Reports

REPORT OF ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, JUNE, 1955

This session was held June 6 to 10 in Atlantic City with a total over all registration of over 30,000, being one of the largest.

The House of Delegates' sessions were held June 6 to 9, inclusive, eighty resolutions were presented and studied.

Dr. Elmer Hess, President-elect, assumed the chair, with Dr. Dwight Murray, Chairman of The Council for several years, being unanimously named as his successor. Dr. Millard Hill of North Carolina was elected Vice President. Dr. James Reuling, Speaker of the House, was named as Dr. Murray's successor on the Board of Trustees, with Dr. Vincent Askey of California being chosen as speaker to succeed Dr. Reuling. Dr. Louis Orr of Florida was named Vice speaker.

The House of Delegates voted the 1955 Distinguished Service Award to Dr. Donald Balfour of Rochester, Minnesota. Dr. Balfour has been with the Mayo Clinic for nearly fifty years; at present, he is director of the Mayo Foundation for Medical Education and Research. Due to Dr. Balfour's illness, his son, Dr. William Balfour, accepted the award for his father.

The Clinical Session for this year will be held in Boston the first week in December. The 1956 Annual Meeting will be held in Chicago next June.

The scientific sessions were held daily, Monday through Friday, with emphasis on Cancer, Mental Health, Poliomyelitis, Geriatrics, Cardiovascular Disease and the newer drugs.

The specialty groups evidenced more interest than usual on the economic problems facing them in addition to their scientific discussions. This was especially so of the ophthalmologic section, in which the majority felt that the former ruling of the Judicial Council prevented them from maintaining as close a relationship with their patients as they deemed necessary. Therefore, they voted to widen the scope of the judicial ruling supported by the House of Delegates. From now on, this will permit them to follow to completion, in their own offices if they so choose, the examination, prescribing and fitting of glasses. Dr. Wilfrid Haughey of Battle Creek was very helpful in discussing this question forcefully and factually before the Reference Committee. Dr. R. H. Pino, of Detroit, also aided the Reference Committee in its deliberations on this topic.

In other phases, the Board of Trustees was authorized to appoint a committee for continuing study of economics in its relation to medicine. This follows out the Pino resolution to have the American Medical Association keep abreast of the changing economic picture. They have increased the personnel of the executive offices at this time.

The suggestion of the Ad Hoc Committee on Intern Study, not to deny recognition to teaching hospitals unless they failed to obtain 25 per cent of their quota for two successive years was passed. The former rule dropped hospitals if they failed to obtain 66.6 per cent for two successive years.

The subject of accreditation of hospitals came up for considerable discussion. Many felt that the hospital groups in certain areas were usurping the medical profession's perogative of being the predominant group to handle this question; therefore, a resolution was passed authorizing a special committee of the House of Delegates appointed to study and survey the work of the committee on accreditation and return suggestions at the next session. The committee members were not to be those who are on the Joint Committee on Hospitals or Hospital Accreditation committee at present.

A special committee to study medical practices, appointed some time ago, reported their findings in a seventy-page report recently to the Board of Trustees. This group, later on, gave certain portions of the report but withheld the report as a whole, due to the fact that it contained some critical material with direct quotations. The Board felt there might be some partial use of the material by those who wish to criticize and put different light on portions of the report.

Several members of the committee felt that the report in its entirety should be made available to all the members of the house; therefore, motion was made that action on the report be held over until the next meeting; in the meantime, all members of the House were to receive this report for study. Dr. Murray, Chairman of the Board, stated it was not the intention of the Board to withhold knowledge from the members of the House, but rather they felt it judicious not to publicize quoted material that might be construed adversely; further, all members were welcome to read the report. A subsequent report was the choice, so the motion was passed.

Director Draper of the United Mine Workers had designated his consulting group to pass on those who were to be admitted to this organization's hospitals, this method was disapproved by the House with a recommendation of free choice of physicians in these cases. This action was unanimously passed.

The question of voluntary social security had been discussed by county and state groups, especially by the younger men in many cases. The Michigan delegation, with its executive officers, felt that while the American Medical Association was against compulsory social security and successfully opposed it, they at no time disapproved the principle of allowing doctors of medicine to participate in Federal Social Security on a voluntary and self-employed basis; therefore, a bill was put in by us with the hope the American Medical Association would at least discuss this situation more freely in the journals for the benefit of those who are interested. The House disapproved of the American Medical Association's asking for a recommendation to the Congress of the United States to change the present status of Doctors of Medicine in relation to Social Security for fear that by once opening up the subject, it might weaken the American Medical Association's position on it and interfere with other legislation that might favor doctors, upon which they are now working. The House, however, did recommend the American Medical Association's thoroughly discussing this subject in THE JOURNAL in the near future. The fact that something of an enlightening nature will be forthcoming satisfied us to a certain extent.

The subject that provided the most discussion was the osteopathic question. Dr. John Cline reported, after nearly a three-year study, that his investigating committee, which visited five of the six osteopathic schools, found they were inferior to our medical schools and needed help both didactically and financially. It resolved into one of two things: either suppress them legally or elevate their standard by allowing Doctors of Medicine to teach in their schools. The resolution did not advocate recognizing osteopaths or osteopathy *per se*. After considerable discussion in committee, a majority and minority report reached the floor of the House. The minority report, which was adopted by the House of Delegates, stated:

"One member of the Reference Committee was completely satisfied that an appreciable portion of current education in colleges of osteopathy definitely does con-

stitute the teaching of 'cultist' healing, and is an index that the 'osteopathic concept' still persists in current osteopathic practice. Since he cannot, with good conscience, approve the recommendation that doctors of medicine teach in osteopathic colleges where 'cultism' is part of the curriculum, he respectfully makes the following recommendations to the House of Delegates:

"1. That the report of the Committee for the Study of Relations Between Osteopathy and Medicine be received and filed; and that the Committee be thanked for its diligent work, and be discontinued.

"2. That if and when the House of Delegates of the American Osteopathic Association, their official policy-making body, may voluntarily abandon the commonly so-called 'osteopathic concept,' with proper deletion of said 'osteopathic concept' from catalogs of their colleges; and may approach the Trustees of the American Medical Association with a request for further discussion of the relations of Osteopathy and Medicine, then the said Trustees shall appoint another special committee for such discussion."

The majority report of the reference committee, which was rejected by the House, made the following recommendations:

"Your Reference Committee, after a study of the report of the Committee for the Study of Relations Between Osteopathy and Medicine and the study of other evidence submitted, is not completely satisfied that the current education in colleges of osteopathy is free of the teaching of 'cultist' healing.

"In view of the desire to elevate the standards of teaching in colleges of osteopathy, your Reference Committee recommends approval of the recommendation of the committee that doctors of medicine may accept invitations to assist in osteopathic undergraduate and postgraduate medical educational programs in those states in which such participation is not contrary to the announced policy of the respective county and state medical associations. Such teaching services would be ethical.

"Your Reference Committee approves the recommendation of the committee that the House of Delegates request state medical associations to assume the responsibility of determining the relationship of doctors of medicine to doctors of osteopathy within their respective states or request their component county societies to do so.

"Your Reference Committee recommends that a committee be appointed at the discretion of the Board of Trustees to confer with representatives of the American Osteopathic Association concerning common or interprofessional problems on the national level."

The minority report was adopted by a vote of 101 to 81.

It is quite evident that we shall hear more about this question in the future.

Among a large number of actions on a wide variety of subjects, the House of Delegates also:

Commended the "Medic" television program;

Reaffirmed its previous recommendation that the United States withdraw from the International Labor Organization;

Approved the Headquarters Survey Report, which included the statement that "the only public relations program of any permanent value is the private and public relations of the individual doctor;"

Expressed regret that the Hoover Commission saw fit to alter or eliminate some of the recommendations of its Medical Task Force;

Reaffirmed its opposition to extension of the Doctor Draft Law;

Recommended the creation of an AMA Committee on Geriatrics;

Warned against the danger embodied in state legislative proposals designed to restrict the entire field of visual care to the profession of optometry.

Each year the work of the House goes more intimately into all phases of scientific and economic medicine which is a very healthy state for the American Medical Association.

Respectfully submitted,

Michigan Delegates to the
American Medical Association
W. D. Barrett, M.D., Detroit
J. S. DeTar, M.D., Milan
W. H. Huron, M.D., Iron Mountain
R. A. Johnson, M.D., Detroit
R. L. Novy, M.D., Detroit
W. A. Hyland, M.D., Grand Rapids, Chairman

ADDENDUM

The Chairman wishes to express his personal appreciation to the delegates from Michigan, previously listed, and to the alternate delegates: W. W. Babcock, M.D., Detroit; O. J. Johnson, M.D., Bay City; C. I. Owen, M.D., Detroit; E. F. Sladek, M.D., Traverse City; J. R. Rodger, M.D., Bellaire; and G. W. Slagle, M.D., Battle Creek.

And to the officers: R. H. Baker, M.D., Pontiac, President; W. S. Jones, M.D., Menominee, President-Elect; William Bromme, M.D., Detroit, Chairman of the Council; L. Fernald Foster, M.D., Bay City, Secretary; Wilfrid Haughey, M.D., Battle Creek, Editor; Wm. J. Burns, LL.B., Lansing, Executive Director; J. Joseph Herbert, Manistique, Legal Counsel; and H. W. Brenneman, Lansing, Public Relations Counsel.

To these and many others of the Michigan State Medical Society, I wish to express my appreciation for their wise counsel and advice. Also the Delegates and Alternates, through me, wish to express appreciation to you, the members of the House of Delegates, for allowing us to represent your views in our parent organization, the American Medical Association.

Respectfully submitted,

William A. Hyland, M.D., *Chairman*
Michigan Delegates to the
American Medical Association

ANNUAL REPORT OF THE COUNCIL—1955

The Council has held three sessions totalling seven days, and the Executive Committee of The Council convened nine days (to September 25, 1955), a total of twelve meetings up to the 1955 Annual Session of the Michigan State Medical Society. This represented a total of 121 hours of deliberations—equivalent to 15 days and one hour on an eight-hour working basis—but as usual, not including additional time necessarily spent by the 25 members of The Council going to and returning from meetings which have been held in the various Councilor Districts.

All matters studied (978 items) and recommendations made by The Council's 21 Committees as well as by the Society's 20 Committees, and all business of the Society, were routinely referred to The Council or its Executive Committee for consideration and action.

Membership

Membership as of June 30, and as of December 31, from 1935 to 1955, is indicated in the following chart:

	1935	*1940*	*1945*	*1950*	*1953*	*1954*	*1955*
June 30	3,410	4,401	4,425	4,881	4,977	5,111	5,503
December 31	3,653	4,527	4,686	5,114	5,330	5,787	——

The figures for 1955 include 4,976 Active Members, 177 Emeritus and Life Members, 49 Retired Members, 294 Associate and Military Members, and 7 Honorary Members.

Finances

As in the past, the first item of new business on the monthly agenda of The Council or its Executive Committee is "Study of Monthly Financial Reports." Every

thirty days, therefore, the Society's financial picture is reviewed and governing policies established. In addition, the Finance Committee meets periodically to study and to advise The Council on particular fiscal questions.

The auditor's report for 1954 plus the budgets of the Society for 1955 were published in JMSMS, March Number, beginning on Page 356. Members are invited to acquaint themselves with the financial status of their State Medical Society and to offer suggestions; these always are truly appreciated. As of June 30, 1955, 4,976 members paid Society dues amounting to $124,-137.50. This was on the basis of $25.00 per member allocated to the General Fund as established by The Council in January, 1955, and includes some payments by new members of portions of a year. Also, $31,034.41 accrued to the Public Education Account, $17,379.11 accrued to the Public Service Account and $26,068.91 accrued to the Professional Relations Account for current activities as directed by The Council in January, 1955. The sum of $9,945.50 was set aside in a Building Fund as well as $7,459.13 in a contingent surplus fund. A brief financial résumé of each of the MSMS activities as of June 30, 1955 is, herewith presented:

Financial Report for Period Ending June 30, 1955

ACCOUNT	*On Hand 1/1/55*	*Income to 7/1/55*	*Expenses to 7/1/55*	*Balance on Hand 7/1/55*
General Fund	$ 73,452.24	$126,629.91	$ 86,939.72	$113,142.43
Annual Session	—0—	22,170.00	2,660.52	19,509.48
Mich. Clinical Institute	—0—	12,746.00	13,816.58	—1,070.58
The Journal	—0—	42,892.37	31,508.80	11,383.57
Public Education	76,816.26	31,161.17	18,261.82	89,715.61
Public Service	3,330.00	17,404.63	10,679.40	10,055.23
Professional Relations	6,545.92	26,106.91	15,500.63	17,152.20
Public Education Reserve	30,000.00	—0—	—0—	30,000.00
Rheumatic Fever Control	13,645.55	16,025.00	9,522.56	20,147.97
Surplus from Dues	29,390.82	7,459.13	—0—	36,849.95
Building Fund	11,770.04	9,945.50	2,799.09	18,916.45
Beaumont Memorial Fund	—10,480.29	200.00	—0—	—10,280.29
TOTALS	$234,470.54	$312,740.62	$191,689.14	$355,522.02

The AMA dues collected by county medical societies, forwarded to MSMS, and then mailed to the American Medical Association during the six months to June 30, 1955, totaled $121,837.50. The very high percentage of AMA dues being paid by MSMS members (97.9%) is to be noted; The Council feels that the members of our State Society are to be congratulated on their tangible co-operation with and support of the American Medical Association. A résumé of the financial condition of the Michigan State Medical Society as of August 31, 1955, will be presented to the House of Delegates at its opening session of September 26, 1955, as a part of The Council's Supplemental Report.

Thus far in 1955, $35,000.00 of the funds of the Michigan State Medical Society have been invested in short-term securities. These funds are invested during the early part of the year when income resulting from dues payments is high and thus earn interest for the MSMS rather than having the funds remain idle in a commercial account. These securities mature later in the year when income is low and expenses continue at the regular rate. Any securities maturing, the funds from which are not immediately required, will be reinvested upon the advice of the Finance Committee.

It should be noted that the Beaumont Memorial Fund is still in the red by $10,280.29. This amount was advanced by the Michigan State Medical Society to complete the building of this historical project. In addition, the Society paid expenses of the Beaumont Memorial Committee of $4,199.56 over the past three years.

The Journal

During the first half of its existence, the Michigan State Medical Society published a yearly book of transactions, but from 1902 it started THE JOURNAL as a monthly magazine which brought messages, information, news items, and scientific papers to the members every month, making for a much more closely knit medical profession.

The wisdom of Dr. Andrew P. Biddle, first Editor of THE JOURNAL, and The Council serving at that time, has been abundantly proven by the great progress in medicine, medical economics, social problems and community service from not only the leaders, but the profession in general.

It has been the privilege and duty of THE JOURNAL to pass on to our members, many new and valuable public relations and public service ideas. Today there is no more public spirited group than the medical profession of Michigan, carrying out the purposes of its establishment.

THE JOURNAL has always published the best of scientific material available, research, and committee reports, and has kept its readers well informed. It has also studied and presented the newest thought and the latest advances in all manner of improved services, adoption of new ideas, and in general we have presented very largely socio-economic editorials. We have tried to give our readers clear evaluations of books presented for review, as well as analysis of problems which face us, be they scientific or legislative.

We have succeeded in making THE JOURNAL of the Michigan State Medical Society different in several ways from the ordinary run of medical journals. For ten years at least, we have changed our cover with each issue, as well as putting special emphasis on the content, each JOURNAL being devoted largely to some specific activity of the Society. Since our last report, the August 1954 issue was devoted to our headquarters building in Lansing with special information about the building. Child Welfare and the Michigan Health Council were the subject of the September number, while October was devoted to diabetes with a special roster supplement. The November number carried a Christmas Seal on the cover and was devoted to tuberculosis. The December number was Michigan Clinical Institute, January—heart, and February was given over to maternal health with a special tribute to A. M. Campbell, M.D., who was much pleased when notified of this tribute before his death. March, April and May numbers were devoted to arthritis and rheumatism, cancer, and geriatrics, the last carrying an outstanding cover, "Grow Old Along With Me."

The June number was given over to Michigan Medical Service, and the cover was its Shield. July was devoted to the Annual Session, August to industrial health, and the rest of the numbers for this year have already been assigned.

We have had many comments about the roster supplement, all pleased, but some urging materially, that names be alphabetized, instead of listed by county, thereby making reference much easier in case one does not remember the county.

In preparing our editorials, we have continued to send "preview" copies to the Publication Committee and the administrative officers, and we are grateful to all of them who have sent us critical and helpful comments.

Organization

1. The Annual County Secretaries-Public Relations Conference was held in Detroit on January 30, 1955, with 157 attending.

The Council has converted this meeting for future years into a three-day seminar for all county society secretaries, presidents, presidents-elect, editors and public relations committee chairmen in order to make it a "down-to-earth" training school to effect better liaison and greater follow-through between the Michigan State Medical Society and its component societies—with the intent to develop better understanding and co-operation

between the state and county units. The initial Seminar will be held in Detroit, January 25-26-27, 1956.

2. The third annual meeting of Michigan's County Medical Society Executive Secretaries (seven) was held in Lansing February 9, with a program that stimulated greater organizational effort and understanding in mutual problems.

3. The Ninth Michigan Clinical Institute was held in Detroit March 9-10-11, 1955, with a record attendance of 2,980, including 1,786 M.D.s. Innovations included the accentuation of "What's New, Doctor, That You Can Use," a résumé of medical techniques and scientific advances developed in the last 365 days; also the use of closed-circuit color television, featured through the courtesy of Smith, Kline and French Laboratories, Philadelphia.

4. The usual semi-annual meetings of the six Delegates from Michigan to the American Medical Association, and also Grover C. Penberthy, M.D., Detroit, AMA Surgical Section Delegate, as well as the six Alternate Delegates, were held with the Executive Committee of The Council immediately prior to the June and December Sessions of the American Medical Association.

5. The Residents, Interns and Senior Medical Students Conference again was held in Detroit on March 9 coincident with the Michigan Clinical Institute with 138 attending. Since the future of medicine lies in the hands of these young men and women whose zeal—obvious at the March meeting—forecasts a good tomorrow for the medical profession and the people of this State, The Council plans a similar conference coincident with the 1956 Michigan Clinical Institute.

MSMS again sponsored financially the sending of delegates from Michigan's two medical schools to the Student AMA Convention in Chicago in May, 1955.

6. The 89th MSMS Annual Session in Detroit, September 29-30-October 1, was great in both quality and quantity—the latter being a record registration of 3,904, including 2,295 M.D.s.

7. National medical leaders from Michigan continue to increase in numbers: during the 1955 Michigan Clinical Institute, seven Michigan doctors of medicine were honored for achieving, during this year, the presidency of national medical associations: A. C. Curtis, M.D., Ann Arbor; L. A. Ferguson, M.D., Grand Rapids; W. A. Hudson, M.D., Detroit; A. C. Kerlikowske, M.D., Ann Arbor; H. M. Pollard, M.D., Ann Arbor; A. D. Ruedemann, M.D., Detroit, and C. C. Sturgis, M.D., Ann Arbor.

8. Indoctrination of new MSMS members. This project, recommended by the Secretary in his Annual Report to The Council, 1954, was referred to the individual Councilors to organize in their respective Districts, with the co-operation of their county medical societies.

The indoctrination of medical students was the study project of a special committee of the State Society. It developed that this work must necessarily be done outside the regular school curricula—on the free time of the students and at hours of their choice—and early in their medical school experience. The Committee recommended that this matter be referred to the Student American Medical Association as a project, with SAMA advising MSMS what the students would like in such a course, was adopted by The Council which also authorized a trial extension of the Residents-Interns Conference as a monthly orientation program for experimental purposes in the Metropolitan Area of Detroit. (See Annual Report of Committee on M.D. Placement Program).

9. The Past Presidents' Club was organized during the past year and held its initial meeting in Detroit on March 10. Twelve past executives were present to formulate plans and projects whereby the storehouse of experience and knowledge of this group can be utilized, for the benefit of the entire medical profession and the people of Michigan.

10. MSMS was host to the Midwest State Medical Officers Conference, in East Lansing, on November 20. Representatives of the state medical societies of Indiana, Illinois, Kentucky, Michigan, Ohio, and Wisconsin were present at this worthy thought-forum, which is to be an annual meeting, rotated among these midwestern states.

11. G. Thomas McKean, M.D., Detroit, was appointed on May 18 as Councilor of the Sixteenth District, to serve the unexpired term of W. D. Barrett, M.D., Detroit, resigned.

12. Organization among the fifty-five component county medical societies, covering all of Michigan's eighty-three counties, was maintained during the past year to a satisfactory degree. The scientific side of medicine in Michigan is at an all-time high. It is gratifying to note the many county and district society "Clinic Days" and the great increase in contributions to the medical literature by our members.

Public Relations

Undercurrents inimical to the private practice of medicine are becoming stronger. We have seen the Congress pass discriminatory legislation to draft our colleagues, as well as "liberalizations" of Social Security and other laws placing the federal government further into the practice of medicine.

With a friendly State Legislature, we have defeated, with difficulty, attempts to dictate our fee schedules as well as to open our profession and medical hospitals to irregular or substandard practitioners.

The words "Socialized Medicine" have become, in the public mind, a bogeyman which it need not fear, while at the same time the socialization of medicine continues.

Our professional services have been placed on the bargaining table in Michigan between labor and management with nationwide repercussions. In these negotiations we were not represented or consulted.

Meanwhile, through so-called governmental screening programs, which had their origins in others states, a successful invasion is being made of our position as diagnosticians and purveyors of the general physical examination service.

There are other, less obvious, public relations problems facing our profession. Possibly the most formidable of these is what appears to the layman to be a growing egoism or "better-than-thou" attitude on the part of a growing number of our profession.

During the past year we have carried on meetings with nearly every county medical society to assay each county society public relations program and to offer the ideas and services outlined in the MSMS brochure "Winning Friends for Medicine." We have found no Society that is not doing something along this line. Yet, we have found no Society that is doing its potential maximum. And we have found no Society that has reached out to its *every* member and impressed him with the necessity for interest and work in this field of Society endeavor.

We continue to receive national recognition of our PR program, the latest being the ATAE (American Trade Association Executives) Award for Outstanding Service by a state association made in appreciation of our Medical Associates program.

For the tenth consecutive session of the Michigan Legislature, no legislation was passed that is inimical to the health interests of the people of the State of Michigan.

The use of communication media (as outlined in the report of the Public Relations Committee) has continued at an acceptable pace.

The advice of the MSMS has been sought and given on innumerable questions of health by the people directly as individuals and by organizations which represent their varied health interests.

Among all organizations representing the various professions, medical societies continue to lead the way in

public relations activity, with MSMS taking its share of this leadership. This has been aided by the loyal service of the MSMS executive staff.

While the medical profession is proud of its accomplishments in the field of public relations, there is every indication that we must continue our activities, if the private practice of medicine is to be preserved. Unless we are to reconcile ourselves to the socialization of our profession, every MSMS member must continue to take an individual interest and wholeheartedly participate in an intensive, well-planned PR program.

Woman's Auxiliary

Under the presidency of Mrs. (Albert F.) Beth Milford, the Woman's Auxiliary to the Michigan State Medical Society has enjoyed a very successful year. For the first time, Michigan received a national award for being 100 per cent in the American Medical Education Foundation. Michigan also received a national award this year and a check for outstanding achievement in Today's Health subscriptions. We spent $8,841.00 in nurse recruitment which was almost double what we did last year. Twenty-seven of our counties gave either a loan or a scholarship to nurses.

Over 5,000 pieces of literature from the American Medical Association office in Chicago were distributed to over 100 PTA groups. The *Today's Health* reprint "Is He Ready for Kindergarten" was used in preschool clinics throughout the State and in the Sparton Nursery School in Civil Defense. Seventy-seven schools in thirty-five counties participated in our tuberculosis speaking contest.

The Michigan State Medical Society is proud of its Auxiliary.

Contacts with Governmental Agencies

Contacts with federal, state and local governmental agencies continue to be an important activity of the Michigan State Medical Society. The more important contacts during the past year included:

1. Michigan Day in Washington, D. C. Again, MSMS representatives visited Washington, D. C., on May 2-3, 1955, pursuant to instructions of the 1954 MSMS House of Delegates, to make personal contacts with our friends in the Capitol, with resulting increase in good will.

A recommendation on this subject follows.

2. The usual number of contacts were maintained during the past year with the Michigan State Board of Registration in Medicine, University of Michigan, Wayne University, State Board of Alcoholism (which invited MSMS to help plan its 1955 Conference on Alcoholism in Kalamazoo), Michigan Crippled Children Commission, Michigan Department of Public Instruction, Michigan Social Welfare Commission, Michigan Insurance Department, Michigan Advisory Hospital Council, State Sanatorium Commission, Veterans Trust Fund, Michigan Civil Defense, Michigan Mental Health Commission, members of the Michigan Legislature (see paragraph on Public Relations and Legislation), and the United States Congress.

A proposed Liaison Committee with the State Executive Office was nominated and transmitted to Governor G. Mennen Williams for his consideration and decision.

3. Liaison with the Michigan Commissioner of Health continued to be frequent and co-operative. Throughout the year, matters of mutual interest were discussed by and with Dr. A. E. Heustis at meetings of The Council and its Executive Committee including the multiphasic screening program, a six-county survey completed in June, 1955.

Contacts with Voluntary Agencies and Organizations

1. Blue Shield, Michigan Medical Service has continued to enjoy amazing success in its 15th year of existence. Financial reports of Michigan Medical Service will be submitted to its Members at their annual meeting on Tuesday, September 27, 1955, at 2:00 p.m. in the Grand Ballroom of the Pantlind Hotel, Grand Rapids. R. L. Novy, M.D., MMS President, urges all MSMS Delegates (who *ispo facto* are Members of Michigan Medical Service) to be present at this session to insure a quorum necessary for the conduct of business.

2. More and more voluntary organizations request representation on their boards and committees or at their meetings and conferences from the Michigan State Medical Society. The Council expresses its sincere thanks to all MSMS members who sacrificed time and effort to act as official MSMS representatives for the following organizations: Michigan Hospital Association; National Citizens Committee for Educational Television; National Hospital Record Librarians; Michigan League for Nursing; Operating Room Nurses Association; Conference on Physicians and Schools; Michigan Rural Health Conference; Michigan State Pharmaceutical Association; Michigan Health Council; National Rural Health Conference; Michigan Association of Health Officers; Adult Education Association of Michigan; American Medical Education Foundation; County Medical Society Civil Defense Conference; Michigan Association of Ice Cream Manufacturers; American Medical Writers Association; American Public Health Association; Conference on Mental Health; Detroit Area Hospital Council; Student AMA; Detroit District Dental Society; State Bar of Michigan; Council on Medical Education and Hospitals of AMA; Conference on Aging; Council on Federal Medical Service; World Medical Association; Michigan State Dental Society; Children's Services Forum; Congress of Industrial Health; American Academy of Pediatrics Committee on Welfare of Fetus and Newborn; the Ontario, Kentucky, Illinois, Ohio, Wisconsin and Georgia State Medical Societies' Annual Sessions; National Conference on Physicians and Schools; Joint Conference on Maternal Mortality Committees; Michigan Hospital Service; Royal Sanitary Institute of London, England; Research Council for Economic Security; and the Midwest Conference on Arthritis.

Salk Polio Vaccine

In The Council's Supplemental Report, submitted to the 1954 MSMS House of Delegates, the following paragraph summed up our viewpoint on Salk polio vaccines of September 27, 1954:

"None knows, or will know until 1955, that there has been protection against epidemic poliomyelitis by virtue of the inoculations or that there has been significant increase in antibody titer in the blood of those inoculated—whether this increase is to the level of producing immunity or not. No one has indicated to anyone whether this patient of yours received the vaccine or the control, and it is impossible to state that the proprietary vaccine of the National Foundation (for Infantile Paralysis), in reaching the mass market first, has made a significant contribution to the mass control of epidemics."

The muddled and controversial situation involving Salk polio vaccine at the present moment suggests that The Council's report to last year's House of Delegates was prophetic. Even today, "no one knows." As recent as June 15, not even Michigan's Health Commissioner had knowledge of the Salk polio vaccine situation other than that which had been appearing in the newspapers!

Despite this lack of knowledge and the confusion surrounding the mass inoculation program, the Michigan State Medical Society co-operated to the fullest and formulated some recommendations as a public relations gesture in this public health emergency. On April 20, 1955, the Executive Committee of The Council made the following UNPRECEDENTED recommendation to all component county medical societies of Michigan:

"That the injections of the vaccine by physicians in their offices be done for a special fee of $2.00 per injection—this to be in addition to the actual cost of the

vaccine—this special fee to hold only during the emergency period while the vaccine is in short supply and the hypersusceptible groups are not protected."

The Michigan State Medical Society continues to offer co-operation and nominated Vice-Speaker K. H. Johnson, M.D., Lansing, as its representative to the State Advisory Committee on Polio Vaccine Distribution, which, with the Health Commissioner's Advisory Committee on Immunization, is endeavoring to organize an orderly program for the benefit of the youth of this state. The medical profession's position was best stated by the Executive Committee on April 20:

"The medical profession is making its contribution in the present public health emergency to the end that all eligible persons may have the vaccine in the office of the physician of their choice."

Beaumont Memorial Restoration

The Beaumont Memorial at Mackinac Island was dedicated July 17, 1954—a monument that will stand for generations as a symbol of the honor and respect which Michigan medical men pay to their scientific Great. During the past year, a magnificent gift was presented by MSMS President-Elect and Mrs. W. S. Jones to the Memorial: eighty extremely valuable books of the Beaumont era, repaired for long preservation through the courtesy of the University of Michigan; in addition, Dr. and Mrs. Jones presented to the Beaumont shrine a special handmade wrought-iron grill to protect these priceless volumes on display in the Memorial.

Another gift to the Beaumont Memorial was received from the St. Louis Medical Society; the bed used by Dr. Beaumont during his lifetime. High thanks are due and payable to Dr. and Mrs. Jones and to the St. Louis Medical Society; also to the Wayne County Medical Society for the repeated loan of its valuable painting, "Dr. William Beaumont," on display for the past two summers in the Memorial.

Additional monies are needed to reimburse the Michigan State Medical Society to the extent of $10,280.29, the sum which the Society loaned to complete the Memorial. Less than 50 per cent of MSMS members have contributed to the building of the Memorial, an architectural and historical gem that belongs to *all* members of the medical profession and should be the financial responsibility of each and every practitioner of medicine in this state.

A recommendation on this subject follows.

Committees

A total of sixty meetings of committees of the Michigan State Medical Society and of The Council were held during the past year (up to September 1, 1955).

Progress of the Michigan State Medical Society continues to be due, in the main, to these active groups. The Council commends to your careful perusal and consideration the Annual Reports of all Committees. The Council expresses gratitude to the chairmen and members for their tangible contributions of time and effort given on behalf of *all* members of the Michigan State Medical Society and for the benefit of the public of Michigan.

The new Study Committee on Mediation, Ethics, and Grievance reported a summary of objectives to the Executive Committee of The Council in June; these objectives will be framed for presentation as changes in the MSMS By-Laws, if possible, before the 1955 Annual Session of the House of Delegates.

Especially active during the past year were the following Commitees: Child Welfare Committee; Geriatrics Committee; Legislative Committee; Maternal Health Committee; Mental Health Committee; National Defense Committee; Rheumatic Fever Control Committee; and the Rural Medical Service Committee.

Annual Reports of Committees of the Council

To save the time of House of Delegates' Reference Committees, the Annual Reports of Committees of The Council are being integrated into the Annual Report of The Council, as follows:

Committee to Co-operate with the Michigan Health Council re Periodic Health Appraisal.—This committee has had but one meeting since the last report, but a great deal of work has been done during the year. With the active support of The Council, a Minimal Periodic Health Appraisal Card has been developed and sent to all members of the Michigan State Medical Society. Articles on the subject of Periodic Health Appraisal, prepared by various members of the Committee, have regularly appeared in JMSMS; the Committee on Postgraduate Medical Education has actively co-operated by placing speakers on this subject on "The Michigan Program for Graduates in Medicine"; a motion picture will be developed on this subject; speakers on the subject have been on the programs of the Michigan Clinical Institute, are planned for the Michigan State Medical Assistants Society, and even the Student AMA Convention; MSMS Councilors are actively promoting Periodic Health Appraisal throughout their representative areas; and an exhibit was prepared for the Annual Session of MSMS.

The committee has felt that its work should be directed toward the medical profession in fostering and developing adequate Periodic Health Appraisals, but that the subject should not, as yet, be one of public information since there is already a great deal of material appearing in various media which urges all individuals to undergo regular health appraisal examinations.

The committee feels that this is an important project; that it has a great deal of work still in progress; and that this committee should be continued.

Committee on Health and Accident Insurance Policy Control.—No meetings of the committee have been held since September, 1954. At the present time there are two cases pending, one of a very recent origin, the other of long standing. It was thought the latter case could be closed by mutual arrangement between the doctor involved and the insurance company, both agreeing to the procedure. However, the doctor could not make his information available to the insurance company before the week of June 13 and since that time no statement has been forthcoming. The first case involves a technicality in which two errors apparently have been made, one by the physician involved, the second by the insurance company. Clarification of the issue by the insurance company is now pending and a letter expected momentarily.

Special Committee to Meet with Michigan Social Welfare Commission.—As in the past four years, this committee has formed the major part of a larger advisory committee under the Chairmanship of Milton Shaw, M.D., of Lansing. We have met at the call of the Director of the Welfare Department a total of six (6) times since September, 1954. Various problems were studied and recommendations made, including reappraisal of the Totally Disabled and Aid to Dependent Children categories; the adoption of "actual cost" medical care in certain counties; review of medical and surgical care at Boys Vocational School; and many other important matters.

The Social Welfare Commission has again thanked this committee for its valuable contributions and respectfully requests a continuation of same in the future.

Medical Procurement Advisory Committee.—This committee held no meetings during the past year since no problems arose which called for a meeting and no references were made by officers or committees of the Society which required consideration.

However, various members of the committee have served in various capacities in medical procurement. Dr. Grover C. Penberthy continues as chairman of the Voluntary Advisory Committee to the Selective Service System and your chairman as Medical Advisor to the Director of Selective Service for Michigan.

Committee on Atomic and Allied Procedures.—This committee held no meetings during the year. The chairman had several personal discussions with members of the committee, also a few telephone discussions. There were no projects warranting a calling of the full committee.

Committee on Rural Medical Service.—This committee met several times during the year and considered a number of subjects. The principal one was the M.D. Placement Program, co-operating with the Michigan Health Council in this respect. Much progress has been made in this program and several specific situations were discussed and decisions made. It is felt that the M.D. Placement Program has done a lot to alleviate the doctor shortage in critical areas and also to promote public relations between the MSMS and the citizens of Michigan as a whole. This indicates the desire of doctors to help in relieving the shortage of trained medical personnel throughout the State.

Several of the committee members attended the National Conference on Rural Health in Milwaukee in Februrary, 1955, and felt that it was a very profitable trip and meeting. Other items of note discussed during the year included the planning of a panel for the program featuring Drs. Furstenberg and Scott at the Delegates luncheon in September, 1955. The Committee was vitally interested in possibilities inherent in the preceptorship plan for the State of Michigan, also in the planning of a possible Senior Day or other form of activity for the medical students of Wayne and University of Michigan Medical Schools, and the co-operation between the Committee members and the various Council members in regard to public relations between local communities and the Michigan State Medical Society.

National Defense Committee.—This committee met three times during the past year. The attendance was excellent and problems of national and local defense were covered.

Many members of the committee and activators, the heads of National Defense of Michigan and of the City of Detroit, as well as representatives of State Headquarters, Dental, Nursing and Hospital Administration were present.

Discussions were based on medical care—some of the following were considered:

1. Following a major accident.
2. Following an atomic blast.

Evacuation (in the proposed evacuation system which is under consideration).

3. Types of casualties to be expected and the priorities of the different types of casualties.
4. Preparedness for the care of casualties of an atomic disaster were discussed, in detail:

(a) "First Aid" training for each and every citizen, starting in the grammar schools. This course should be more intensive than those presented at this time. Certain required training should be eliminated and more pertinent training added. "Buddy Aid" should be taught.

(b) Blood typing, procurement, storage and blood substitutes and expanders were discussed fully. (These are important in emergency and definitive care of the different types of wounds from an atomic blast.) Dextran, an expander, was considered to be one of the important and valuable drugs for the treatment of shock, burns and fractures.

(c) Radioactivity: its detection and care, and the treatment of complications.

(d) Triage.

(e) Sanitation, food, water supply, public health, et cetera—if blast occurs.

(f) Re-check, at this time, vaccinations against small pox, typhoid, tetanus, diphtheria, scarlet fever, and all communicable diseases.

(g) Emergency hospitals.

(h) Use of all medical and para-medical personnel including nurses, dentists, veterinarians, laboratory technicians, dietitians, and former armed forces medical personnel.

Many of our members have attended national defense meetings in Chicago, Washington and other cities and have returned with material which will profit our state and local organizations.

Committee on Arbitration.—The committee attempts to advise fair, equitable and uniform fees for certain medical services rendered to governmental agencies. In the first six months of the 1954-55 year, the committee held two meetings and reviewed sixteen (16) cases. Judging from past experience, we presume we will have about two more formal meetings and review about forty (40) cases during the year.

Committee on Courses on Medical Economics and Ethics.—In all, nine lectures were given to the senior medical students at the University of Michigan.

On October 1, the chairman presented a talk on "Medical Public Relations" which included a discussion of the personal factors which relate to the physician himself and also to the public relations value of a good office examination and treatment.

On November 10, Warren R. Mullen, M.D., of Pentwater, gave a lecture on "Starting Practice."

On December 8, Professor Charles Joiner, of the University of Michigan Law School, put on a court demonstration in which a witness was interrogated and caught up on several errors. At the end of the demonstration Professor Joiner pointed up these errors in a ten-minute talk.

On December 15, John S. DeTar, M.D., Milan, gave a talk on "General Practice."

On February 2, Lawrence A. Drolett, M.D., Lansing, chairman of the Legislative Committee of the Michigan State Medical Society, spoke on "The Relation of the Physician to the Legislature."

On February 9, Kenneth H. Johnson, M.D., Lansing, Vice Speaker of the MSMS House of Delegates, spoke on "Selection of a Career in Medicine." In this talk many of the personal phases of the selection and working out of a career in medicine which are fundamental to the actions and the relations to the patient were pointed out.

On February 23, Ralph A. Johnson, M.D., Detroit, one of the Delegates of the MSMS to the AMA, spoke on "The Relation of the Physician to Organized Medicine."

On March 9, a panel consisting of the entire Ethics Committee of the Washtenaw County Medical Society held an open meeting before the students, at which time six applicants for membership in the Society were present. This meeting took the place of the required session with the Ethics Committee prior to any applicant's being passed upon.

On March 16, two films, "The Picture of Health" and "A Citizen Participates," were shown in order to acquaint the students with the material on film which is available.

A similar program is being carried out at Wayne University under the direction of Dr. R. I. McClaughry, Assistant Dean, and while your committee has had no direction in this work, it has been furnished with complete information by Dr. McClaughry. It is our opinion that the program being carried on at Wayne is of excellent content.

Committee to Meet with the University of Michigan.—This committee met in September 1954. As a result of the meeting, the committee was promised a "letter of policy" by the University Hospital from Roger B. Nelson, M.D. The next meeting of the committee is contingent on the receipt of this letter.

Hospital Relations Committee.—The Michigan Supreme Court ruling in the Gogebic County (Grand View) Hospital case and subsequent litigation entered in Allegan County Circuit Court by a doctor applying the Supreme Court findings to a community hospital, supplied

the foundation for this committee's major work during 1954-55. The Supreme Court declared that the Board of Trustees of Grand View hospital had usurped authority not granted in Act No. 350 of the Public Acts of 1913 under which this and seven other county-owned Michigan hospitals operate. In denying that the Grand View trustees had power to regulate the professional staff of the hospital according to the language of Act 350, the Supreme Court established a precedent considered dangerous from the medical viewpoint since medical and surgical care would be provided without adequate supervision. On January 26, this Committee met jointly with the Hospital Relations Committee of the Michigan Hospital Association, officers of MSMS, and Legal Counsel of MSMS, to determine a course of action with which to meet these hospital problems. Agreement was reached on several points, and action was taken immediately on several of these. With subsequent approval of The Council, the following conclusions and recommendations were made: (1) a re-examination of the bases upon which rules are being formulated in various types of hospitals throughout Michigan was indicated to see that all such rules are predicated upon reason and fairness; (2) that the Allegan Health Center litigation was of unusual urgency and import to the people, the Michigan Hospital Association, and MSMS, and that each of these organizations should engage separate legal counsel to bring this suit to a successful termination; (3) that active support be given the individuals and local organizations named as defendants in the Allegan suit; (4) that MHA, with MSMS co-operation, should vigorously pursue the amendment of Act No. 350 of Public Acts of 1913 during the 1955 Michigan Legislature in order to rectify the situation caused by the Grand View Hospital Case; (5) that an effort might well be made to establish standards for hospital constitutions and by-laws which could be recommended to hospitals in Michigan, and (6) that much could be gained by periodic meetings between committees of MHA and MSMS to work out areas of agreement and plans for the solution of common problems.

Subsequently, a vigorous defense was initiated in the Allegan Health Center litigation, with close co-operation from counsel for the other organizations and individuals named as defendants. The court's first ruling in the case, which denied the plaintiff a temporary injunction, was favorable to MSMS and its co-defendants. The final outcome is still forthcoming. Meanwhile MHA also sponsored legislative amendments to Act No. 350 of the Public Acts of 1913 designed to correct the flaws uncovered by the Supreme Court, and MSMS gave strong support in the effort to have this bill passed in the 1955 Legislature. The amendments were embodied in House Bill 362 (see report of Legislative Committee for details).

Committee on M.D. Placement Program.—This committee has had two meetings and considerable correspondence in regard to indoctrination talks to medical students.

At the present time, there is some word concerning the practice of medicine being given to the medical students in their senior year, but outside of the regular curriculum the committee feels that the work of indoctrination should be given in the freshman year and continue through the senior year.

The committee recommends that this matter be referred to the Student American Medical Association as a project with the SAMA advising the MSMS what the students would like to have in such a program; and that the SAMA recommendation also be forwarded to the AMA.

Medical Advisory Committee to the Michigan United Fund.—The first meeting was held on October 28, 1954, and was devoted to organizational problems. The following motion was adopted:

That the functions of this committe be:

1. Evaluation of new programs viewed in the light of type of service, prevention of duplication of service, organization of the program, and adequate area coverage in the State;

2. Medical analysis of established programs viewed in the light of effectiveness of service and desirability of enlargement or limitation of activities;

3. A relative evaluation of programs in comparison with one another from these same angles of population and area covered as well as medical need within a community.

On March 30, 1955, the committee held its second meeting. A fourth function of the Advisory Committee was added to the original three, as follows:

4. Evaluation of medical research for cure and prevention of disease as well as rehabilitation programs.

Also at this meeting, the request of the Michigan Multiple Sclerosis Society, through its representatives, was considered, and the committee recommended approval of their program subject to the approval by the Wayne County Medical Society. This action subsequently was adopted by the MSMS Executive Committee of The Council.

Matters Referred to The Council by the 1954 House of Delegates

1. *Periodic Health Examinations by Hospital Staffs.*—Following specific recommendation by last year's House of Delegates, The Council appointed a Study Committee composed of: O. B. McGillicuddy, M.D., Chairman, L. J. Bailey, M.D., V. N. Slee, M.D., and E. P. Vary, M.D. The report of this Study Committee is as follows:

The Committee on the Study of Periodic Health Examinations in Hospitals met on June 1, 1955. A questionnaire to Michigan hospitals revealed that only nine give such examinations to executives.

"The Committee felt that the Michigan State Medical Society should be concerned with the ethical presentation of the participating doctor's bills to the patients; the criteria used by the hospital in choosing staff doctors for these examinations and the great expansion of hospital population that may result from these examinations."

2. *Traffic Safety*—A special committee of The Council was appointed to carry through the instruction of last year's House of Delegates, the personnel being J. R. Rodger, M.D., Chairman, W. W. Babcock, M.D., A. Z. Howard, M.D., H. T. Johnson, M.D., H. J. Meier, M.D., and C. L. Straith, M.D. This Committee submitted the following annual report:

"There are so many facets to the complex problem of traffic safety and so many groups working on it that your Committee feels it has spent the year wisely in exploring the specific areas in which the medical profession could be of the greatest help. Three meetings of the Committee were held during the year, some of them being with representation from the offices of the Michigan State Police, the State Safety Commission, and the State Toxicologist.

"The mid-winter meeting was spent primarily in legislation connected with traffic safety, and study was given to bills on voluntary chemical tests for alcoholism, driver training, maximum speed laws and increased numbers of state police. With the exception of the latter, all these bills died in committees of the Legislature.

"At its spring meeting the Committee learned that in Michigan in 1954 the highway fatalities decreased 6 per cent in spite of increased registration and mileage driven, and that the highway mortality *rate* on the basis of miles driven had decreased 9 per cent. The Committee discussed but took no action on problems of car design, since there is now AMA representation on such a Committee of the National Safety Council.

"The Committee recommends to the House of Delegates that the Committee be continued during the coming year with the main activity being to follow educational lines rather than legislative activity, and that it approach the highway accident problem through driver training, Parent Teacher Associations and other similar groups,

stressing medical aspects of preventing highway accidents, including co-operation with other interested groups studying this same problem. It was also the recommendation of the Committee that its membership next year should be enlarged to include representation from the specialty fields of eye, ear, nose and throat, internal medicine and psychiatry, and any other pertinent specialty that might add to the knowledge of the cause and prevention of highway accidents."

3. *Migrant Workers.*—The possibilities of health screening procedures of all migrant workers, by their employers in co-operation with Blue Shield, were referred (in Secretary's Letter No. 175) to the component county societies for action. Results can be assayed only at the end of the 1955 harvest season.

4. Panel on Undergraduate Medical Education with the Medical School Deans. This is the feature of the House of Delegates luncheon scheduled for Monday, September 26, 1955, Pantlind Hotel, Grand Rapids.

5. Increase by Michigan Medical Service of fees for anesthetists. As instructed, this matter was referred to the Medical Advisory Committee to Michigan Medical Service ("without recommendation" of the 1954 MSMS House of Delegates). The Committee's report reads: "Anesthesia fees and problems of rendition of anesthesia are still being studied by the Staff and Medical Advisory Committee of Michigan Medical Service."

6. Greater Uniformity by Basic Science Boards. This Resolution was referred to the Committee on Study of Basic Science Act, composed of H. A. Furlong, M.D., Chairman, D. W. Thorup, M.D., C. E. Umphrey, M.D., and Mr. J. Joseph Herbert, Advisor. The annual report of this Committee is as follows:

"The activities of the Committee on Study of Basic Science Act have been directed towards additional improvements in this legislation. This has been accomplished by a series of telephone conferences with the MSMS Legislative Committee, the Michigan State Medical Society headquarters staff, the MSMS Legal Counsel, and the Committee members. The Committee participated in a hearing before the Public Health Committee of the House of Representatives.

"Amendments to the Basic Science Law (HB 415) as finally enacted by the 1955 Legislature further increase the discretionary powers of the Basic Science Board as follows:

(1) Certificates in Basic Science may be granted to applicants by the Michigan Basic Science Board in lieu of examinations provided the applicant presents a certificate from any legally constituted examining board in the healing arts, from any state or territory and providing the examination was equivalent to the Michigan Examination.

(2) The Amendment places the burden of presenting proof upon the applicant rather than requiring the Basic Science Board to obtain proof of the examination taken by the applicant. This has been a successful provision of Basic Science laws in other states."

7. *Information by Blue Cross-Blue Shield to Contract Holders.*—Intelligent follow-through on this Resolution has been done by Michigan Hospital Service and Michigan Medical Service. First, an excellent "Question-and-Answer" brochure was printed and distributed to all members of the Michigan State Medical Society explaining contract provisions and their interpretation; in addition, office plaques entitled "To All My Patients," based on an AMA plaque, were supplied to all M.D.'s to encourage free discussion by patients of medical services and fees. Secondly, all new subscribers of Blue Cross-Blue Shield are receiving literature (revised since September, 1954) explaining the benefits and especially the exclusions of the contracts. Moreover, the advertising program and all literature to enrolled groups attempts to clarify the contract provisions.

8. *Expansion of AMA Administrative Facilities.*—Your Michigan Delegates to the AMA House of Delegates followed the instruction of the 1954 MSMS House of Delegates and presented a Resolution in Miami last December asking that the AMA Board of Trustees appoint a committee to study the matters set forth in this Resolution. A Study Committee was appointed by the AMA Board of Trustees which reported to the House in Atlantic City, June, 1955, indicating progress in the streamlining of AMA's administrative setup. For complete report see *JAMA* of July 2, Page 747; also Annual Report of Michigan's Delegates to AMA, published in 1955 Handbook for Delegates.

9. *Study of General Practice by AMA.*—Your Michigan Delegates to the AMA House of Delegates followed the instruction of the 1954 MSMS House of Delegates and presented a Resolution at the Miami meeting—December, 1954, calling upon the AMA to initiate an exhaustive study of the whole problem of the general practice of Medicine. A Study Committee was appointed by the AMA Board of Trustees which has been laboring on this overwhelmingly complex subject. A résumé of the Committee's progress report was submitted to the AMA House in June; copies of the complete report are to be sent to all members of the House so that final action may be considered in Boston, December, 1955. See *JAMA* of July 2, Page 750 et seq; also Annual Report of Michigan's Delegates to AMA, published in 1955 Handbook for Delegates.

Legal Actions

In the past year, the Michigan Supreme Court held for the plaintiff (Samuel G. Albert, M.D.), in the case against the Grand View Hospital Trustees at Ironwood. As a result, in the eight hospitals operating under this special County Hospital Act, the Board of Trustees is not permitted to regulate the admission or conduct of its medical staff. (Relief from this unhealthy situation was sought from the Legislature in H.B. 362, previously described.)

This case undoubtedly stimulated the suit of Wm. A. Kopprasch, M.D., vs. Allegan County (hospital) Health Center, its Trustees, its Medical Staff, the Allegan County Medical Society, Michigan Hospital Association and the Michigan State Medical Society. Dr. Kopprasch demanded the use of the community hospital for his practice and seeks injunctions and damages in excess of $250,000. The potential danger to hospitals and their staffs arising from this case resulted in The Council taking prompt action to defend itself as well as the Allegan County Medical Society "to whatever extent is necessary." The legal counsel of all defendants have co-operated well in this case, still a matter of litigation. However, the first round, decided on May 10, 1955, was lost by the plaintiff when the court refused him a temporary injunction by reason of the fact that he never had made proper application to become a staff member of the Allegan Health Center.

The members of the Allegan County Medical Society are especially to be congratulated on their vigorous defense of their rights in this legal controversy which affects all medical men who practice in the hospitals of Michigan and the United States.

Respectfully submitted,

WILLIAM BROMME, M.D.
Chairman of The Council
H. B. ZEMMER, M.D.
Vice Chairman of The Council
ARCH WALLS, M.D.
R. S. BREAKEY, M.D.
G. W. SLAGLE, M.D.
RALPH W. SHOOK, M.D.
J. D. MILLER, M.D.
H. H. HISCOCK, M.D.
L. C. HARVIE, M.D.
G. B. SALTONSTALL, M.D.
F. H. DRUMMOND, M.D.
W. M. LEFEVRE, M.D.
B. T. MONTGOMERY, M.D.

T. P. Wickliffe, M.D.
B. M. Harris, M.D.
D. Bruce Wiley, M.D.
G. T. McKean, M.D.
W. B. Harm, M.D.
J. E. Livesay, M.D., *Speaker*
K. H. Johnson, M.D., *Vice Speaker*
R. H. Baker, M.D., *President*
W. S. Jones, M.D., *President-Elect*
L. Fernald Foster, M.D., *Secretary*
W. A. Hyland, M.D., *Treasurer*
L. W. Hull, M.D., *Immediate Past President*

Recommendations

1. That The Council be authorized to send MSMS representatives to Washington, D. C., in 1956, on the occasion of the Annual Michigan Day.
2. That contributions to the Beaumont Memorial Restoration Fund—by every individual MSMS member—be urgently recommended by the 1955 House of Delegates. Every member of the Michigan State Medical Society should take pride in contributing to the Beaumont Memorial which will represent for generations the best type of public relations for the medical profession of this state.
3. That each individual member of the MSMS House of Delegates pledge himself to further in his community or area the MSMS periodic health appraisal program to the end that private medical practice will bring—in full measure to all people of this state—the life lengthening health protections afforded by modern medical science. The doctor of medicine must keep in mind that this program is one desired by the people; and people usually secure what they demand—if not by voluntary means, then through compulsory legislation.
4. That, in these times of change, The Council trusts that it will continue to merit your continued support, co-operation, and faith.

ANNUAL REPORT OF LEGISLATIVE COMMITTEE—1954-1955

Although the medical profession fared very well in the 1955 Michigan Legislature, it was perhaps the most difficult session in recent years. It was complicated by the emotional impact of the release of new poliomyelitis vaccine, by an all-out legislative drive by chiropractors, and by a well-directed effort to confuse legislators on a vital piece of hospital legislation with misinformation and irrelevant side issues. Of interest was a change in the Basic Science Law, which was amended for the third time in as many years.

All in all, MSMS was required to marshal great strength in meeting the challenges of the 1955 Session, and MSMS representatives were required to exert even more time and energy than in the hectic sessions of 1953 and 1954.

A total of 952 measures were introduced and given consideration by one or both houses of the Legislature, and—following the usual pattern—approximately 10 per cent of these were of interest to the medical profession in large or small degree.

A total of 95 bills demanded the attention of MSMS, with a large number of them requiring direct action on the part of the medical profession and its spokesmen.

Grave threats to the health and medical welfare of the people of Michigan were posed by a series of dangerous measures which *failed to pass* but which might well have become law had members of the Legislature not been able to get authoritative information and counsel from MSMS, aided by the co-operation of related organizations dedicated to retaining high medical and health standards in Michigan. Except for positive action to halt these measures, the people of Michigan might well have been saddled with:

—One of two proposed new definitions of chiropractic authorizing chiropractors to engage in various phases of medicine far beyond their qualifications, using instruments and practices dangerous in the hands of the unskilled or untrained. (H.B. 289, killed by the Senate Committee on Health and Welfare; S.B. 1313, killed in Senate Committee on State Affairs.)

—A new "healing art" to be carried on by "naturopathic physicians" with their meager training, giving them their own examining and licensing board, the right to use the title "doctor" and authorizing them to use a method of treatment based solely on cultist philosophy. (H.B. 348, died in the House Committee on State Affairs.)

—An amendment to the Basic Science Art, which would have thrown a time-consuming and complicated burden on the Basic Science Board. (H.B. 415, carefully revised to workable form by House Committee on Public Health, with important amendment added by the Senate Committee on Health and Welfare.)

—Transfer of one of the state's largest tuberculosis hospitals to use for domiciliary care of mentally defective children without adequate survey of Michigan's tuberculosis needs, and use of a smaller, obsolescent institution for a similar purpose. (S.B. 1387, died in Senate Appropriations Committee; S.B. 1215, died in Senate State Affairs Committee; H.B. 350, killed by the Senate Appropriations Committee.)

—Abolition of the Tuberculosis Sanatorium Commission, Office of Hospital Survey and Construction, and Advisory Hospital Council as independent agencies, centralizing power in the State Health Department. (H.B. 424, killed in the House State Affairs Committee; S.B. 1317, killed by the Senate State Affairs Committee.)

—A program for training practical nurses in unregulated public school facilities, rather than in well-staffed and well-administered training centers. (S.B. 1252, killed by Senate State Affairs Committee.)

—A precedent of stipulating by law the fee for professional services of a physician for vaccinating private patients, and the appropriation of tax money to finance "free" mass immunization clinics using state-purchased vaccine, as a result of confusion over the new polio vaccine. (Repeated attempts to incorporate doctors' fees for vaccination into the law itself were defeated on the floor of the House during the debate on H.B. 472, the bill which appropriated $2,000,000 for the State purchase of polio vaccine for "high risk" groups; H.B. 474, died in House Committee on Ways and Means; S.B. 1408, died in Senate Committee on Appropriations.)

—Control of programs for the physically handicapped by an advisory committee within the Department of Labor without any provision for medical representation or counsel. (S.B. 1054, killed by Senate Committee on Labor.)

—A measure legalizing the antiquated "old wives' tale" that epilepsy can be a contributing factor in causing an individual to commit crime. (H.B. 162, killed by the House Committee on Judiciary.)

—An unnecessary hospital licensing act. (H.B. 72, died in House Public Health Committee.)

By the same token, advantageous measures which *succeeded in passing* the Legislature might well have failed, or contained any one of several unsatisfactory provisions, had there not been co-operation by MSMS in supplying authentic factual information, active sponsorship, or co-operation with the Legislature or sponsoring organization. As a result of such interest, the 1955 Legislature successfully took steps which:

—Recognized the contributions to Michigan's historical

and cultural affairs by MSMS members through their restoration of the Beaumont Memorial on Mackinac Island as a gift to the people of this state. (Senate Concurrent Resolution 34, adopted unanimously by both houses of the Legislature.)

—Saved time for the physician by allowing oral prescription of certain narcotics, in line with a recent liberalization of the Federal Law, provided a written prescription is immediately forthcoming. (S.B. 1121)

—Allowed the Basic Science Board to use discretion in waiving examinations for applicants from other states who have already successfully completed examinations in the basic sciences before a licensing board with standards substantially equal to those of the Michigan Basic Science Board, provided the applicant submits a copy of his examination questions and (when in existence) his answers for evaluation by the Michigan Board; an amendment aimed at maintaining Michigan standards of licensure, yet easing the requirements for applicants from non-basic science states. (H.B. 415 carefully amended in each house of the Legislature to allow maximum protection and ease in administration while attempting to alleviate factors which a few believe have tended to discourage M.D.'s from locating in Michigan.

—Raised to $19 per day the ceiling on hospital ward care for crippled and afflicted children. (S.B. 1189 and S.B. 1190)

—Extended from 60 days to 90 days the period for billing for medical treatment of crippled and afflicted children. (S.B. 1120 and S.B. 1162)

—Allowed the use of certain non-caloric sweeteners in the manufacture of foods and beverages, simplifying the problems of patients on special diets. (H.B. 262, passed after amendment based on information from MSMS.)

—Created a new Legislative Advisory Council on Problems of the Aging, which will report annually to the Legislature. (S.B. 1187, responsible to Legislature, adopted in place of S.B. 1128 with narrower range advising Social Welfare Department only.)

Some of the most diligent work during the 1955 Session was done by the Michigan Hospital Association on H.B. 362, with firm support from MSMS. This measure was designed to correct flaws in the County Hospital Act of 1913, discovered by the Supreme Court in its decision on the Gogebic County (Grand View) Hospital case. Although only eight hospitals in Michigan have been set up by counties under the 1913 Act, many side issues were brought up by substandard healing groups, and the possible effects on other hospitals under the precedent established by the Supreme Court was dragged into committee consideration, all of which created confusion. The bill was emasculated in the House with amendments which re-inserted the defects in the law pointed out by the Supreme Court, namely, the provision which limits the authority of the Board of Trustees to adopting rules which govern only the "economic and equitable" conduct of hospitals established under the Act, and denying trustees power over the duties and qualifications of the professional staff. Satisfactory amendments placed on H.B. 362 in the Senate were presented to the House but the House failed to concur in them. A joint conference committee failed to produce a settlement acceptable to the House just before the Legislature recessed on June 3. A second conference committee was appointed to attempt to iron out differences in a report scheduled for submission on July 14, date of final adjournment for the 1955 Legislature. (A supplementary report will be made upon the final outcome of H.B. 362.)

The MSMS Legislative Committee established close liaison with representatives of the Michigan Psychological Association during the year, considering questions of mutual interest.

MSMS also took an active interest in budget and appropriation matters which had a bearing on health, medical education, hospital construction, mental health, and operation of the State Health Department.

Federal legislation also came under the scrutiny of the Legislative Committee throughout the 1955 Congressional session, and the MSMS viewpoint on Federal matters was kept constantly before the Michigan congressional delegation by direct contact, and to the Congress as a whole by contact with the AMA Washington office. An MSMS delegation visited Washington in early May for on-the-spot conferences with Michigan congressmen and senators and other congressional leaders.

In summarizing Lansing events of the past few months, it should be pointed out that members of both houses of the Legislature, regardless of political party, were most attentive to MSMS representatives, often voluntarily seeking the advice of the Society in matters pertinent to health and medicine. Most legislative decisions, whether favored by MSMS or not, were made with all necessary information in the hands of legislators. Relationships with the Governor and, in his absence, the Lieutenant Governor, were particularly cordial throughout the 1955 Legislature and the "front office" frequently requested the MSMS viewpoint on various matters.

The Legislative Committee further recognizes that success of MSMS legislative activities during the 1955 session was once more the result in a large part, of the interest and activity of a great many members of MSMS; those who shouldered the burden by personally taking an active part on the local level, or who had a hand in the decisive group action taken by county medical societies. Some of the most effective work in behalf of the people of Michigan is done in the home community by the county society and individual Doctor of Medicine between sessions of the Legislature. Increasingly, county society leaders are making an effort to become well-acquainted with local legislators and to establish a working relationship with them.

This is the type of activity which must be planned carefully and carried out conscientiously at the community level before the Legislature convenes once more in January, 1956.

To all MSMS members who have during 1954-1955 contributed their time, energy, counsel, and suggestions toward the success of the MSMS legislative program, we are sincerely grateful. We appreciate their sacrifices. They deserve the heartfelt thanks not only of their colleagues, but of all the citizens of Michigan.

Respectfully submitted,
L. A. Drolett, M.D., *Chairman*
O. B. McGillicuddy, M.D., *Vice Chairman*
William Bromme, M.D.
G. V. Conover, M.D.
J. C. Elliott, M.D.
O. K. Engelke, M.D.
L. W. Hull, M.D.
W. S. Jones, M.D.
M. H. Marks, M.D.
P. T. Mulligan, M.D.
J. S. Rozan, M.D.
H. A. Towsley, M.D.
R. V. Walker, M.D.

ANNUAL REPORT OF PREVENTIVE MEDICINE COMMITTEE, 1954-1955

This report briefly summarizes the activities of several of the Advisory Committees during the past year.

The Rheumatic Fever Control Committee continues in its basic function as an educational source for both practicing physicians and the public. Desk reference cards on Rheumatic Fever are being distributed periodically, model county programs are being set up in collaboration with health officers, and teaching facilities for cardiac children are in process of development in cooperation with the Michigan Department of Public Instruction. The plan of sending several physicians to

St. Francis Sanatorium each year for refresher courses in Rheumatic Fever is continuing as in the past.

The Maternal Health Committee continues its survey of maternal deaths and the results of the first three years' study have been published in a recent number of THE JOURNAL of the Michigan State Medical Society.

The Venereal Disease Control Committee studied the problem of prophylaxis for gonorrheal ophthalmia neonatorum and has recommended the substitution of 1 per cent penicillin ointment for 1 per cent silver nitrate. It also urged that the Treponema Pallidum Immobilization test be made available by the State Laboratory to doctors with special problems of syphilis or biological false positive reactions.

Modifications of the pre-marital examination certificate were recommended.

The Mental Health Committee's activities were directed towards the problem of lay-psychotherapy, the relationship between physicians and psychologists and a furthering of the educational program for both lay and professional groups.

The Iodized Salt Committee continues to promote the more widespread use of iodized salt by placarding grocery stores and educating wholesale grocers; by exhibits at State Medical Society meetings; by publication of timely articles in important magazines; and by stimulating surveys in communities outside of Michigan. The study of goiter operations performed in Michigan is being completed and will be reported in the near future.

The Scientific Radio Committee, in planning to broaden its audience of 50,000 school children, has arranged to expand the membership of its subcommittee to include both lay and professional people prominent in this work. In addition to appropriate subject matter the committee has made every effort to have program topics coincide with national health weeks and specific health days.

The Committee on Postgraduate Medical Education's program has been well received throughout the state. Plans are under way to include the subject of periodic health examinations in its extramural program.

Appreciation is due our State Health Commissioner, Dr. A. E. Heustis and Dr. J. K. Altland for their active participation in the deliberations of this committee and for their valuable suggestions, guidance and help.

Respectfully submitted,

W. S. REVENO, M.D., *Chairman*
G. E. ANTHONY, M.D.
H. W. BIRD, JR., M.D.
B. E. BRUSH, M.D.
H. H. CUMMINGS, M.D.
A. C. CURTIS, M.D.
S. T. HARRIS, M.D.
A. E. HEUSTIS, M.D.
W. A. HYLAND, M.D.
O. J. JOHNSON, M.D.
A. H. PRICE, M.D.
P. E. SUTTON, M.D.
J. W. TOWEY, M.D.
H. A. TOWSLEY, M.D.

ANNUAL REPORT OF VENEREAL DISEASE CONTROL COMMITTEE—1954-1955

During the past year a meeting was held on February 20, 1955, at which time it was proposed that examinations on migratory agricultural workers who come into the seven counties of the Saginaw Valley (Huron, Tuscola, Sanilac, Bay, Saginaw, Midland and Isabella) be screened by chest x-ray, STS and physical examination of males.

The Method of Operation is to be as follows:

I. Using mobile trailers and moving from farm to farm, chest x-rays, blood drawing for STS, and physical examinations of all males will be affected. Working hours will be from 6:00 to 10:00 p.m. A clerk will register all persons. A technician will be employed to draw bloods and a qualified physician will make a physical examination of the genitalia of all males. Those males with evidence of urethral discharges will be treated. Blood samples will be sent to the nearest state laboratory where we hope to receive results back within 72 hours.

II. Treatment:

(a) Syphilis—all persons having a positive blood will be treated by the project physician with 2,500,000 units of Bicillin. At the time of treatment a second blood will be drawn. A diagnosis of syphilis, in absence of clinical evidence, will not be made unless this second STS is positive. All persons with clinical evidence will be treated with 2.5 million units.

(b) Urethritis—All males having urethral discharge will receive 1.2 million units of Bicillin.

III. Epidemiology:

(a) Syphilis—Persons with clinical evidence of syphilis will be interviewed and attempts made to bring contacts to diagnosis and treatment.

(b) Urethritis—All males with urethritis will be interviewed and attempts made to bring contacts to diagnosis and treatment.

The Venereal Disease Control Committee heartily approved of the principle of the pilot study and expressed interest in what the results should show.

After some discussion of the use of Bicillin, the Committee recommended that the present schedule of procaine penicillin be considered the treatment of choice for management of all types of syphilis; however where an emergency exists and multiple injections cannot readily be given, the Committee approves that Bicillin be used as a substitute as a single injection of 2.4 to 3 million units but also recommends where co-operation for additional treatment can be secured that an additional injection be given one week later: carried unanimously.

Dr. Shaffer led a discussion on the increase in number of cases of gonorrhea being reported and showed slides on statistics in the City of Detroit and in his clinic. There are evidences of increase in gonorrheal ophthalmia neonatorum. The statistics show that gonorrhea is on the increase and suggested that the following might be some of the causes: (a) increase in juvenile delinquency; (b) deteriorating moral standards; (c) less fear of infection; and (d) inadequate treatment by oral penicillin.

Respectfully submitted,

A. C. CURTIS, M.D., *Chairman*
J. A. COWAN, M.D.
RUTH HERRICK, M.D.
D. K. HIBBS, M.D.
H. L. KEIM, M.D.
H. E. LICHTWARDT, M.D.
J. A. RYAN, M.D.
L. W. SHAFFER, M.D.
D. E. SILER, M.D.
FRANK STILES, M.D.
R. S. BREAKEY, M.D.

Nitrogen mustard is only moderately effective in leukemia, but is of great value in Hodgkin's disease.

* * *

Folic acid antagonists produce more satisfactory results in acute leukemia in children than in adults.

* * *

X-ray therapy is a superior form of treatment in multiple mycloma and chronic granulocytic leukemia.

* * *

External radiation is the method of choice in treatment of Ewing's sarcoma.

Technical Exhibits -- 1955 Annual Session

Abbott Laboratories **Booth No. 408**
North Chicago, Illinois

Filmtab® ERYTHROCIN® Stearate (Erythromycin Stearate, Abbott) will be displayed by Abbott Laboratories. ERYTHROCIN gives specific therapy against coccic infections . . . and with little risk of side effects. It's especially advantageous when the cocci resist other antibiotics. Indications include pharyngitis, bronchopneumonia, tonsillitis, cellulitis, otitis media, furunculosis, sinusitis, laryngitis, bronchitis, lobar pneumonia, scarlet fever, peritonsillar abscess, erysipelas, septic sore throat, pyoderma, urinary tract infection, wound infection and acute and chronic intestinal amebiasis.
®Filmtab—Film sealed tablets; patent applied for.

A. S. Aloe Company **Booth No. P-26**
St. Louis, Missouri

Visit Space No. P-26 where the A. S. Aloe Company will have on display a cross-section of their most complete line of physicians' supplies. Our representatives will certainly appreciate the opportunity of discussing items of interest with you.

American Ferment Company, Inc. **Booth No. 112**
New York, N. Y.

Representatives at the booth will welcome the opportunity to demonstrate the proteolytic and mucosolvent action of the enzyme, Caroid, and to discuss Caroid and Bile Salts Tablets and Alcaroid Antacid. Supligol, a whole bile-ketocholanic acid compound useful in the management of biliary dysfunction, will also be featured.

American Hospital Supply Corporation **Booth No. 619**
Evanston, Illinois

On exhibit will be the complete line of Baxter Intravenous Solutions including new Travert Solutions, new Plexitron Sets for parenteral therapy and new blood pumps for rapid blood transfusions. See the new FLASHBALL which simplifies needle insertion and addition of supplemental medication.

Ames Company, Inc. **Booth No. 414**
Elkhart, Indiana

The Ames representatives Messrs. Roger Gosling and Ralph Matheny will be on hand to discuss MY-B-DEN, the adenine nucleotide, adenosine-5-monophosphate, found highly effective in the treatment of varicose vein complications, stasis and bursitis. MY-B-DEN preoperatively shortens the waiting period necessitated by poor tissue condition and enhances surgical results. DECHOLIN/Belladonna will also be shown.

Armour Laboratories **Booth No. 104**
Kankakee, Illinois

The Armour Laboratories booth will feature H. P. Acthar Gel as well as other specialties of Armour Research. Our representatives will be happy to answer questions about Armour products for anyone who cares to stop at our booth.

Audio-Digest Foundation **Booth No. 609**
Glendale, California

Audio-Digest Foundation—a subsidiary of the California Medical Association—gives the busy physician an effortless tour through the best of current medical literature each week. This medical tape-recorded "newscast"—compiled and reviewed by a professional Board of Editors—may be heard in the physician's automobile, home or office. The Foundation also offers medical lectures by nationally-recognized authorities.

Ayerst Laboratories **Booth No. 412**
Chicago, Illinois

Your Ayerst Representatives cordially invite you to visit them at Booth No. 412 where they will be glad to discuss any Ayerst products of interest. The Ayerst Exhibit will feature "Colprosterone," Progesterone Vaginal Tablets, and "Mediatric" Capsules and Liquid for your geriatric patients.

Baby Development Clinic **Booth No. P-1**
Chicago, Illinois

Maternity Counselling Service offers: Products and literature helpful in teaching expectant mothers (and fathers) physical and emotional aspects of parent-child relationship arising out of daily care in feeding, bathing, sleeping and toileting. Aids for parents to understanding and providing emotional security for children through school ages.

Baker Laboratories, Inc. **Booth No. 504**
Cleveland, Ohio

You are invited to visit our booth where Baker's Modified Milk and Varamel, two successful products for infant feeding, are on display.
Baker representatives will be glad to discuss the practical application of Grade A Milk, adjusted fat composition, zero curd tension, synthetic vitamins and other important factors which help to eliminate many of the problems in modern infant feeding.

Bard-Parker Company, Inc. **Booth No. 205**
Danbury, Connecticut

RACK-PACK . . . gross and half gross units of B-P Rib-Back Surgical Blades ready for sterilization in a matter of seconds. Saves time and labor in the O.R., prevents costly, accidental damage to sharp edges. B-P knife handles, B-P Germicide, Chlorophenyl, sterilizing containers, transfer forceps, "C.F." Pipettes, B-P Disposable Finger Lancets, and the Reese Dermatome.

Barry Laboratories, Inc. **Booth No. 317**
Detroit, Michigan

The BARRY LABORATORIES will exhibit complete, easy-to-use allergy diagnostic sets and treatment materials. Also on display will be their new germicidal concentrate, Merphene, as well as a complete line of sterile injectables. An attendant will be present to answer questions regarding any of the items exhibited.

Beech-Nut Packing Company **Booth No. 520**
New York, New York

The Borden Company **Booth No. 305**
New York, New York

There's no better place to talk over the latest information on infant feeding than the Borden Prescription Products booth. On display is the complete line of Borden's infant formula products for every feeding purpose or preference. You can feed almost any baby BREMIL, MULL-SOY (Liquid or Powdered), DRY-CO, or BIOLAC.

Bristol-Myers Products Division **Booth No. 613**
New York, New York

Here are four products you'll want to know about: BUFFERIN—Antacid analgesic. Acts twice as fast as aspirin, does not upset the stomach. SAL HEPATICA

—Effervescent saline laxative. AMMENS Medicated Powder—Relieves itching and burning skin. Discourages bacterial growth. TRUSHAY—The "beforehand" lotion. Helps keep hands smooth in spite of roughening scrubbings.

Brooks Appliance Company **Booth No. 314**
Chicago, Illinois

The Brooks Appliance Company will exhibit and describe in detail the technique of applying the combination pressure bandages. The moist medicated Primer Bandage plus the Dalzoflex Elastic Adhesive Bandage which are used in treating leg ulcers and Phlebitis. Elastic Stockings, the Nulast Elastic Crepe Bandages and Surgical Instruments will also be displayed.

Burroughs Wellcome & Company **Booth No. 420**
Tuckahoe, New York



The extensive research facilities of "B. W. & Co." both here and in England are directed to the development of improved therapeutic agents and techniques.
Through such research "B. W. & Co." has made notable advances related to cancer, malaria, diabetes, antibiotics, muscle relaxants, and autonomic, antihistaminic, and antinauseant drugs.
An informed staff will be at our booth to discuss our products and latest developments.

Cambridge Instrument Company, Inc. **Booth No. 514**
New York, New York

The new Cambridge Audio-Visual Heart Sound Recorder; the well-known Cambridge Simpli-Scribe Model Direct-Writing Portable Electrocardiograph and the Cambridge Standard String Galvanometer Electrocardiograph, both in the "Simpli-Trol" Portable and the Mobile Model Electrocardiograph-Stethograph with Pulse Recorder, will be displayed at this booth. Also, other important Cambridge instruments, including the Operating Room Cardioscope, Educational Cardioscope, Multi-Channel Direct-Writing Recorder, Electrokymograph, Plethysmograph, and pH Meters. The Cambridge Engineers in attendance will be glad to give you complete information on these instruments.

Cameron Surgical Specialty Company **Booth No. P-15**
Chicago, Illinois

Visit the interesting and informative Cameron exhibit of integrated diagnostic instruments, incorporating the focalite system which assures maximum illumination, service and satisfaction at minimum cost. Also the new Cameron Cauteradiodyne, incorporating cauterization, coagulating, fulguration, desiccation, dehydration, and orificial ultra-violet radiation; and other diagnostic and operative aids and specialties.

Carnation Company **Booth No. 505**
Los Angeles, California

Carnation Company is pleased to present the first INSTANT Nonfat Dry Milk. You are cordially invited to visit with us and to sample this miracle product . . . the greatest advance in the dairy industry since homogenization. You'll like its fresh milk flavor . . . it dissolves instantly, even in ice water. An excellent, economical source of protein; useful in diets for weight reduction, high protein, undernutrition, pregnancy and geriatrics.

Central Pharmacal Company **Booth No. 513**
Seymour, Indiana

The Central exhibit will feature the Neocylate Family of potentiated salicylate combinations.
This group includes five products which may be prescribed successfully for the prevention and treatment of pain of varying intensity and origin in all types of arthritic and rheumatic conditions.
Descriptive literature and samples will be available to members and guests of the Michigan State Medical Society.

Chicago Pharmacal Company **Booth No. 508**
Chicago, Illinois

Chimedic quality products featured include: URISED, nationally-known urinary antiseptic and sedative tablet; TOLYPHY, the improved spasmolysis formula for a wider range of muscle relaxation; VERMIZINE, the deliciously strawberry-flavored vermifuge, 97 per cent effective in the eradication of pinworms in children; CEVICETYL, full therapeutic combination of aspirin and Vitamin C in an enteric coated tablet; plus a complete injectable, ointment, liquid and tablet line awaiting your inspection. Representatives: Mr. M. C. Miner, Mr. C. G. Shotwell.

Chicago Reference Book Company **Booth No. P-22**
Chicago, Illinois

Ciba Pharmaceutical Products, Inc. **Booth No. P-3**
Summit, New Jersey

The CIBA exhibit features SERPASIL—the original, pure crystalline alkaloid of Rauwolfia. SERPASIL has been found extremely useful as a tranquilizer in treating patients whose adjustment to life is complicated by anxiety, irritability and various psychoses. Patients feel calm, yet in properly adjusted doses retain their drive and energy. It is highly effective in many conditions where barbiturates have been commonly prescribed.

Coca-Cola Company **Booth Nos. P-9, P-10**
Atlanta, Georgia

Ice-cold Coca-Cola served through the courtesy and co-operation of the LaSalle Coca-Cola Bottling Company, Grand Rapids, and The Coca-Cola Company.

DePuy Manufacturing Company **Booth No. 605**
Warsaw, Indiana

We extend an invitation to all members of the Michigan State Medical Society to visit us at our booth where we will exhibit the new Scuderi Hip Prosthesis, Small Hand Drill, Plate Bending Irons, Spring Retractors, Bone Screw Rack, Pelvic Traction Apparatus and our complete line of orthopedic and fracture equipment. Stop in and see us at Booth 605.

Desitin Chemical Company **Booth No. 416**
Providence, Rhode Island

DESITIN OINTMENT: the pioneer in external cod liver oil therapy.
Indications: diaper rash, slow healing wounds, burns of all degrees, lacerations, hemorrhoids and fissures.
DESITIN POWDER: a unique, dainty medicinal powder saturated with cod liver oil.
DESITIN HEMORRHOIDAL SUPPOSITORIES with COD LIVER OIL: coats ano-rectal area with soothing, lubricating cod liver oil, gives prompt relief of pain, allays itching.
DESITIN LOTION: The original cod liver oil lotion, soothing, protective, mildly astringent and healing, in non-specific dermatitis, pruritus, poison ivy, etc.

Dictaphone Corporation **Booth No. 212**
Detroit, Michigan

For busy doctors—Dictaphone Corporation presents the Time-Master dictating machine. Also try the Time-Master Telephone Recording and the new President Model with Remote Power Control. Power Control centralizes all dictating operations on the hand microphone itself.
For hospitals—medical records are more complete and more accurate with the Dictaphone Telecord System of network dictation by phone.

Dietene Company **Booth No. 401**
Minneapolis, Minnesota

Have YOU tasted MERITENE . . . the whole protein supplement that DOES taste good? Visit our booth, enjoy a MERITENE Milk Shake with its multiple nutritive values.
While you're there, review the Dietene Diet based on DIETENE Reducing Supplement. It provides the rare combination of low calories (1000) with high intake of protein and all essential vitamins and minerals in an interesting, effective, SAFE weight-reducing diet.

Doho Chemical Corporation **Booth No. 415**
New York, New York

Doho Chemical Corporation is pleased to exhibit:
AURALGAN, the ear medication for the relief of pain in Otitis Media and removal of Cerumen;
NEW OTOSMOSAN, the effective, non-toxic ear medication which is Fungicidal and Bactericidal (gram negative-gram positive) in the suppurative and aural dematomycotic ears;
RHINALGAN, the nasal decongestant which is free from systemic or circulatory effect and equally safe to use on infants as well as the aged.
Mallon Chemical Corporation, subsidiary of the Doho Chemical Corporation, is also featuring:
RECTALGAN, the liquid topical anesthesia, also for relief of pain and discomfiture in hemorrhoids, pruritus and perineal suturing.

Eaton Laboratories, Inc. **Booth No. 103**
Norwich, New York

For prompt results in urinary tract infections, Furadantin® is now available in the form of tablets and as Furadantin Oral Suspension.
The latest dosage forms of Furacin® of special interest include Furacin Vaginal Suppositories for cervicitis and vaginitis, Furacin Urethral Suppositories for painless therapy of urethritis, and Furaspor® Cream for rapid control of dermatomycoses.
For the treatment of Trichomonas vaginalis vaginitis and the accompanying secondary bacterial infections, we now have available Tricofuron* Vaginal Suppositories and Powder.
*T.M.

Paul B. Elder Company **Booth No. 509**
Bryan, Ohio

Members of the Society and their guests are cordially invited to visit Booth No. 509. A new drug for the treatment of idiopathic vitiligo, as well as several other interesting and new pharmaceuticals, will be presented.

Encyclopedia Americana **Booth No. 313**
Grand Rapids, Michigan

We will feature our 1955 edition of *Encyclopedia Americana.* The finest and best in our 126-year history acclaimed by leading educators as the ultimate for reference. All those who register at our booth will receive a 48-page world atlas in full color.

Ethicon Suture Laboratories **Booth No. 110**
New Brunswick, New Jersey

Ethicon CP Surgical Gut and Textile Sutures
Ethicon Atraloc Eyeless Needle Sutures
Bio-Sorb Absorbable Dusting Powder
Gamophen Antiseptic Surgical Soap
Tantalum Gauze and Other Tantalum Surgical Materials
SUTUPAK—Pre-cut Sterile Surgical Silk and Cotton Sutures
Surgical Steel Sutures and Gauze
Surgiset, Surgiset, Sr., and Pocket Surgiset—Suture Assortments
LIGAPAK—Spiral Wound Sutures
New OPHTHALMIC Sutures

Executone Company of Detroit **Booth No. 114**
Detroit, Michigan

At the Executone booth there will be "live" demonstrations of Executone's latest electronic intercummunication systems engineered and designed for use by the physician in his private offices, or in clinics and medical centers. Doctors will be shown how these communication systems save doctor's precious time and energy, help him see more patients each day, help him and nurse run office more efficiently and with less effort.

M. G. Farnsworth & Company and Waite Pharmacal Company, Inc. **Booth No. 318**
Chicago, Illinois

Presenting:
DYPRO . . . The non-narcotic, non-steroid analgesic, antipyretic and anti-rheumatic. Normally, complete relief from pain is anticipated within minutes following injections. Patients remain awake and able to co-operate.
AQUACAINE . . . The prolonged local anesthetic.
KOLMET . . . Widely used in mixed infections and brucellosis.
THE WAITE PROGRAM . . . For the treatment of obesity, excessive weight considered as a health problem.

H. G. Fischer & Company **Booth No. 518**
Detroit, Michigan

Latest models of Modern X-ray, F.C.C. approved Physicial Medicine and Rehabilitation Equipment, all of highest quality materials and construction, will be on display. Representatives in attendance will welcome an opportunity to give demonstrations and quote today's low prices. Your visit will be appreciated.

C. B. Fleet Company, Inc. **Booth No. 519**
Lynchburg, Virginia

During the past fifty years PHOSPHO-SODA (FLEET) has been a symbol of elegance in sodium phosphate medication. FLEET ENEMA DISPOSABLE UNIT—an enema solution of Phospho-Soda (Fleet)—is a worthy companion product. The single use unit simplifies and assures satisfying preparation for proctoscopy and as a routine enema it is a boon to the hospitalized patient.

Flint, Eaton & Company **Booth No. 316**
Decatur, Illinois

Flint, Eaton presents Ferrolip, a new chelate complex of iron.
Chelated iron, as in Ferrolip, is resistant to all usual chemical forces serving to precipitate iron and to produce iron intolerance; yet the chelated iron in Ferrolip is completely soluble and readily available for uptake along the entire gastrointestinal tract.
Visit the Flint, Eaton & Company booth to hear of chelation as it applies to iron therapy.

E. Fougera & Company, Inc. **Booth No. 512**
New York, New York

E. FOUGERA & COMPANY, INC., and Division, VARICK PHARMACAL COMPANY, INC., cordially invites physicians to discuss with Professional Service Representatives new preparations of importance to their every day practice. Descriptive literature and samples of all products will be available.

Freeman Manufacturing Company **Booth No. 102A**
Sturgis, Michigan

Makers of Orthopedic Supports

For more than sixty years, Freeman has been engaged in making surgical supports and elastic hose. During that time we have worked closely with members of the medical profession. Their assistance has proved invaluable in enabling us to maintain the highest standards of quality and design.

Geigy Pharmaceuticals **Booth No. 208**
New York, New York

GEIGY will feature Council Accepted BUTAZOLIDIN, oral nonhormonal antiarthritic, and MEDOMIN, new hypnotic-sedative affording sound, refreshing sleep and alert awakening without hangover. Also on display will be EURAX Cream and Lotion, antipruritic and scabicide; TROMEXAN, oral anticoagulant of rapid action, little cumulation and diminished risk of sustained or severe hemorrhage; and STEROSAN Cream and Ointment, bacteriostatic and fungistatic for treatment of pyogenic and mycotic skin disorders.

General Electric Company **Booth No. P-19**
Milwaukee, Wisconsin

X-Ray Department, General Electric Company, manufacturers of complete X-Ray equipment from portable diagnostic to 2,000,000-volt therapy apparatus — electrocardiograph—diathermy—X-Ray accessories and supplies. Whatever your needs, you can put your confidence in General Electric.

Gerber Products Company **Booth No. 319**
Fremont, Michigan

WHEN MILK IS CONTRAINDICATED as the basic food for infants, Gerber's "Meat Base Formula" can provide a nutritionally adequate replacement. It is well accepted and tolerated by infants of all ages. Your Gerber detailman invites you to evaluate "Meat Base Formula" and the complete line of supplementary baby foods.

Grand Rapids Creamery Company **Booth No. P-7**
Grand Rapids, Michigan

Sealtest TRADE MARK DAIRY PRODUCTS

Grand Rapids Creamery Co., local distributors of Sealtest milk, ice cream, and dairy products invites you to stop at their booth displaying the Sealtest symbol of quality, and enjoy a complimentary bottle of Sealtest milk. Representatives will be on hand to answer your questions on dairy products.

Hack Shoe Company **Booth No. P-11**
Detroit, Michigan



Regular as well as prescription shoes.

J. F. Hartz Company **Booth No. 116**
Ferndale, Michigan

Cardiovascular, thoracic, eye, and general surgery stainless steel instruments; diagnostic equipment; and our latest pharmaceutical specialty, will be on display in the booth of The J. F. Hartz Company at the Michigan State Medical Exhibition of 1955.

H. J. Heinz Company **Booth No. 214**
Pittsburgh, Pennsylvania

Heinz offers your infant and adult patients on soft diets over 60 varieties of Strained and Junior Foods, including 100% meats now completely in glass.
The four Heinz Pre-Cooked Cereals—Barley, Oatmeal, Rice and Cereal Food are now in packages with the new pouring spout.
A new Teething Biscuit of novel horse shoe shape, crumble proof and moderately sweet, which has been fortified with Iron and the B vitamins, is a brand new item in the line.
The following literature is available: For the physicians the Revised (1954) edition of Nutritional Data, Variety and Ingredient Listing Pads and Prescription Pads. For the patient these booklets: Facts about Foods, Feeding Guide for Healthy Happy Babies and Recipe Magic.

Hoffmann-La Roche, Inc. **Booth No. 215**
Nutley, New Jersey

NODULAR is a new, *non-barbiturate* hypnotic which provides effective relief of insomnia and tension states. NOLUDAR is so well tolerated that side effects such as nausea, vomiting, and dizziness, are rarely, if ever, experienced with therapeutic doses. NOLUDAR is available in scored tablets of two strengths, 50 mg and 200 mg, and in a cordial-flavored elixir, 50 mg per teaspoonful.

Holland-Rantos Company, Inc. **Booth No. 101**
New York, New York

Physicians interested in Medical Contraception are invited to discuss with H-R representatives latest information on laboratory and clinical data concerning efficacy of Koromex products. . . . Trichomonicidal, fungicidal and bactericidal Nylmerate Jelly and Solution and the Dila-Spray will also be shown, as will the new Hollandex Ointment.

G. A. Ingram Company **Booth Nos. 407, 409, 411**
Detroit, Michigan

THE G. A. INGRAM COMPANY will include in its exhibit this fall, the latest in equipment: diagnostic and surgical instruments, as well as physical therapy and laboratory supplies. A number of their men will be on hand to give you immediate attention, and they will appreciate your dropping by to see them.

Instant Sanka Coffee **Booth Nos. P-16, P-17**
White Plains, New York

It is gratifying to General Foods to be associated with the Ninetieth Annual Session of your Society. INSTANT SANKA will be served daily. This is 100% pure coffee, with 97% of the caffein removed. We invite you to sample this delicious coffee often during the Session, and to register for a professional sample and product booklet.

Jobst Applied Biomechanics Institute **Booth No. 502**
Toledo, Ohio

Jobst Applied Biomechanics Institute invites you to visit the scientific exhibit on the principle of hydrostatic counter pressure to stimulate fluids dynamics in limbs. Details of technical essentials necessary for the creation of a functioning support are clearly demonstrated.

E. J. Kantar Company **Booth No. 115**
Detroit, Michigan

E. J. Kantar Company, 2575 Puritan Avenue, Detroit, Michigan—Michigan's oldest and most complete intercommunication and signaling headquarters —Webster Electric Teletalk intercommunication systems; Golden Tone Ekotape recorders; Amplifiers, preamplifier-equalizers for background high fidelity music and public address systems.

C. B. Kendall Company **Booth No. 506**
Indianapolis, Indiana

In accordance with a custom which approaches the status of tradition, we will of course be represented at the September Meeting of the Michigan State Medical Society.

We appreciate this opportunity to again present the several Kendall products which your members have found so worthy of their acceptance.

Kremers-Urban Company **Booth No. 601**
Milwaukee, Wisconsin

WELCOME TO THE KREMERS-URBAN EXHIBIT. Medications featured: LEVSIN Sulfate, the most potent antispasmodic for relief of visceral muscle spasm; NITROL Tablets and Ointment for prophylaxis against anginal attacks provides both fast and prolonged vasodilatation; SALIMEPH-C and PHYATROMINE-H "inject-oral" combination for relief of crippling skeletal muscle spasm.

A. Kuhlman & Company **Booth No. 417**
Detroit, Michigan

The A. Kuhlman & Company of Detroit invites you to see our exhibit of the latest colors in steel and wood examining room furniture. Also on display will be many new diagnostic and surgical instruments.

Lea & Febiger **Booth No. 102**
Philadelphia, Pennsylvania

Be sure to see these 1955 books: Pullen—Pulmonary Diseases; Twiss and Oppenheim—Practical Management of Disorders of the Liver, Pancreas and Biliary Tract; Herbut—Pathology; Bailey—Surgery of the Heart; Goldberger—Heart Disease; Master, Moser and Jaffe—Cardiac Emergencies and Heart Failure; Burch and Winsor—Primer of Electrocardiography; Epstein—The Spine; Ritvo—Bone and Joint X-Ray Diagnosis; Merritt—Neurology; and other books of current clinical importance.

Lederle Laboratories **Booth No. P-25**
Pearl River, New York

You are cordially invited to visit our exhibit in booth P-25 where you will find our representative prepared to give you the latest information on LEDERLE products.

Liebel-Flarsheim Company **Booth No. 207**
Cincinnati, Ohio

The Liebel-Flarsheim Company cordially invites you to visit Booth 207, in which their latest electromedical-electrosurgical equipment will be exhibited. We ask particularly that you stop and see the L-F Basal-MeteR, the first automatic, self-calculating metabolism unit ever offered. Capable representatives will be on hand at all times.

Eli Lilly & Company **Booth Nos. 204, 206**
Indianapolis, Indiana

You are cordially invited to visit the Lilly exhibit located in space numbers 204 and 206. The display will contain information on recent therapeutic developments. Lilly sales people will be in attendance. They welcome your questions about Lilly products.

J. B. Lippincott Company **Booth No. P-4**
Philadelphia, Pennsylvania

J. B. Lippincott Company presents, for your approval, a display of professional books and journals geared to the latest and most important trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than 100 years of traditionally significant publishing.

M & R Laboratories, Inc. **Booth No. 405**
Columbus, Ohio

Your SIMILAC representatives are happy to take part in this meeting. They are pleased to have the opportunity to discuss with you the role of SIMILAC in infant feeding. They have for you the latest Pediatric Research Conference Reports. Also available are current reprints of pediatric nutritional interest.

Maico Company, Inc. **Booth No. 507**
Grand Rapids, Michigan

MAICO products (Medical Acoustic Instrument Co.) are well known to the medical profession. Their audiometers and hearing aids are unexcelled for excellence in precision and reliability in giving service to their users.

Ninety per cent of all precision hearing test equipment used in the United States by doctors, hospitals, schools, clinics, et cetera, are supplied by the Maico Company, Inc.

Maltbie Laboratories Division **Booth No. 108**
Wallace & Tiernan, Inc.
Belleville, New Jersey

You are cordially invited to visit the Maltbie Exhibit. Featured items will be DESENEX, the well-known undecylenate fungicide; SALUNDEK, for Tinea Capitis; MALCOTRAN, the high potency, low dosage anticholinergic; CHOLAN-HMB, for biliary dysfunction and SOTRADECOL, for safe, effective injection therapy of varicose veins and internal hemorrhoids.

S. E. Massengill Company **Booth No. P-18**
Bristol, Tennessee

The S. E. Massengill Company will feature SALCORT, the new antiarthritic with multiple advantages. Combined, Salicylates multiplied while the side effects are reduced. SALCORT provides safe, dependable relief in arthritic affections. Early functional improvement and a sense of well being are significant in a large number of patients.

McNamara Medical Equipment Company **Booth No. 403**
Detroit, Michigan

We will exhibit the finest in ultra-sonic generators, electrical muscle stimulators, moist steam packs, and other allied physical medical equipment.

We shall be happy to discuss with you any equipment problem you may have.

Mead Johnson & Company **Booth No. 320**
Evansville, Indiana

New displays of Liquid Lactum and Powdered Lactum, complete infant formulas, will be featured at the Mead exhibit. Also on display will be Liquid Sobee, the hypoallergenic soya formula, Sustagen, the complete food, and Natalins, the smaller prenatal capsule.

Medco Products Company **Booth No. P-6**
Tulsa, Oklahoma

Medical Arts Physiotherapy Equipment Co.
Detroit, Michigan **Booth No. 511**

John C. Hesse, representative for the Hanovia Chemical Mfg. Co. for thirty years, is now in business for himself, supplying a complete line of Electro Medical Specialties. Such as Short Wave Diathermy, Ultra Violet and Infra Red lamps, Muscle Stimulators and Ultra Sound generators.

Medical Arts Supply Company **Booth Nos. 309, 311**
Grand Rapids, Michigan

Medical Arts' Boys will again occupy their familiar spot—Nos. 309, 311.

They will display medical furniture, instruments, diagnostic equipment, physical therapy units, medical supplies and pharmaceuticals.

Representatives from the entire state will be on hand to greet you.

Please stop at Booths 309 and 311.

Medical Protective Company **Booth No. 117**
Fort Wayne, Indiana

An unparalleled record of successful malpractice protection since 1899 distinguishes The Medical Protective Company from all others. Year in and year out 99.94 per cent of its policyholders have been completely covered under $2,500. It's a sustained record that causes Medical Protective to be considered the Doctor's most secure source of security.

Wm. S. Merrell Company **Booth No. 210**
Cincinnati, Ohio

The Wm. S. Merrell Company presents Bentyl, the safe, effective, yet comfortable antispasmodic that is superior to atropine and belladonna for relief of nervous indigestion.

Bentyl has a musculotropic action like that of papaverine, and a neurotropic action like that of stropine. Because of its unique specificity for the G. I. tract, Bentyl is virtually free of the side effects generally associated with antispasmodics, and offers effective relief without "belladonna backfire."

Literature, including reprints reporting more than 1,500 clinical cases treated with Bentyl, is available at the booth.

Meyer Chemical Company, Inc. **Booth No. 109**
St. Clair Shores, Michigan

Gastralme, and antacid, and Almethine, a time disintegration capsule Expoxymethamine Bromide, a highly effective parasympatholytic drug in the suppression of acid secretion and gastric hypermotility when administered orally. Almethine Duracaps produce an effect lasting about 12 hours.

Michigan Cooperative Surgical Supply Co., Inc. **Booth No. 111**
Grand Rapids, Michigan

The Michigan Cooperative Surgical Supply Co. carries a complete line of quality equipment and supplies for the physicians and surgeons of Michigan. Our guarantee is your complete satisfaction at all times. Our aim is service.

Michigan Medical Service **Booth No. 304**
Detroit, Michigan

The Blue Shield exhibit exemplifies the prepayment plan sponsored by the doctors of Michigan and what that plan means to the people of the State. The family scene is typical of a family which has been relieved of the worry of catastrophic medical bills.

The photograph of the doctor and the child which makes up the Blue Shield portion of the exhibit is symbolic of the co-operation of the doctors of Michigan. Through that co-operation, Blue Shield in Michigan has led the nation in meeting the needs of the public.

Middleton's Incorporated **Booth No. 517**
Grand Rapids, Michigan

It's here—at Middleton's
Ar-Ex Cosmetics
America's finest hypo-allergenic Cosmetics and Dermatological Pharmaceuticals
* Clinically tested on allergic persons
* For use by allergic persons
* Available scented and unscented
* As glamorous as they are safe

Mr. Peter Middleton will be in attendance to show and present samples of all these products for your inspection and approval.

Miles Reproducer Company, Inc. **Booth No. 510**
New York, New York

Case histories, lectures and dictation may now be recorded at a 60-foot radius with Walkie-Recordall, an 8-lb. self-powered battery recorder-transcriber. It operates in or out of the closed briefcase, indoors or outdoors, while stationary, walking, riding or flying. The Voice-Activated Self-Start-Stop feature automatically starts and stops the recording from microphone or telephone, thus eliminating supervision and the recording of silent periods. While facilities for transcribing are available, transcription may be eliminated due to ease of handling identifiable, compact, indexed recordings without the delay of rewinding. Up to 8 hours of permanent recordings may be accumulated at intervals on an "endless" belt costing 25 cents.

Miller Surgical Company **Booth No. P-24**
Chicago, Illinois

MILLER SURGICAL COMPANY will show the Miller Electro-scalpel. This unit cuts, desiccates, fulgurates, coagulates, and is used for most delicate work up to light major surgery. Accessories such as Snares, Smoke Ejectors, et cetera also available. A complete line of Diagnostic Equipment consisting of Illuminated Otoscopes, Ophthalmoscopes, Eyespud with magnet, Transillumination Lamps, Headlights, Vaginal Speculum with Smoke Ejector and the Gorsch Operating Scopes and Stainless Steel Proctoscopes all sizes with magnification, Suction Tubes, and Grasping Forceps.

Muller's Shoes, Inc.
Grand Rapids, Michigan **Booth No. P-12**

Specializing in orthopedic type footwear for juveniles and adults. Our stock includes various special shoes such as Sabel club foot shoes, surgical, pre-walker, surgical and slub, and pigeon toe shoes. Also Tarso Supernator (flat foot) and Pronator (pigeon toe) and "Nature's Own," 100 per cent straight last shoes. We also have a complete mismating service.

Nepera Chemical Company, Inc. **Booth No. 211**
Yonkers, New York

The Nepera exhibit features a new drug, *Choledyl,* which has been highly effective in the treatment of bronchial asthma, broncho-spasm and congestive heart failure. Choledyl assures high oral theophylline blood levels, with minimal side reactions; it rarely produces fastness.

Also featured:

Biomydrin Nasal Spray, for effective mucolytic-penetrating, antibacterial activity, prolonged nasal decongestion and antiallergic effect.

Biomydrin-F, adds Hydrocortisone Alcohol to the Biomydrin Nasal Solution formula. Biomydrin-F is anti-inflammatory, anti-allergic, mucolytic-penetrating, anti-bacterial and decongestant.

Urosulfin, a new product, which is a combination of a well-known soluble sulfonamide for anti-bacterial effect and a widely-used azo dye for rapid symptomatic relief of pain, burning, frequency, et cetera, in the treatment of urinary infections.

Wm. R. Niedelson Company **Booth No. 213**
Detroit, Michigan

We are introducing the PROFEXRAY ROCKET No. 100—the newest advance in office radiography. The JONES AIR-BASAL—the metabolism tester that eliminates oxygen tanks—: will be demonstrated, as well as the CARDIOTRON, a completely new model direct-writing Cardiograph with rectilinear response. Your visit will be welcome.

Noble-Blackmer, Inc. **Booth Nos. 118, 119**
Jackson, Michigan

Stop at Booth Nos. 118 and 119 and visit your friendly representatives from Noble-Blackmer, Inc. If you have time they will be glad to tell you about the latest developments in supplies and equipment.

Ortho Pharmaceutical Corporation **Booth No. P-21**
Raritan, New Jersey

ORTHO cordially invites you to visit their exhibit

at booth P-21. The Ortho display will feature PRECEPTIN® vaginal gel, their product for conception control, designed for use without a vaginal diaphragm. Preceptin vaginal gel has achieved an outstanding record of clinical effectiveness and has been widely acclaimed by the medical profession. Your inquiries on Preceptin vaginal gel are invited.

Parke, Davis & Company **Booth No. 209**
Detroit, Michigan

Medical service members of our staff will be in attendance at our exhibit for consultation and discussion of various products. Important specialties, such as Penicillin S-R, Benadryl, Ambodryl, Dilantin Suspension, Vitamins, Oxycel, Milontin, Amphedase, Chloromycetin, Thrombin Topical, et cetera, will be featured. You are cordially invited to visit our exhibit.

Pelton & Crane Company **Booth No. 306**
Detroit, Michigan

High speed autoclaves for the private office and small clinic are being demonstrated all during the meeting. One filling with water lasts all day. Sterilizing loads may be removed every thirteen minutes.
These self-contained units require an electric outlet only. Pelton autoclaves are the only office autoclaves which double as dry heat sterilizers also.

Pet Milk Company **Booth Nos. 201, 202**
St. Louis, Missouri

We will be pleased to have you stop and discuss the variety of time-saving material available to busy physicians. Our representatives will be on hand to discuss the merits of "Pet" Evaporated Milk for infant feeding and INSTANT "Pet" Nonfat Dry Milk for special diets. A miniature "Pet" Evaporated Milk can will be given to all visitors.

Pfizer Laboratories **Booth No. 302**
Brooklyn, New York

The Pfizer exhibit again will be in the spotlight with its new and original concept of anti-stress, anti-infective therapy—TERRAMYCIN-SF and TETRACYN-SF. Also featured will be the complete line of Pfizer broad-spectrum antibiotics and STERAJECT as well as the new specialties, BONAMINE TABLETS, BONAMINE CHEWING TABLETS, TYZINE, and TOCLASE.

Picker X-Ray Corporation **Booth No. 603**
White Plains, New York

'Dial-the-part' automation distinguishes the new Picker Anatomatic Century II x-ray unit. Simple to use, it eliminates the need for technic charts or manual setting of separate technic factors. The operator merely "dials" the body part, makes a simple thickness-of-part setting, and pushes a button for the exposure. Coupled with this control is a new full size motor-driven table with a single x-ray tube quickly changed over from fluoroscopy to radiography.

Procter & Gamble Company **Booth No. 410**
Cincinnati, Ohio



Ivory soap (Procter & Gamble) offers a series of time-saving leaflet pads for doctors, each pad containing fifty identical tear-out sheets. These sheets, which may be given to patients, contain routine instructions covering six different topics. There are also samples of other free, helpful material prepared especially for physicians.
Mrs. Christyne Schwab in charge.

Professional Management **Booth No. 413**
Battle Creek, Michigan

PM

Business Counsel to the Medical Profession
Our account executives devote their full time to professional management. They are the *best informed men in the country* on the business side of your practice. Stop at Booth No. 413 and learn why PM clients enjoy a higher than average income at a lower cost to the patient.

Purdue Frederick Company **Booth No. 615**
New York, New York

Purdue Frederick Company will feature SENOKOT, new non-bulk, non-irritating constipation corrective acting selectively on the parasympathetic (Auerbach's) plexus in the large bowel, physiologically stimulating the neuromuscular defecatory reflex.
PRE-MENS, the multidimensional premenstrual tension therapy; COLPOTAB, a tested effective Tyrothricin trichomonacide; and CHLOROGIENE Duchettes, a hygienic douche formulation, will also be presented.

Randolph Surgical Supply Company **Booth Nos.**
Detroit, Michigan **217, 219**

Reed & Carnrick **Booth No. 515**
Jersey City, New Jersey

Reed & Carnrick—invites you to demonstrations of —DIA-DISCS, for determining degree of sensitivity of bacteria to various antibiotics for therapeutic guidance—NEOBACIN Tablets for synergism of bacitracin and neomycin for preoperative sterilization of the bowel or treatment of diarrheas or dysenteries, and GINEBATIN SUPPOSITORIES for preoperative or therapeutic vaginal use.

R. J. Reynolds Tobacco Company **Booth No. 501**
Winston-Salem, North Carolina

Welcome to the R. J. Reynolds Tobacco Company Exhibit! You are cordially invited to receive a cigarette case (monogrammed with your initials) containing your choice of CAMEL, CAVALIER King Size, or WINSTON, the distinctive new king size filter cigarette.

Riker Laboratories, Inc. **Booth No. 312**
Los Angeles, California

Riker Laboratories presents "PENTOXYLON," a new and more complete therapy in angina pectoris. "PENTOXYLON" combines the actions of "RAUWILOID," the alseroxylon fraction of Rauwolfia serpentina and of pentaerythritol tetranitrate (PETN). A truly important step toward providing a solution to the total clinical problem of angina pectoris. Visit Booth 312 for complete information.

A. H. Robins Company, Inc. **Booth No. P-20**
Richmond, Virginia

Physicians attending the Michigan State Medical Society meeting are extended a cordial invitation to visit the exhibit of the products of the A. H. Robins Company. Experienced medical representatives will be in attendance to welcome you and answer inquiries relative to any of Robins' prescription specialties.

J. B. Roerig and Company
Chicago, Illinois **Booth No. P-13**

J. B. ROERIG AND COMPANY's Booth No. P-13 will highlight ROETINIC, the new one a day capsule hematinic for all anemias amenable to oral therapy. Also featured will be BONADOXIN for the prevention of nausea and vomiting of pregnancy and postoperatively. ASF, Roerig's new anti-stress formula, VI THYRO, for the vitalized thyroid and improved

thyroid action and NEOBON, Roerig's new geriatric formulation. VITERRA, VITERRA THERAPEUTIC, AMPLUS, OBRON, OBRON HEMATINIC and HEPTUNA PLUS will also be available on request.

Sandoz Pharmaceuticals **Booth No. 301**
Hanover, New Jersey

FIORINAL A new approach to therapy of tension headaches and other head pain due to sinusitis and myalgiz.
BELLERGAL Time-tested and clinically proven as a potent autonomic inhibitor in a variety of psychosomatic disorders. Supporting clinical evidence will be presented.
CAFERGOT Available in oral and rectal form for effective control of head pain in migraine and other vascular headaches.
PLEXONAL A new hypnotic-autonomic and central acting drug potentiates the action of subthreshold doses of classic sedative agents.
BELLADENAL Anti-spasmodic sedative for the control of hypermotility with pain and hypersecretion of the intestinal tract.

W. B. Saunders Company **Booth No. P-2**
Philadelphia, Pennsylvania

Harold Rozema will be showing amongst the newest of our line: Cecil & Loeb: MEDICINE; Williamson: OFFICE PROCEDURES; Modell: RELIEF OF SYMPTOMS; Henry Ford Hospital: CARDIOVASCULAR SURGERY; Boyd: SURGICAL PATHOLOGY; Harvey & Bordley: DIFFERENTIAL DIAGNOSIS, and Cantarow & Trumper: CLINICAL BIOCHEMISTRY. These will be permanently displayed along with all our standard titles.

Schering Corporation **Booth No. P-8**
Bloomfield, New Jersey

Members of the Michigan State Medical Society and their guests are cordially invited to visit the Schering exhibit where new therapeutic developments will be featured.
Schering representatives will be present to welcome you and to discuss with you these products of our manufacture.

Julius Schmid, Inc. **Booth No. 308**
New York, New York

An interesting and informative exhibit featuring RAMSES Flexible Cushioned Diaphragm; RAMSES Vaginal Jelly; VAGISEC Jelly and Liquid, two new products embodying "Carlendacide," the recent development of Carl Henry Davis, M.D., and C. G. Grand for vaginal trichomoniasis therapy; and XXXX (FOUREX) Skin Condoms, RAMSES and SHEIK Rubber Condoms for the control of trichomonal reinfection.

G. D. Searle & Company **Booth No. P-23**
Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be Mictine, the new safe, non-mercurial oral diuretic; Vallestril, the new synthetic estrogen with extremely low incidence of side reactions; Banthine and Pro-Banthine, the standards in anticholinergic therapy; and Dramamine, for the prevention and treatment of motion sickness and other nauseas.

Sharp & Dohme, Inc. **Booth Nos. 216, 218**
Philadelphia, Pennsylvania

The Sharp & Dohme exhibit presents highlights on steroid therapy featuring "Deltra," "Hydrocortone," "Alflorone," and related steroids in respiratory allergies, endocrine disorders, eye diseases, collagen diseases, and skin conditions. Expertly trained personnel will be pleased to discuss new dosage forms, new indications, new management techniques, and the latest summaries of advanced clinical reports. A new anesthetic agent "Cyclaine" Hydrochloride with qualities suitable for such forms of regional anesthesia as infiltration, nerve block, spinal, caudal, and topical is of interest. Research data relative to more effective therapy when penicillin is used in conjunction with "Benemid" completes the exhibit.

Smith, Kline & French Laboratories **Booth No. P-5**
Philadelphia, Pennsylvania

The S.K.F. booth will feature the latest clinical information about the remarkable new drug—THORAZINE*—and its many and varied uses. These uses include potent anti-emetic action, potentiation of other drugs, and its unique and dramatic applications in the field of mental and emotional problems.
*"THORAZINE"—Trademark, S.K.F.

E. R. Squibb & Sons **Booth No. 418**
New York, New York

E. R. Squibb & Sons has long been a leader in development of new agents used in prevention and treatment of disease. The results of diligent research is quickly made available to the Medical Profession as new products or improvement on products already marketed.
At booth No. 418 we are pleased to present up-to-date information on these advances for your consideration.

The Stuart Company **Booth No. 105**
Chicago, Illinois

Representatives of the Stuart Company are featuring two new products. One is Suladyne, a more complete product for the treatment of urinary tract infections, and the other is Mulvidren, an entirely different type of multivitamin tablet for children 2 to 10.

Swift & Company **Booth No. 113**
Chicago, Illinois

THE ORIGINAL all-meat baby foods, Swift's Meats for Babies and Juniors, will be featured at the Swift exhibit. Literature and information on clinical research available. Also available is information about *new* Swift's Strained Chicken for Babies. Its pleasant mild flavor will make a delicious, taste-tempting change for any baby's diet.

Tampax Incorporated **Booth No. 617**
New York, New York

Your opinion of internal menstrual protection is important to your women patients. Tampax Educational Consultants at the exhibit will explain the correct use of the three absorbencies—Junior, Regular and Super.
Also displayed are Dickinson charts of female anatomy, Tampax teaching model, booklets for adolescents, medical reprints and literature on menstruation and menopause.

Testagar & Company, Inc. **Booth No. 310**
Detroit, Michigan

TESTAGAR & CO., INC. will show three new timed disintegrating capsules. TIMED PYMADEX is a trisynergistic antihistamine in a timed disintegrating capsule composed of three proven antihistamines. Smaller than average doses of each are used thereby minimizing possible side reactions to the patient and still affording the patient a maximum of effect. TIMED PYMADEX CAPSULES, a day-time partner to Timed Pyma Capsules also contains 6 mg. of

Dextro-Amphetamine to overcome any possible soporific aftereffects of the antihistamines and give the patient a sense of well-being. One TIMED PYMADEX CAPSULE at breakfast and one TIMED PYMA CAPSULE before retiring affords the patient protection around the clock. TIMED BAR-TROPIN CAPSULES are an antispasmodic capsule using tried and proven Atropine. One capsule at breakfast affords 10- to 12-hour (all-day) antispasmodic activity. Samples and literature will be available.

S. J. Tutag & Company **Booth No. 106**
Detroit, Michigan

S. J. Tutag & Company will feature Buffonamide brand of acet-dia-mer sulfonamide suspension at booth No. 106.

This outstanding cherry-flavored triple sulfa is unsurpassed among sulfa drugs for wide spectrum—high blood levels, palatability and minimal side effects. The non-settling, synergistic suspension contains Sodium Citrate for protection against crystalluria.

The Upjohn Company **Booth No. 203**
Kalamazoo, Michigan

Members of the medical profession are invited to visit the Upjohn booth where members of The Upjohn Company professional detail staff are prepared to discuss subjects of mutual interest.

U. S. Vitamin Corporation **Booth No. 107**
New York, New York

Exhibit features VI-AQUAMIN THERAPEUTIC . . . for the first time *aqueous* therapeutic vitamin formula with minerals in a *single capsule* to hasten recovery in medical, surgical and convalescent patients.

Professional samples and literature on Vi-Aquamin Therapeutic and other of our nutritional specialties will be distributed at the booth.

Warner-Chilcott Laboratories **Booth No. 419**
New York, New York

Two important cardiovascular agents will be featured at the Warner-Chilcott booth: Methium with Reserpine, a hypotensive-sedative, to lower blood pressure and relieve hypertensive symptoms and Peritrate to prevent attacks in angina pectoris. Parsidol, for the control of symptoms in parkinsonism, will also be exhibited. Representatives and research personnel will welcome an opportunity to discuss these drugs with you.

Westwood Pharmaceuticals **Booth No. 315**
Buffalo, New York

Westwood will display Gentia-Jel. The only effective gentian violet jelly you can prescribe for self treatment by the patient at home. Eliminates messy office treatments which often stain your furniture and clothing. Lowila Cake, the only completely soapless skin cleanser, in cake form, available to your allergic or dermatitic patients whenever soap is contraindicated. Obtain a Lowila Cake from the Westwood Booth for your own personal use.

White Laboratories **Booth No. 307**
Kenilworth, New Jersey

MOL-IRON—ferrous sulfate in a therapeutically potentiated form—has been described by competent investigators, as the most effective iron therapy known. Rapid hemoglobin increases plus a markedly low incidence of side-effects are two of the outstanding characteristics of the product. Mol-Iron is available in drop, liquid, and tablet forms, also as Mol-Iron with Calcium and Vitamin D, Mol-Iron with Liver and Vitamins and Mol-Iron E.M.F. (erythrocyte maturing factors).

Winthrop-Stearns, Inc. **Booth No. 406**
New York, New York

THEOMINAL R.S. (Theominal with Rauwolfia serpentina), an alliance of the classic and contemporary in antihypertensive compounds. Theominal R.S. combines the vasodilator and myocardial stimulant actions of theobromine and Luminal with the moderate central hypotensive effect of Rauwolfia serpentina. Gentle sedation calms the patient and a feeling of "relaxed well-being" is established. Headache and vertigo disappear as the blood pressure and pulse rate are reduced gradually.

Woodward Medical Personnel Bureau **Booth No. 607**
Chicago, Illinois

To those doctors seeking to re-locate, or to physicians who wish to reorganize or augment their present staff, Ann Woodward offers the facilities of the Woodward Medical Personnel Bureau. The details of excellent opportunities for above-average income, with good security and fine future potential may be investigated. You may also review the records of some exceptionally well-qualified younger doctors just finishing their formal training as well as diplomates of the specialties qualified to head departments. The complete files for these purposes may be found at Booth 607 where Mrs. Woodward will be available to greet and assist you.

Wyeth Laboratories **Booth No. 611**
Philadelphia, Pennsylvania

The Wyeth Laboratories exhibit will feature EQUANIL, a new anti-anxiety agent with muscle-relaxing properties. EQUANIL inhibits internuncial circuits in the subcortex without affecting the autonomic system, peripheral nerves, or the myoneural junction. Significant side-effects, toxic manifestations, or withdrawal phenomena have not been observed in widespread clinical trials.

Yakes Office Supply Company **Booth No. 516**
Grand Rapids, Michigan

Zimmer Manufacturing Company **Booth No. 402**
Warsaw, Indiana

Mr. C. A. Fisher, your Zimmer Distributor, extends a most cordial invitation to the members of the Michigan State Medical Society to visit his exhibit at Booth 402.

A complete line of Orthopedic Instruments and Fracture Equipment will be on display. Items of special interest, Badgley Nail, TITANIUM omplants, ZIMALOY new inert metal, Townley Cup Stem Prosthesis, Linbach Contour Medullary Screw, Schneider Self-Broaching Intramedullary Pins, "Underwriters Approved" Explosion Proof Luck Bone Saw and Brown-Electro Dermatome, DUROCEL a new "non-toxic" plastic foam padding which can be autoclaved and eliminates the use of stockinette—sheet wadding—felt or foam rubber.

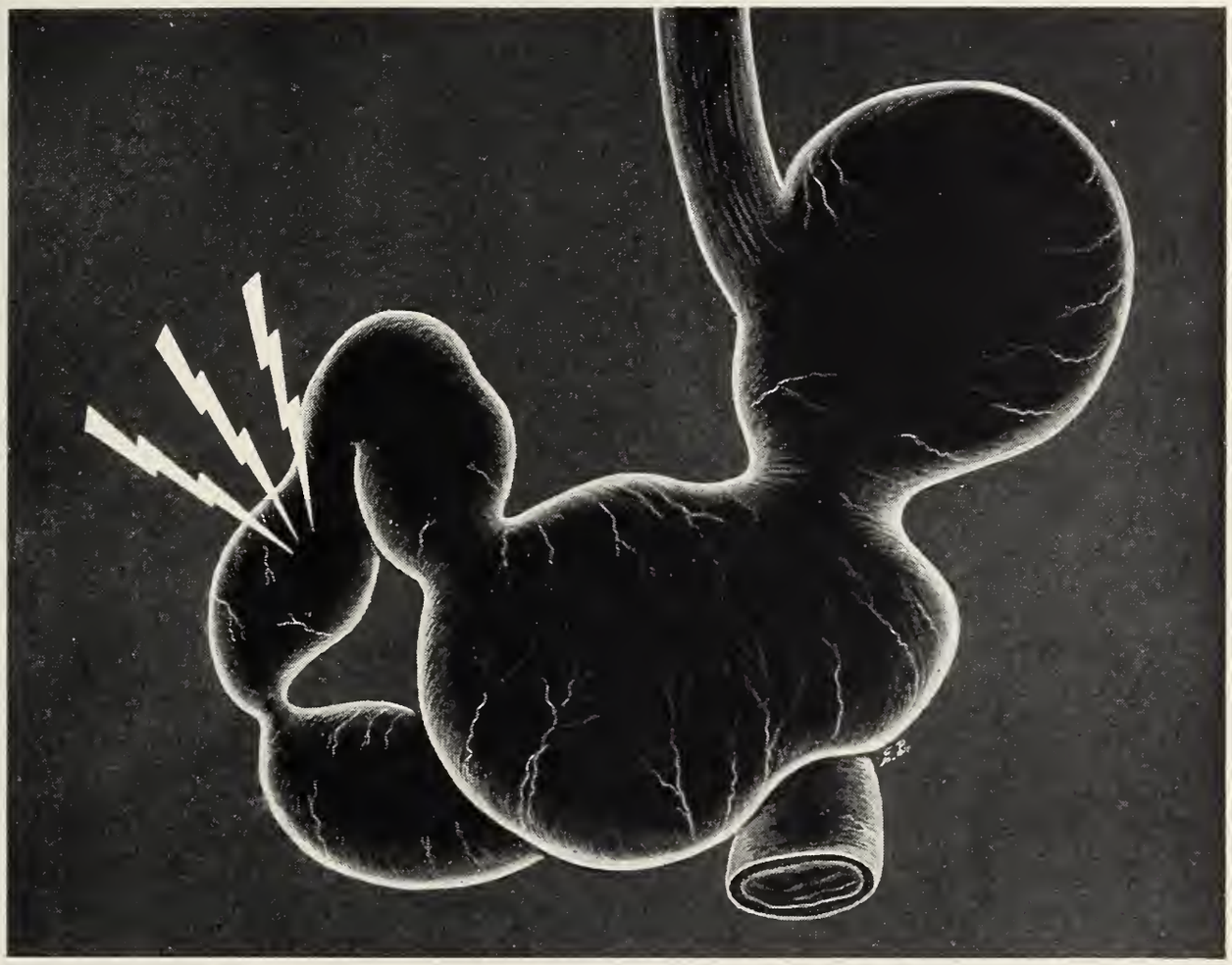
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THANKS

To our Business Friends in the Exhibit.

The Michigan State Medical Society expresses sincere thanks to the Technical Exhibitors for their splendid cooperation and very tangible contribution to the great success of the 1955 MSMS Annual Session.

PRO-BANTHĪNE FOR ANTICHOLINERGIC ACTION



Abnormal Motility as the Cause of Ulcer Pain

Until recently the general opinion was held that ulcer pain was primarily caused by the presence of hydrochloric acid on the surface of the ulcer.

Present investigations[1,2] on the relationship of acidity and muscular activity to ulcer pain have led to the following concept of its etiologic factor:

"... abnormal motility[2] is the fundamental mechanism through which ulcer pain is produced. For the production and perception of ulcer pain there must be, one, a stimulus, HCl or others less well understood; two, an intact motor nerve supply to the stomach and duodenum; three, altered gastro-duodenal motility; and four, an intact sensory pathway to the cerebral cortex."

Pro-Banthīne® has been demonstrated consistently to reduce hypermotility of the stomach and intestinal tract and in most instances also to reduce gastric acidity. Dramatic remissions[1] in peptic ulcer have followed Pro-Banthine therapy. These remissions (or possible cures) were established not only on the basis of the disappearance of pain and increased subjective well-being but also on roentgenologic evidence.

Pro-Banthine Bromide (Beta-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) has other fields of usefulness, particularly in those in which vagotonia or parasympathotonia is present. These conditions include hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm.

1. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

2. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

SEARLE

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

DISTRIBUTION AND USE OF POLIO VACCINE IN MICHIGAN

The Governor's Advisory Committee on Distribution of Poliomyelitis Vaccine approved, with slight modifications, the recommendations of the Commissioner's Special Technical Committee on Immunization in regard to distribution and use of the vaccine in Michigan. The recommendations were then adopted by the State Health Commissioner.

In general, the Committee feels that the total preventive effect of the vaccine in a period of rising poliomyelitis incidence should be much greater than any possible hazard from the provoking effects of the injection.

The Committee feels, also, that for the present all poliomyelitis vaccine available to Michigan should come directly to the Michigan Department of Health to be allotted to counties on a formula basis. The amount sent to each area will depend upon the relative proportion of priority children in the county—figured in strict ratio to the number of priority children in the state as a whole.

Local distribution will be governed by local arrangements.

As to the so-called provoking effect of Salk vaccine when used extensively during epidemic periods, this must be considered in an entirely different light from the possible provoking effect of injectable materials which do not produce an immune response against poliomyelitis infection.

Poliomyelitis vaccine has been shown to reduce incidence of paralytic poliomyelitis by 80 to 90 per cent. This reduction is particularly striking in severe and fatal forms of the disease.

The vaccine is expected to produce some antibody response as early as a week to ten days following the first shot. Even small amounts of antibodies are believed to have some effect in preventing paralytic polio after this interval. Therefore, the onset of an antibody response to the vaccine may well eliminate any subsequent provoking effect of the vaccine injection.

Experience with the polio vaccine in 1954 and 1955 showed no evidence of any significant provoking effect of the vaccine.

Even the small potential risk of the provoking effect of injections probably can be reduced still further by avoiding any such injections in persons with symptoms of minor illness, especially fever, sore throat or gastrointestinal upsets, and for a period of at least two weeks thereafter.

The vaccine should not be given to persons in a household where a case of poliomyelitis has just occurred, since almost all of the other members of the household are already infected when the case is identified. There is greater possibility that injections might provoke paralysis.

As to the localizing effect of the vaccine, evidence indicates that the risk of localizing the paralysis or of provoking a paralytic attack of poliomyelitis by giving the vaccine is small. The duration of such a possible effect is limited to about three weeks following an injection.

There is only scanty evidence that injections other than poliomyelitis immunizations increase the risk of acquiring paralytic poliomyelitis in injected individuals during epidemic periods. However, the effect of localization of a developing paralysis to the injected extremity has been clearly shown. Therefore, it is still considered advisable that booster injections against common infectious diseases, such as diphtheria, whooping cough and tetanus be postponed during the periods of high poliomyelitis incidence.

This does not contradict the recommendation that Salk vaccine should be given during periods of high poliomyelitis incidence. The Salk vaccine is specific for poliomyelitis.

In both recommendations, the same rule is followed: Injection is given only when the risk of the disease to be prevented by the injection is greater than the presumed risk of converting an asymptomatic poliomyelitis infection into a paralytic one—or of localizing the paralysis to the injected extremity.

As to the limitations of the Salk vaccine, when it is given to large numbers of persons during periods of rising incidence, a small proportion may be in the incubation period and may subsequently experience paralytic disease. Persons receiving the poliomyelitis vaccine during the early, silent period of a poliomyelitis infection may not be protected. And they may be subject to a localizing effect of paralysis at the site of the injection.

Experience so far this year has shown, too, that a number of cases may be erroneously reported as poliomyelitis which are other diseases with clinical similarities.

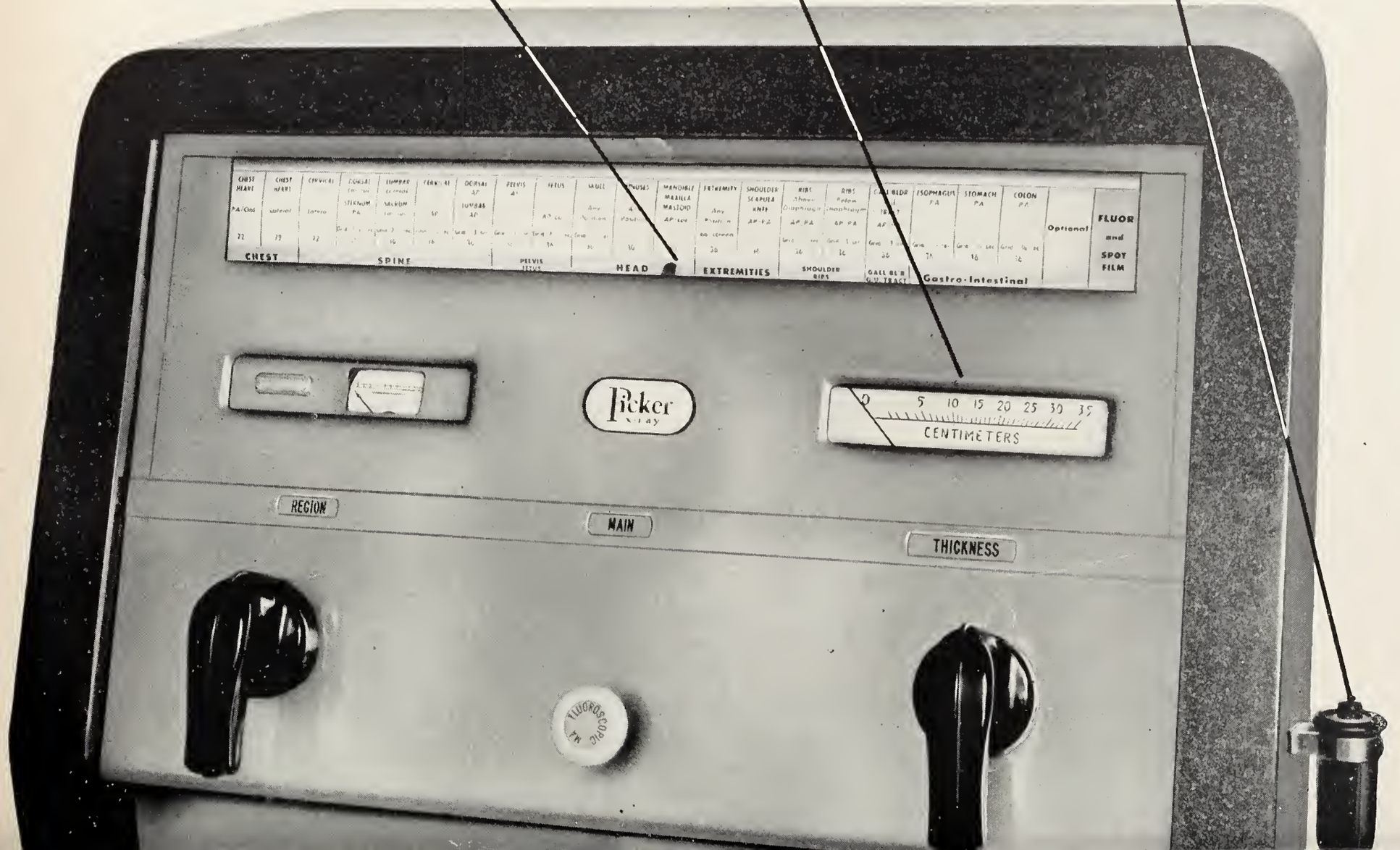
And, of course, the vaccine is not 100 per cent effective.

It is considered extremely significant that in 26,000 Michigan youngsters who received the placebo substance in the field trials last year, there were thirty-seven cases of paralytic poliomyelitis. In the same number of youngsters who received the poliomyelitis vaccine, there were only three cases of paralytic poliomyelitis.

The Committee concluded that benefit to be gained by poliomyelitis immunization, in contrast to the small potential risk of provocation, increases in proportion to the severity of the poliomyelitis incidence—since a larger number of paralytic cases should be prevented during the entire period of any epidemic.

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MICHIGAN AUTHORS

Waldemar E. Gizynski, M.D., Detroit, is the author of an article entitled "Program Highlights Central Association of Obstetricians and Gynecologists," published in the *Harper Hospital Bulletin,* March-April, 1955.

Thomas Francis, Jr., M.D., Ann Arbor, is the author of an article entitled "Approach to Control of Poliomyelitis by Immunological Methods" published in the *Bulletin of the New York Academy of Medicine,* April, 1955.

William G. McDevitt, M.D., F.A.C.S., F.I.C.S., Detroit, is the author of an article entitled "A Method for Correction of Blepharoptosis," read at the Nineteenth Annual Congress of the United States and Canadian Sections, International College of Surgeons, Chicago, September, 1954, and published in *The Journal of the International College of Surgeons,* June, 1955.

K. T. Johnstone, M.D., Saginaw, is the author of an article entitled "The Identification of Accident Proneness" which was presented at the Seventeenth Annual General Motors Medical Conference, Buffalo, New York, April, 1955, and published in *Industrial Medicine and Surgery,* July, 1955.

William B. Taylor, M.D., and **Richard E. Dickes, M.D.**, Ann Arbor, are the authors of an article entitled "The Carcinogenic Properties of Cutting Oils," published in *Industrial Medicine and Surgery,* July, 1955.

Earl F. Lutz, M.D., Detroit, is the author of an article entitled "The Tetanus Problem" presented at the General Motors Medical Conference, Buffalo, New York, April, 1955, and published in *Industrial Medicine and Surgery,* July, 1955.

A. Burgess Vial, M.D., Ann Arbor, is the author of an article entitled "Succinylcholine and Artificial Respiration in the Treatment of Tetanus: Report of a Case," published in *University of Michigan Medical Bulletin,* May, 1955.

Robert M. Reynolds, A.B., M.D., Ann Arbor, is the author of an article entitled "Adrenal Hemorrhage in Adults: Two Case Reports," published in the *University of Michigan Medical Bulletin,* May, 1955.

P. E. Hodgson, M.D., D. A. Moosman, M.D., and **M. R. Abell, M.D.**, Ann Arbor, are the authors of an article entitled "Surgery Staff Conference: Diseases of the Gallbladder," published in the *University of Michigan Medical Bulletin,* May, 1955.

William C. Baum, M.D., Ann Arbor, is the author of an article entitled "Oxytetracycline in the Treatment of Infections of the Genitourinary Tract" published in the *International Record of Medicine and General Practice Clinics,* April, 1955.

Allen I. Bortz, M.D., and **Frank H. Bethell, M.D.**, Ann Arbor, are the authors of an article entitled "Pigmented Spots of the Oral Mucosa, Lips and Digits Associated with Gastrointestinal Polyposis," published in the *Digest of Ophthalmology and Otolaryngology,* April, 1955.

Prescott Jordan, Jr., M.D., and **Harper K. Hellems, M.D.**, Detroit, are the authors of an article entitled "Surgical Treatment of Aortic Insufficiency," published in the *Harper Hospital Bulletin,* March-April, 1955.

Paul De Kruif, Ph.D., Holland, is the author of an article entitled "News for the Itching," published in *Today's Health,* July, 1955.

Thomas Geoghegan, M.D., and **Brock E. Brush, M.D.**, Detroit, are the authors of an article entitled "Relationship of Corticotropin (ACTH) to the Healing of Gastrointestinal Anastomoses," published in AMA *Archives of Surgery,* June, 1955.

J. Reimer Wolter, M.D., Ann Arbor, is the author of an article entitled "The Cells of Remak and the Astroglia of the Normal Human Retina," published in AMA *Archives of Ophthalmology,* June, 1955.

James E. Coyle, M.D., and **Samuel L. Balofsky, M.D.**, by invitation, Detroit, are the authors of an article entitled "Current Trends in Radiotherapy of Head and Neck Cancer," published in *Transactions of the American Academy of Ophthalmology and Otolaryngology,* March-April, 1955.

Richard C. Woellner, Chicago, by invitation, and **Harold F. Schuknecht, M.D.**, Detroit, are the authors of an article entitled "Hearing Loss from Lesions of the Cochlear Nerve: An Experimental and Clinical Study," published in *Transactions of the American Academy of Ophthalmology and Otolaryngology,* March-April, 1955.

(Continued on Page 1004)



READING TIME—1 MINUTE

A FEW FACTS FOR THE BUSY DOCTOR WHO WANTS THE

Latest Information About Filter Tip Cigarettes

Your patients are interested in cigarettes! From the large volume of writing on this subject, Brown & Williamson Tobacco Corp. would like to give you a few facts about *Viceroy*.

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(Continued from Page 1002)

Merle Lawrence, Ph.D., Ann Arbor, by invitation, is the author of an article entitled "In Vitro Studies of Bone from the Developed Human Otic Capsule," published in *Transactions of the American Academy of Ophthalmology and Otolaryngology,* March-April, 1955.

Elisha S. Gurdjian, M.D., John E. Webster, M.D., Frederick R. Latimer, M.D., Sander P. Klein, M.D., and **James E. Lofstrom, M.D.,** Detroit, are the authors of an article entitled "Recent Advances in Surgical Management of Chromophobe Tumor of Pituitary," published in *The Journal of the American Medical Association,* May 7, 1955.

Basil I. Hirschowitz, M.D., M.R.C.P., David H. P. Streeten, Dr. Phil., M.R.C.P., M. Marvin Pollard, M.D., and **Henry A. Boldt, Jr., M.D,** Ann Arbor, are the authors of an article entitled "Role of Gastric Secretions in Activation of Peptic Ulcers by Corticotropin (ACTH)," published in *The Journal of the American Medical Association,* May 7, 1955.

Brock E. Brush, M.D., and **Thomas J. Heldt, M.D.,** Detroit, are the authors of an article entitled "A Device for Relief of Lymphedema," published in *The Journal of the American Medical Association,* May 7, 1955.

Leo S. Figiel, M.D., and **Steven J. Figiel, M.D.,** Detroit, are the authors of an article entitled "Volvulus of the Transverse Colon" published in *Radiology,* a condensation of which appears in the *American Practitioner and Digest of Treatment,* June, 1955.

P. J. Melnick, M.D., Eloise, is the author of an article entitled "Polycystic Liver," published in *American Journal of Pathology,* a condensation of which appears in *American Practitioner and Digest of Treatment,* June, 1955.

Rudolf E. Wilhelm, M.D., Dearborn, Michigan; **Helen M. Nutting, A.B.; H. B. Devlin, Ph.D.; Elmer R. Jennings, M.D.,** and **Osborne A. Brines, M.D.,** Detroit, are the authors of an article entitled "Antihistaminics for Allergic and Pyrogenic Transfusion Reactions," published in *The Journal of the American Medical Association,* June 18, 1955.

Paul V. Woolley, Jr., M.D., and **William A. Evans, Jr., M.D.,** Detroit, are the authors of an article entitled "Significance of Skeletal Lesions in Infants Resembling Those of Traumatic Origin," published in *The Journal of the American Medical Association,* June 18, 1955.

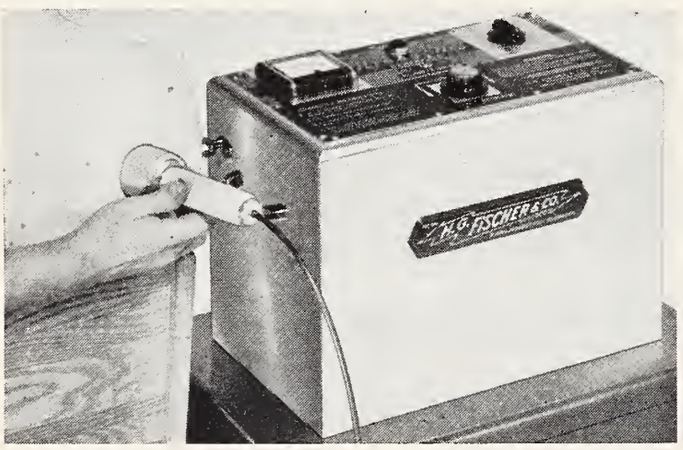
James L. Wilson, M.D., and **David G. Dickinson, M.D.,** Ann Arbor, are the authors of an article entitled "Prevention of Long-Time Dependence of Poliomyelitis Patients on Tank Respirator," published in *The Journal of the American Medical Association,* June 18, 1955.

Joseph H. Chandler, M.D., Ann Arbor, is the author of an article entitled "Reserpine in the Treatment of Huntington's Chorea," published in the *University of Michigan Medical Bulletin,* April, 1955.

(Continued on Page 1006)

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(Continued from Page 1004)

C. William Castor, M.D., and **William H. Beierwaltes, M.D.,** with the technical assistance of **Emily Dorstewitz** and **Joanne E. Auch,** Ann Arbor, are the authors of an article entitled "The Effect of Dinitrophenol on Protein-Bound Iodine in Man: A Preliminary Report," published in the *University of Michigan Medical Bulletin,* April, 1955.

Robert E. McClellan, M.D., Ann Arbor, is the author of an article entitled "Unusual Case Report: Buckshot Colic," published in the *University of Michigan Medical Bulletin,* April, 1955.

* * *

The American Society of Human Genetics will hold its annual meeting in conjunction with the AIBS meeting in East Lansing, September 6 through September 8, 1955. Physicians in that area with an interest in hereditary aspects of disease may be interested in attending some of these sessions.

* * *

Represented at Geneva.—Some 100 U. S. industrial and commercial firms, along with fifty academic, professional and private educational and research organizations, will be represented in exhibits at the International "atoms-for-peace" conference at Geneva, Aug. 8-20. Several commercial concerns will have displays in more than one of the exhibits. Michigan organizations to be represented are Detroit Edison Company, Detroit; Michigan State University, East Lansing; Radioactive Products, Inc., Detroit; University of Michigan, Ann Arbor; and Bendix Aviation Corporation, Detroit.

* * *

New Group Formed.—At the recent meeting of the Upper Peninsula Medical Society, a new group was formed consisting of the radiologists of the Upper Peninsula of Michigan. The group will be known as the Upper Peninsula Radiological Society. The following officers were elected: Dr. L. Grant Glickman, Menominee, president; Dr. T. Boyd Bolitho, Marquette, vice-president, and Dr. Arthur Gonty, Menominee, secretary. The group will meet quarterly.

* * *

Noah E. Aronstam, M.D., Detroit, addressed the Detroit Philosophical Society on the subject "Glances in the Anthropology of Medicine" on June 24, 1955, at the Wayne University Science Building. The speaker was honored at a dinner preceding the meeting.

* * *

Rheumatic Fever TV Program.—A panel discussion on rheumatic fever and part of "The Valiant Heart" was presented from WNEM-TV on May 15, 1955. It was hoped that this whole program would be tape recorded in order to prepare an article for THE JOURNAL of the Michigan State Medical Society from the material presented, but unfortunately this was not done.

This program was organized by Robert E. Fisher,

(Continued on Page 1008)

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(Continued from Page 1006)

M.D., of Bay City, and the following physicians of the adjacent counties took part: C. F. Wible, M.D., Sebewaing; W. L. Howland, M.D., Pinconning; H. T. Knobloch, M.D., Bay City; Bert Bullington, M.D., Saginaw; Harold T. Donahue, M.D., Cass City; M. S. Chambers, M.D., Flint; L. O. Shantz, M.D., Flint; B. O. O'Hora, M.D., Midland; L. R. Wickert, M.D., Mt. Pleasant; T. Finkelstein, M.D., Flint; Frank Johnson, M.D., Flint; J. E. Harroun, M.D., Owosso; R. M. Jarvi, M.D., Saginaw; Raymond J. Winfield, M.D., Marlette; Glenn Smith, M.D., Imlay City; Scott Harris, M.D., Ypsilanti; L. Fernald Foster, M.D., Bay City; R. E. Fisher, M.D., Bay City; and Mrs. William Dibble, 3160 Skander Drive, Flint.

* * *

The American Medical Association has published a 24-page pamphlet on "Community Efforts Provide Medical Facilities." It tells the story of how various communities made efforts to secure doctors. This is a report from the Committee on Medical and Related Facilities, with Ralph A. Johnson, M.D., Detroit, as chairman.

A complete story along with the sketches of eight doctors' offices, is provided, two of which were in Michigan, one at Hillman and one at Onaway. Short comments with pictures of clinic buildings at four other places are also given. It is interesting that in this group, two of Michigan's efforts are completely described.

* * *

J. P. Gray, B.A., M.D., M.P.H., Detroit, will speak at the American Medical Writers' Association Twelfth Annual Meeting to be held in St. Louis in September, 1955. The subject of his talk will be "Report on A.M.W.A. Visiting Lectureship to the Medical Colleges."

* * *

Brock E. Brush, M.D., W. L. Lowrie, M.D., and **W. E. Redfern, M.D.,** Detroit, will be scientific exhibitors at the Twentieth Annual Meeting of the Mississippi Valley Medical Society to be held in St. Louis in September, 1955.

* * *

John W. Smillie, M.D., Ann Arbor, presented a paper on "Cataract Surgery in Megalocornea" before the Section on Ophthalmology, at the 104th Annual Meeting of the American Medical Association, Atlantic City, June 9, 1955.

* * *

George Curry, M.D., Flint, will participate in a panel on Trauma which will be a part of the program of the Interstate Postgraduate Medical Association to be held in Milwaukee, Wisconsin, November 14-17, 1955.

* * *

"Endocrinology and Metabolism" is the subject for the seventh annual Postgraduate Assembly of the Endocrine Society, being held in Indianapolis, September 26-October 1, with the co-operation of the Indiana University School of Medicine.

Continuation study facilities of the Indiana University Medical Center will be utilized for the sessions at

(Continued on Page 1010)

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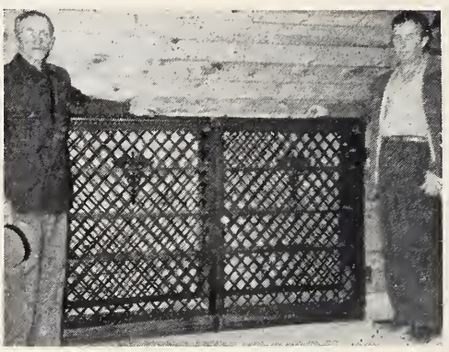
(Continued from Page 1008)

which twenty-one leading clinicians and investigators will be heard.

Information regarding the program, registration, et cetera, is available by addressing: Postgraduate Office, Indiana University School of Medicine, 1100 West Michigan St., Indianapolis 7, Indiana.

* * *

Wm. S. Jones, M.D., President-Elect of the Michigan State Medical Society, and for years a member of the Beaumont Restoration Committee, and Mrs. Jones have given the Michigan State Medical Society for the Beaumont Memorial, a priceless gift—a set of books of the Beaumont age.



The books are housed in the memorial and to protect them a set of grilles has been made by a blacksmith artist at the Stadula Blacksmith Shop in Daggett. They are steel riveted with small copper rivets, as shown in the accompanying illustration. Again, we thank Dr. and Mrs. Jones for their generosity.

* * *

The Sixth Annual Clinic on Trauma, sponsored by the Central Michigan Committee, Michigan Regional Committee on Trauma of the American College of Surgeons, and the Medical Society of North Central Counties, was held at Hidden Valley, Gaylord, on July 28. This meeting and future clinics are to be known as the "Doctor Claude R. Keyport Trauma Day," recognizing the pioneer work done by the late Doctor Keyport, MSMS Past President.

* * *

The Ohio Academy of General Practice will hold its Fifth Annual Scientific Assembly at the Dayton Biltmore Hotel, Dayton, Ohio, September 20-21. For program, write Earl D. McCallister, M.D., 209 S. High St., Columbus 15, Ohio.

* * *

Willard B. Howes, M.D., and **William P. Chester, M.D.,** both of Detroit, were re-elected as Regent for Michigan-Ohio and as Governor for Michigan, respectively, of the American College of Chest Physicians, at its recent Atlantic City meeting.

* * *

The Association of Military Surgeons of the United States will hold its 62nd Annual Convention at the Statler Hotel, Washington, D. C., November 7-8-9, 1955. For complete information and program, write the Association at Suite 718, New Medical Building, 1726 Eye Street, N.W., Washington 6, D. C.

Say you saw it in the Journal of the Michigan State Medical Society



Louis J. Hirschman, M.D., Traverse City, was honored at Wayne University's 87th annual alumni reunion in Detroit when he was presented with the University's Alumni Award. Dr. Hirschman was graduated from Wayne University College of Medicine in 1899.

The author of several textbooks in his professional field of proctology and of chapters in the Yearbook of Anesthesia, Dr. Hirschman is currently Associate Editor of the *American Journal of Surgery* and of the *American Journal of Digestive Diseases.* He was a member of the Wayne Medical School faculty from 1904 until 1946; he has been President of the Wayne County Medical Society, of the Michigan State Medical Society, the American Proctological Society, Wayne University College of Medicine Alumni Association, Detroit Academy of Medicine, and the Detroit Medical Club (founder).

This is the second time Wayne University has honored Dr. Hirschman; in 1952, he was awarded the Distinguished Service Citation.

Dr. Hirschman also was honored by the American Proctological Society, at its 1955 meeting in New York City, when he was made a member of the APS Fifty-Year Club, signifying the completion of fifty years of practice of medicine.

* * *

Thomas A. Grekin, M.D., Eloise, was awarded first prize in the annual competition sponsored by the Trauma and Nutrition Committees of the American College of Surgeons. The competition papers were written by residents and interns from the State of Michigan and from Toledo, Ohio. Dr. Grekin's subject was "Peritoneal Aspiration." At the committee's recent meeting in Ann Arbor, 250 were registered. The F. A. Coller Award was presented to Dr. Grekin at the banquet.

* * *

William J. Burns, Executive Director of the Michigan State Medical Society, received a Twenty-Five Year Achievement Award at the Atlantic City meeting of the Medical Society Executives Conference, held coincident with the 1955 American Medical Association Annual Session.

* * *

The National Board of the American Cancer Society will hold its annual meeting at the Sheraton-Cadillac Hotel, Detroit, during the week of June 4, 1956.

* * *

Joseph T. Noe, M.D., has been appointed Medical Director of Wyandotte Chemicals Corporation, to fill the vacancy created by the death in March of William H. Honor, M.D.

* * *

Sidney J. Shipman, M.D., of San Francisco, a native of Michigan and graduate of the University of Michigan Medical School ('17, '19m), has been elected president of the California Medical Association. Dr. Shipman is a Past President of the National Tuberculosis Association and is now Professor of Medicine of the

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.:
J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.:
Brit. M. J. 2:755, 1953.

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Brown, H. W.:
J. Pediat. 45:419, 1954.

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(Continued from Page 1011)

University of California Medical School. He is also past president of the San Francisco Medical Society.

* * *

The Wayne County Medical Society approved the recent report of its Public Relations Committee that the Society accept the offer of the *Detroit Free Press* to sponsor again a Public Health Forum to be held September 12-19-26 at the Rackham Building, Detroit. The subjects of the first two meetings will be (a) Heart Diseases and (b) Arthritis and Rheumatism.

A different approach is planned for these forums. In place of a didactic lecture with discussion on symptoms and treatments, it is planned to stress what the patient can do to adjust and alleviate his condition; for example, in discussing heart diseases, the panel will attempt to show how the patient can revise his daily pattern in order to live more completely with his handicap. It is planned to use visual aids, such as short films and to co-operate with interested organizations such as the Michigan Heart Association, the Michigan Rheumatism Association, and others.

William Bromme, M.D., Detroit, was requested to assume responsibility for the arrangements of the forums.

* * *

H. Marvin Pollard, M.D., Ann Arbor, was recently appointed Secretary-General of the First World Congress of Gastroenterology, at a meeting of the American Gastrological Association in Atlantic City. The World Meeting is slated to be held in the United States in 1958.

Dr. Pollard also was re-elected Secretary of the American Association.

Congratulations, Dr. Pollard!

* * *

Roger V. Walker, M.D., Detroit, was honored at a meeting in the Detroit Mayor's office on June 10. Mr. Cobo thanked Dr. Walker for eleven years of service as a member of the Board of Health.

* * *

Wolf W. Zuelzer, M.D., Detroit, was elected President of the Society for Pediatric Research at its annual meeting in Quebec, held in conjunction with members of the Canadian, British and American Pediatric Societies.

* * *

J. W. Rigterink, M.D., was featured in a "profile" sketch in *St. Mary's Hospital* (Grand Rapids) *Bulletin* of June, 1955. The eighty-three-year-old internist, whose career has spanned fifty-four years of practice, claims that the advice of a grade school teacher started him on his medical career. This teacher told young Rigterink and the other members of his class: "For true happiness in life, devote your life to others."

Congratulations, Dr. Rigterink, on a career of service to others!

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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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R. A. C. Wollenberg, M.D., Detroit, was honored with a testimonial dinner, at the Detroit Athletic Club on June 29, in celebration of fifty years of medical practice and his fiftieth wedding anniversary. Exactly fifty friends gathered to honor the Detroit dermatologist, presenting him with a scroll with the following poem written thereon by one of the Sisters of Mt. Carmel Mercy Hospital, Detroit:

THE PHYSICIAN

Deftly he handles the scalpel,
Skillfully heals the ill,
Tenderly smoothes the fevered,
Forces the fears be still.

Selflessly spends of his powers,
Day and at night is on call,
Assisting the new-born and dying,
Assuring and comforting all.

Patiently treats the psychotic,
Rightens the life of the stray,
For Christ is at work in the doctor,
The light and the strength of his day.

* * *

A. E. Heustis, M.D., Michigan Health Commissioner, received an Honorary degree of Doctor of Laws from Michigan State College at the annual spring convocation.

The citation read:

"Albert E. Heustis, physician, researcher, guardian of the public health. Through diligent effort, you prepared yourself to practice one of the highest arts known to man: that of safeguarding the health of human beings and of protecting them against the ravages of widespread disease. This training, and your experience as a director of county health programs, qualified you for your present important office of State Health Commissioner, in which you are serving in such a manner as to furnish an example of outstanding leadership and vision to the entire nation. Your distinguished professional achievements to date give promise of an even wider extension of the benefits of the public health program of the state of Michigan."

Congratulations, Dr. Heustis!

* * *

Michigan's Health, the monthly publication of the Michigan Department of Health, featured in its April, 1955, number, an article on cancer-phobia with the subheading of "See Your Doctor for Appraisal."

Two paragraphs of this interesting lead story read as follows:

"Dr. Albert E. Heustis, state health commissioner, says the first thing to do if you are worried about cancer is to "Make an appointment with your family physician.

"Cancer-phobia," he said, "which we can define as incessant fear of the disease, will only run down your health. By seeing your doctor for a periodic health appraisal, you can get the peace of mind that comes from his examination, and if cancer should be found, the rewards of early detection may be yours."

* * *

William M. LeFevre, M.D., of Muskegon, Councilor of the Eleventh District and an avocational woodcarver of high repute, has hand-turned a wooden caduceus which will be placed over the door of the MSMS hospitality booth, used during MSMS Annual Sessions in Grand Rapids. The caduceus is being gold leafed by Dr. LeFevre.

(Continued on Page 1016)

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(Continued from Page 1014)

The American Urological Association offers an annual award of $1,000 for three essays on the result of some clinical or laboratory research in urology. For full particulars, write Executive Secretary, W. P. Didusch, 1120 N. Charles Street, Baltimore, Maryland. Essays must be submitted before December 1, 1955.

* * *

S. A. Gaffney, long-time representative of Merck & Company, Rahway, New Jersey, and a good friend of hundreds of Michigan doctors of medicine whom he met at MSMS Annual Sessions, died after an illness of several months at his home in Lansdowne, Pennsylvania, June 19.

MSMS has lost a good friend and nation-wide "booster" in Si Gaffney.

* * *

New fields of atomic research were opened to University of Michigan scientists on June 9 with the dedication of the ultramodern Phoenix Memorial Laboratory, believed to be unequalled outside government facilities. The three-story, glass and brick structure, located on the new North Campus in Ann Arbor, is a living monument to the University of Michigan's dead of World War II.

The $1,500,000 structure will make possible studies involving the most powerful sources of atomic energy, and contains the latest facilities for handling and storing these materials. A $1,000,000 nuclear reactor is under construction at one end of the building and will be in operation next year. Both the laboratory and reactor were made possible by gifts to the University of Michigan Memorial-Phoenix Project, a program of study of the peaceful uses of atomic energy. The laboratory will conduct only peaceful atomic investigations with no security restrictions on the open research.

* * *

John W. Castellucci, Executive Director of Blue Shield Medical Care Plans, has announced that the recently-tried infringement suits in Texas and Mississippi, involving the well-known Blue Shield service mark and the shield symbol, have been settled. The validity of the Blue Shield service marks has been recognized. The defendants, who were using Blue Seal and White Seal, have each agreed to stop immediately any further preparation of sales material, or advertising of any kind, using these marks. Details of the settlement are set out in Agreements filed with the U. S. District Courts in Austin, Texas, and in Jackson, Mississippi, where the cases were tried.

* * *

British Can't Link Cancer to Cigarets—A series of tests in Britain have produced no link between cigaret smoke and lung cancer, the British Empire Cancer Society reported Tuesday at its annual meeting.

Five strains of mice were treated for eighteen months with two preparations from cigaret smoke tar. "Large groups" of other mice were exposed to cigaret smoke all their lives. Twenty-four hamsters were exposed to the smoke of fifty cigarets daily in a special cabinet for eight months.

(Continued on Page 1019)

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Surgical Technique, Surgical Anatomy and Clinical Surgery, four weeks, October 17
Surgical Anatomy and Clinical Surgery, two weeks, August 22
Surgery of Colon and Rectum, one week, September 19
General Surgery, two weeks, October 3; one week, October 17
Gallbladder Surgery, ten hours, October 24
Thoracic Surgery, one week, October 3
Esophageal Surgery, one week, October 10
Basic Principles in General Surgery, two weeks, September 26
Fractures and Traumatic Surgery, two weeks, October 17
GYNECOLOGY & OBSTETRICS—Vaginal Approach to Pelvic Surgery, one week, November 7
Three-week Combined Course Gynecology and Obstetrics, September 12
MEDICINE—Two-week Course, September 26
Electrocardiography and Heart Disease, two weeks, October 10
Gastroscopy, One Week Advanced Course, September 12
Gastroenterology, two weeks, October 24
Dermatology, two weeks, October 17
RADIOLOGY—Clinical and Didactic Course, two weeks, October 3
Clinical Uses of Radioisotopes, two weeks, October 10
PEDIATRICS—Clinical Course, two weeks by appointment
Pediatric Cardiology, one week, October 10 and 17
UROLOGY—Two-week Course October 10

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(Continued from Page 1016)

All the tests have been negative, the society announced, but in view of their importance, they are being expanded and continued.

Another series of tests has sought a possible link between soil and stomach cancer. Soil samples were taken from gardens of homes in Wales and England where people died from different forms of cancer.

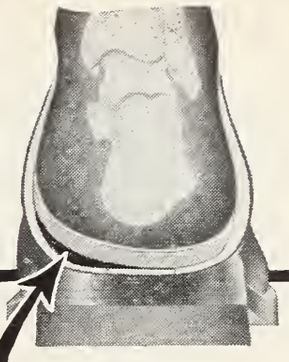
"The preliminary results suggest there may be some association between cancer of the stomach and certain soil characteristics," the society announced.—*Detroit Free Press,* July 13, 1955.

* * *

DOCTOR LOCATIONS--THROUGH JUNE 30, 1955

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Placed by Michigan Health Council		
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H. Leighton Williams, M.D.	Hart	June 20
Roy A. Landry, M.D.	Waterford	June
Assisted by Michigan Health Council		
Gustave Prinsell, M.D.	Saginaw	June 19
Homer G. Slade, M.D.	Saginaw	June 19
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AN EVALUATION OF THE POLIOMYELITIS VACCINE TRIALS. Summary Report by Thomas Francis, Jr., M.D., Robert F. Korns, M.D., Robert B. Voight, B.S., Morton Boisen, B.A., Fay M. Hemphill, Ph.D., John A. Napier, Eva Tolchinsky. From the Poliomyelitis Vaccine Evaluation Center, University of Michigan, Ann Arbor, Michigan, April 12, 1955. Sponsored by The National Foundation for Infantile Paralysis. Published in the American Journal of Public Health and the Nation's Health, May, 1955.

NEEDED RESEARCH IN HEALTH AND MEDICAL CARE. A Bio-social Approach by Cecil G. Sheps, M.D., M.P.H., and Eugene H. Taylor, M.D., M.P.H. Based on a Seminar held in Chapel Hill in September, 1952. Chapel Hill: The University of North Carolina Press, 1955. Price, $5.00.

THE MANUAL OF ANTIBIOTICS 1954-1955. Prepared under the editorial direction of Henry Welch, Ph.D. Price $2.50.

REVIEW OF MEDICAL MICROBIOLOGY by Ernest Jawetz, Ph.D., M.D., Professor of Bacteriology and Lecturer in Medicine and Pediatrics, University of California School of Medicine, San Francisco; Joseph L. Melnick, Ph.D., Professor of Epidemiology, Yale University School of Medicine, New Haven; Edward A. Adelberg, Ph.D., Assistant Professor of Bacteriology, University of California, Berkeley. Lange Medical Publications, P.O. Box 1215, Los Altos, California, 1954. Price $4.50.

ANNUAL REPORT OAKLAND COUNTY DEPARTMENT OF HEALTH, 1953.

THE CITY OF HOPE. Samuel H. Golter, G. P. Putnam's Sons, New York. Price $3.50.

SIMPLIFIED DIABETIC MANAGEMENT. By Joseph T. Beardwood, Jr., A.B., M.D., F.A.C.P., Professor of Diseases of Metabolism, Graduate School of Medicine, University of Pennsylvania; Director of Medical Services, Abington Memorial Hospital, Abington, Pa.; Chief of the Metabolic Department, Philadelphia General Hospital-Northern Division; Consultant to the Metabolic Service of the Presbyterian Hospital in Philadelphia and Herbert T. Kelly, M.D., F.A.C.P., Associate in Medicine, Graduate School of Medicine, University of Pennsylvania; Associate Physician, Presbyterian Hospital; Chief, Department of Medicine, Doctor's Hospital; Chairman of the Committee on Nutrition, Medical Society of the State of Pennsylvania; Honorary Chairman, Pennsylvania Nutrition Council. Sixth Edition. Philadelphia and Montreal: J. B. Lippincott Company. Price $3.00.

MANAGEMENT OF ADDICTIONS. Edited by Edward Podolsky, M.D., Department of Psychiatry, Kings County Hospital, Brooklyn, New York. Editor of "Music Therapy" and "War Medicine." New York: Philosophical Library, 1955. Price $7.50.

HANDBOOK OF PEDIATRICS. By Henry K. Silver, M.D., Associate Professor of Pediatrics, Yale University School of Medicine, New Haven, Connecticut; C. Henry Kempe, M.D., Assistant Professor of Pediatrics, University of California School of Medicine, San Francisco, California; Henry B. Bruyn, M.D., Assistant Professor of Pediatrics and Medicine, University of California School of Medicine,

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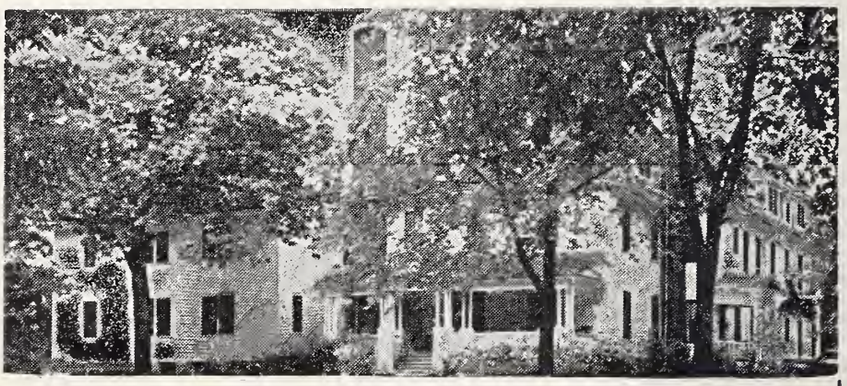
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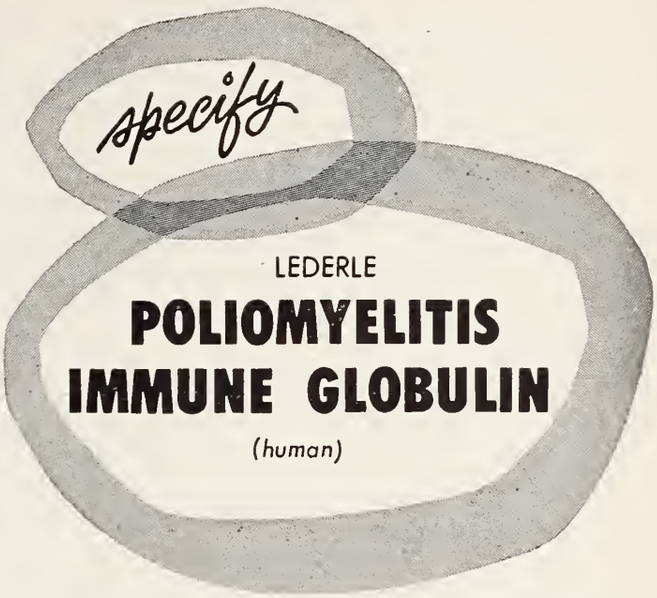
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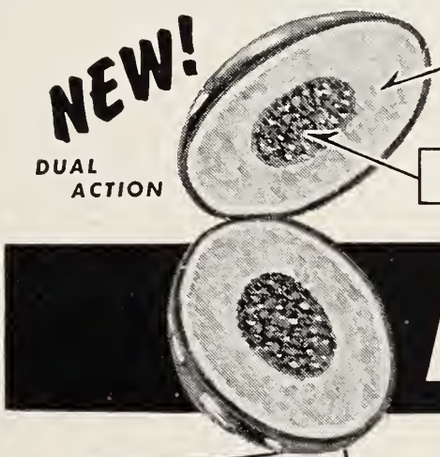
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San Francisco, California, Assistant Clinical Professor of Pediatrics, Stanford University Medical School, San Francisco, California. Los Altos, California: Lange Medical Publications, 1955. Price, $3.00.

This book is entitled "Handbook" and was written to supplement more complete pediatric texts. However, when one carefully examines the Handbook of Pediatrics it becomes readily evident that this is perhaps one of the most complete ready references on pediatrics that has appeared in many years.

There are 537 pages containing all the pertinent information one could wish, well-written, concise and yet fairly complete with up-to-the-minute accepted ideas and therapy. The authors make good use of illustrations for various procedures and have many prepared tables to enable quick comparisons. The subjects covered are complete for the pediatrician and contain several from the clinical and practical point of view not found in standard texts. This is a worthwhile addition to any library.

PERINATAL MORTALITY IN NEW YORK CITY. Responsible Factors. A Study of 955 Deaths by the Subcommittee on Neonatal Mortality, Committee on Public Health Relations, the New York Academy of Medicine. Analyzed and reported by Schuyler G. Kohl, M.S., M.D., Dr.P.H. Published for The Commonwealth Fund. Cambridge: Harvard University Press, 1955. Price, $2.50.

This report emphasizes continuing need for expert obstetrical and pediatric care if the perinatal mortality is to be reduced in any community.

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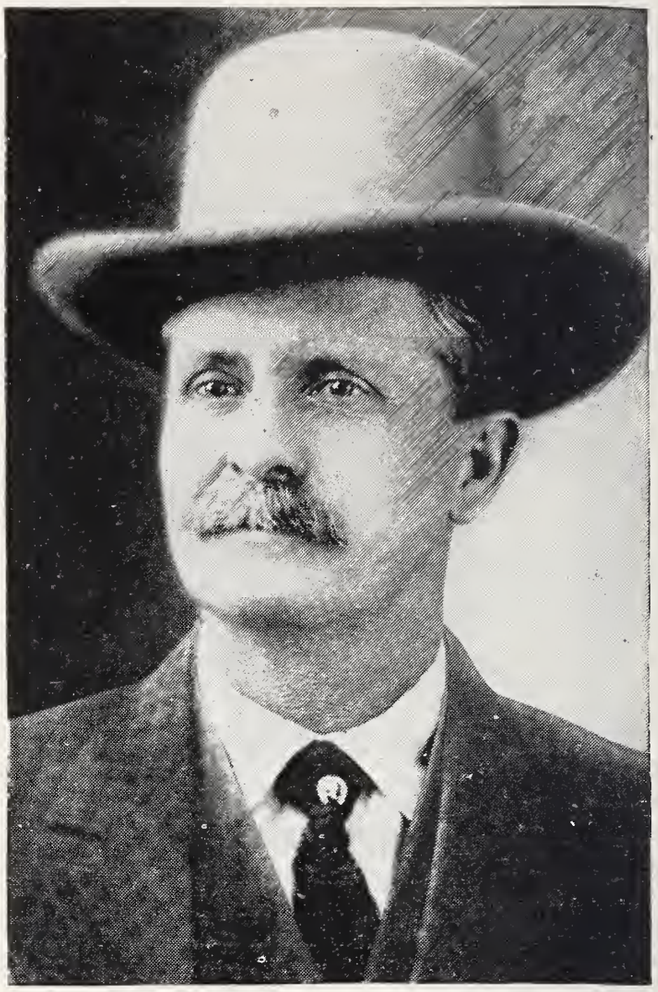
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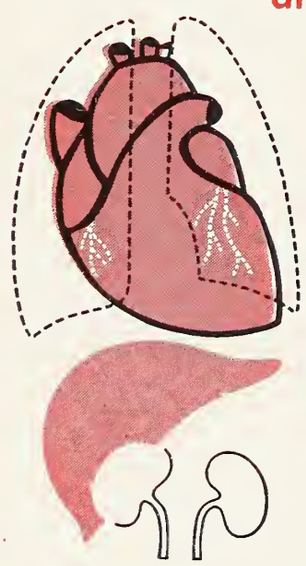
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Secretary

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DELEGATES TO A. M. A.

Delegates

W. A. Hyland, M.D., *Chairman*.....1955
W. D. Barrett, M.D.....1956
J. S. DeTar, M.D.....1955
W. H. Huron, M.D.....1956
R. A. Johnson, M.D.....1955
R. L. Novy, M.D.....1956

Section Delegate

G. C. Penberthy, M.D.....Detroit

Alternates

W. W. Babcock, M.D.....1955
O. J. Johnson, M.D.....1955
C. I. Owen, M.D.....1956
E. F. Sladek, M.D.....1955
J. R. Rodger, M.D.....1956
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(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., ond Ishmoel, W. K.: J. Lab. & Clin. Med. *45*:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chron. Dis. *1*:168, 1955. (3) Holbrook, W. P.: M. Clin. North America *39*:405, 1955.

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You and Your Business

MICHIGAN ASSOCIATION OF BLOOD BANKS

The Michigan Association of Blood Banks was organized at a meeting in the Michigan State Medical Society headquarters in Lansing on June 18, 1955.

Members of the Blood Banks Committee of the Michigan State Medical Society and of a similar committee of the Michigan Pathological Society met to prepare a constitution and by-laws and to elect officers of the new Association. The preamble of the constitution, as adopted, reads:

"In order that useful and adequate service may be rendered to our communities, our hospitals, and those persons through the State of Michigan who need or will need whole blood or its derivatives, this Michigan Association of Blood Banks has been formed and this Constitution adopted for the uses and purposes herein set forth."

R. L. Mainwaring, M.D., of Allen Park, was elected President; E. R. Jennings, M.D., Detroit, was chosen as Vice President, and J. A. Kasper, M.D., Detroit, was made the first Secretary-Treasurer of the new Association. Otto Van der Velde, M.D., of Holland, was elected as representative of the Association to the Board of Directors of the North Central District Blood Bank Clearing House.

Present at the organizational meeting were: Viola G. Brekke, M.D., Highland Park; Alice Campbell, M.D., Albion; Charles F. Du Bois, Alma; Jo Erwin, Detroit; W. G. Gamble, M.D., Bay City; E. R. Jennings, M.D., Detroit; Mrs. Helen A. Jones, Midland; Joseph A. Kasper, M.D., Detroit; C. Allen Payne, M.D., Grand Rapids; R. E. Rice, M.D., Greenville; John F. Scully, Lansing; Otto Van der Velde, M.D., Holland; H. W. Wiley, M.D., Lansing; and Mrs. Norabelle T. Williams, Midland.

HIGHLIGHTS OF THE COUNCIL

Session of July 14-15-16, 1955

Ninety-seven (97) items were presented to The Council at its Midsummer Session at Mackinac Island. Items of chief importance were:

● **Report by K. H. Johnson, M.D.,** Lansing, on June 17 meeting of State Advisory Committee on Polio Vaccine Distribution; also report of Michigan Health Commissioner A. E. Heustis, M.D., on June 16 meeting of Special Technical Committee on Immunization (copy sent to all MSMS members with Secretary's Letter No. 176 on July 1).

● **Committee Reports:** The following committee reports were presented—(a) Committee on Blood Banks, meeting of June 18; (b) Rheumatic Fever Control Committee, June 22; (c) Geriatrics Committee, June 29; (d) Committee on Postgraduate Medical Education, June 30; (e) Maternal Health Committee, May 26.

● **Physicians' Conference on Gerontology,** to be held January, 1956: co-sponsorship was approved; MSMS will continue its program of paying the expenses of one delegate per component society to attend this conference, for the year 1956.

● **The Past Presidents' Club** was made a permanent Committee of The Council.

● **The Ninth Annual Fall Postgraduate Clinic** of the Michigan Academy of General Practice was given co-sponsorship by MSMS.

● **The grand award** of the American Trade Association Executives, for state associations, was won by the Michigan State Medical Society for its successful program of "Recruitment and Training of Medical Associates," according to report of Executive Director Wm. J. Burns. William Bromme, M.D., Council Chairman, was authorized to receive the ATAE award at its August 2 meeting at Mackinac Island.

● **The individual Councilors** were assigned to attend House of Delegates Reference Committee meetings, in order to advise the Committees on background material, of interest and value to the Reference Committees, as discussed by The Council and by its Executive Committee.

● **A special committee** was appointed to develop suggestions for the Special Committee on Review of the Joint Commission on Accreditation: J. E. Livesay, M.D., Flint, Chairman; J. S. DeTar, M.D., Milan; W. A. Hyland, M.D., Grand Rapids; R. W. Shook, M.D., Kalamazoo, and G. W. Slagle, M.D., Battle Creek.

● **President R. H. Baker, M.D.,** reported on the scheduled Upper Peninsula Medical Societies' good will tour, participated in by the President, the President-Elect, the Secretary, the two Councilors from the Upper Peninsula, and the Public Relations Counsel, running July 18 through July 22.

● **President-Elect W. S. Jones, M.D.,** reported appointment of personnel of the 27 MSMS Committees. He indicated he had appointed a vice-chairman to each committee, to assist in efficient administration. All committee appointments were confirmed by The Council.

● **Annual Session:** (a) Coleman Mopper, M.D., Detroit, was appointed Secretary of the Third Assembly (Thursday morning, Sept. 29) at the Grand Rapids Annual Session. (b) A caduceus on the Hospitality Booth, hand-turned and gold-leafed by Wm. M. LeFevre, M.D., Muskegon,

(Continued on Page 1034)



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HIGHLIGHTS OF THE COUNCIL

(Continued from Page 1032)

was received by the Michigan State Medical Society with a rising vote of thanks to Dr. LeFevre.

● **Annual reports** of MSMS Committees were accepted for publication in the Handbook for Delegates.

● **Tentative program of 1956 Michigan Clinical Institute** was presented by Wm. S. Reveno, M.D., Chairman of the Program Committee for next year's MCI in Detroit (March 7-8-9). L. W. Hull, M.D., Detroit, was appointed as Chairman of the 1956 MCI Committee on Arrangements. H. H. Cummings, M.D., Ann Arbor, and J. M. Wellman, M.D., Lansing, were appointed as members of the Committee.

● **Members of the Allegan County Medical Society** were commended for their interest and diligent activity in connection with the legal suit instigated by Wm. Kopprasch, M.D.

● **Legal Counsel's Opinion** on question as to whether a physician who attends a person during his last illness, but who has not actually seen the patient within 36 hours of his death, may properly sign the death certificate, was read and ordered published in JMSMS.

● **The Public Relations Counsel** presented progress report on legislation (H.B. 362—the County Hospital Bill); doctor draft legislation; compulsory disability insurance; once per month TV show over WKAR-TV (Michigan State University) for 1955-56; and plans for MSMS exhibit at Michigan State Fair.

● **The three standing committees of The Councils** (Finance, Publication, and County Societies) reported on meetings held July 15.

● **The Publication Committee** urged continued support of the American Medical Education Foundation and recommended that a quarter-page in JMSMS for display copy be made available to AMEF two or three times per annum.

● **Messrs. W. T. Coulter** and **J. Robert Bruce** of Bruce Publishing Company, St. Paul, attended the Publication Committee meeting and reported on printing conditions in the St. Paul-Minneapolis area.

● **Inquiry from the Kalamazoo Academy of Medicine** re emergency call service resulted in instruction to the MSMS Secretary that he write the Chairman of the Constitution and By-Laws Committee of the Kalamazoo Academy of Medicine that (1) MSMS has urged county medical societies to establish emergency call systems in the interest of better medical service and better public relations; (2) county medical societies are autonomous; (3) the Kalamazoo emergency call system is not in conflict with the Constitution and By-laws of the Michigan State Medical Society; (4) questions be referred to the Kalamazoo Academy of Medicine through the procedure set up in the emergency call system regulations.

● **Beaumont Memorial.**—Arno B. Luckhardt, M.D., of Chicago offered to present to the Beaumont Memorial a birchbark canoe, circa 1820—the period of Dr. Beaumont. This generous gift of Dr. Luckhardt was accepted by The Council with sincere thanks.

● **The Annual Report of The Council** was approved for publication in THE JOURNAL and in the Handbook for Delegates.

● **New Michigan Medical Service** $6,000 family income service contract—and adequate fee therefor: A resolution from the Executive Committee of Michigan Medical Service requesting consideration of this matter was presented to The Council. The MSMS President was authorized to appoint a committee to study the whole problem and report back with recommendations at the earliest possible moment.

R. L. Novy, M.D., President of Michigan Medical Service, presented detailed information on the thinking of Michigan Medical Service.

Committee personnel: L. W. Hull, M.D., Detroit, Chairman; E. B. Cudney, M.D., Pontiac; William L. Foster, M.D., Detroit; H. C. Hansen, M.D., Battle Creek; J. R. Heidenreich, M.D., Daggett; W. M. LeFevre, M.D., Muskegon; F. E. Luger, M.D., Saginaw; E. A. Osius, M.D., Detroit; C. A. Payne, M.D., Grand Rapids; G. B. Saltonstall, M.D., Charlevoix; Ralph W. Shook, M.D., Kalamazoo; W. S. Stinson, M.D., Bay City; C. K. Stroup, M.D., Flint; R. W. Teed, M.D., Ann Arbor; T. J. Trapasso, M.D., Sault Ste. Marie; J. M. Wellman, M.D., Lansing; H. B. Zemmer, M.D., Lapeer.

● **Death of Stuart A. Campbell,** Grand Rapids, MSMS Field Secretary The sad news of Mr. Campbell's death on July 16, 1955, was reported to The Council. A letter of deep condolence was ordered sent to the family of Mr. Campbell, an employe who had given much of himself to the Michigan medical profession in the six years of his association with MSMS.

● **The annual joint meetings** of MSMS Council with Michigan Hospital Association Board's Executive Committee; with the Michigan Crippled Children Commission; and with the Executive Committee of Michigan Health Council were held, to discuss mutual plans and ambitions.

● **Thanks to Upjohn Company of Kalamazoo.**—A letter of thanks from The Council to Upjohn for sponsoring, via Michigan Health Council, the program to place doctors of medicine in communities which need them, was ordered dispatched.

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1954 'Alflorone' | 1955 Deltra®

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Inflammatory skin conditions

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Heart Beats

PREVENTION OF RHEUMATIC FEVER AND BACTERIAL ENDOCARDITIS THROUGH CONTROL OF STREPTOCOCCAL INFECTIONS

Rheumatic fever is a recurrent disease which in most instances can be prevented. Since both the initial and recurrent attacks of the disease are precipitated by infections with beta hemolytic streptococci, prevention of rheumatic fever and rheumatic heart disease depends upon the control of streptococcal infections. This may be accomplished by (1) early and adequate treatment of streptococcal infections in all individuals and (2) prevention of streptococcal infections in rheumatic subjects.

Treatment of Streptococcal Infections in the General Population

In the general population about 3 per cent of untreated streptococcal infections are followed by rheumatic fever. Adequate and early penicillin treatment, however, will eliminate streptococci from the throat and prevent most attacks of rheumatic fever.

Diagnosis of Streptococcal Infection.—In many instances streptoccocal infections can be recognized by their clinical manifestations. In some patients, however, it is difficult or impossible to determine the streptococcal nature of a respiratory infection without obtaining throat cultures. The following section on diagnosis has been included in order to reduce diagnostic errors and to assist physicians in avoiding unnecessary therapy.

The accurate recognition of individual streptococcal infections, their adequate treatment and the control of epidemics in the community presently offer the best means of preventing initial and recurrent rheumatic fever.

Treatment of Streptococcal Infection.—When streptococcal infection is suspected, treatment should be started immediately. Penicillin is the drug of choice. Effective blood levels should be maintained for a period of ten days to prevent rheumatic fever by eradicating the streptococci from the throat.

Penicillin may be administered by either intramuscular or oral route. Intramuscular administration is recommended as the method of choice since it insures adequate treatment. Oral therapy by contrast is dependent upon the co-operation of the patient. On the other hand, some physicians and patients prefer repeated oral medication and object to injections.

Common Symptoms

Sore throat—sudden onset, pain on swallowing
Headache—common
Fever—variable, but generally from 104° F.
Abdominal pain—common, especially in children; less common in adults
Nausea and vomiting—common, especially in children

Common Signs

Red throat
Exudate—usually present
Glands — swollen, tender lymph nodes at angle of jaw
Rash—scarlatiniform
*Acute otitis media**
*Acute sinusitss**

*Frequently due to the streptococcus.

In the absence of the common symptoms and signs occurrence of any of the following symptoms is usually not associated with a streptococcal infection; simple coryza; hoarseness; cough.

Laboratory Findings

White blood count—generally over 12,000.
Throat culture—positive culture for hemolytic streptococci is almost always diagnostic.

Recommended Treatment Schedules

Intramuscular Penicillin

Benzathine Penicillin G
Children—one intramuscular injection of 600,000 units.
Adults—one intramuscular injection of 600,000 to 900,000 units.
OR
Procaine penicillin with aluminum monostearate in oil.
Children—one intramuscular injection of 300,000 units every third day for three doses.
Adults—one intramuscular injection of 600,000 units every third day for three doses.

Oral Penicillin

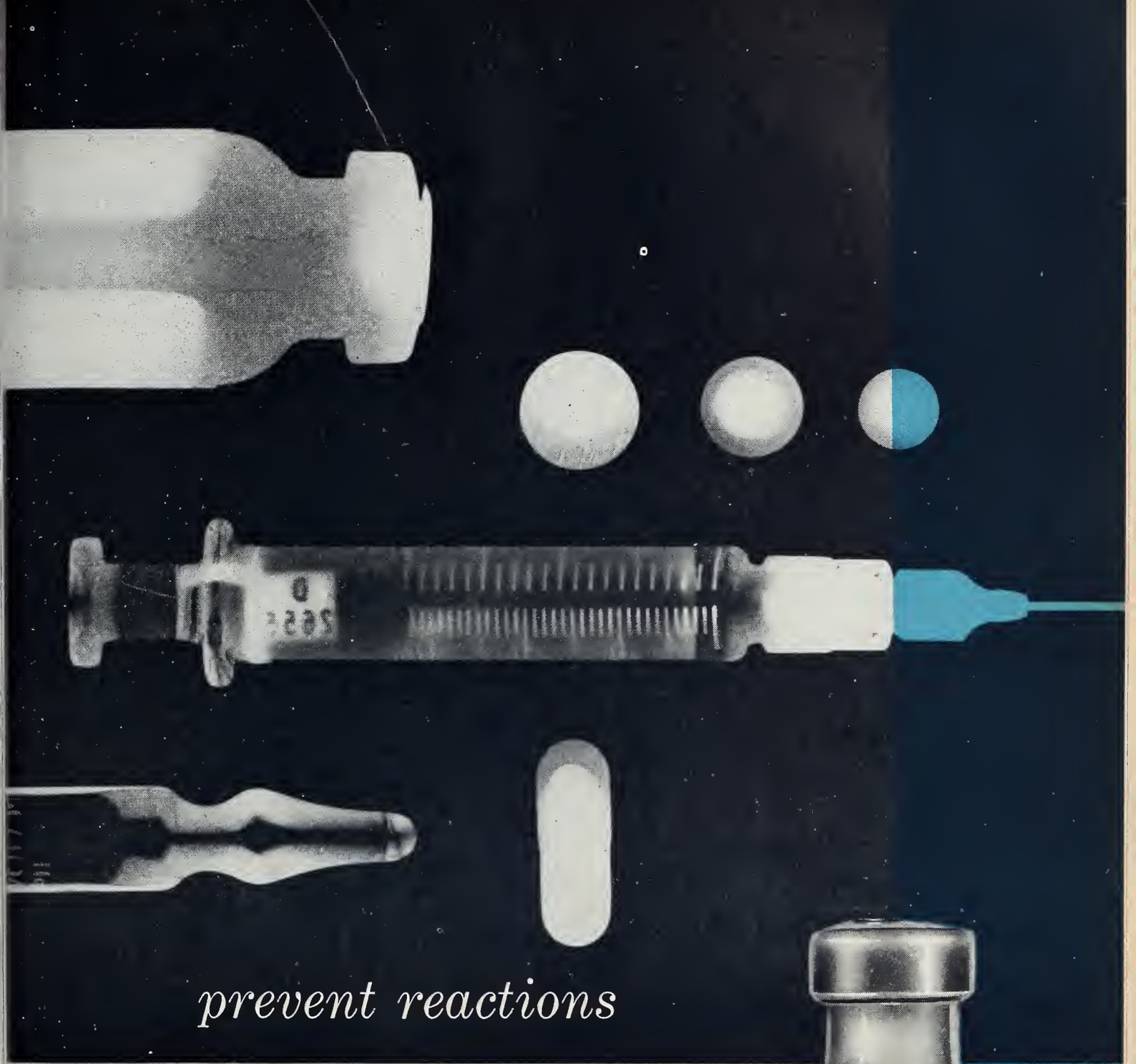
Children and Adults—250,000 units three times a day for a full ten days.

To prevent rheumatic fever by eradicating streptococci, therapy must be continued for the entire ten days even though the temperature returns to normal and the patient is asymptomatic.

Other Medication.—It has not been established that the broad spectrum antibiotics are as effective as penicillin in preventing rheumatic fever. They should be used only if the patient is sensitive to

(Continued on Page 1040)

This statement was first published in *Circulation,* Volume 11, February, 1955. It is a revision of the American Heart Association statement on the prevention of rheumatic fever issued in January, 1953.



prevent reactions

protect your penicillin therapy...

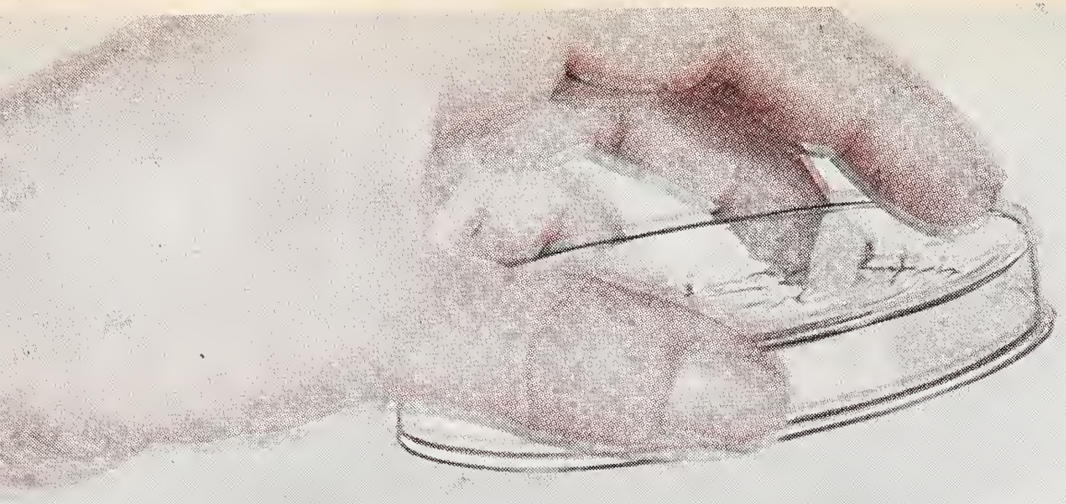


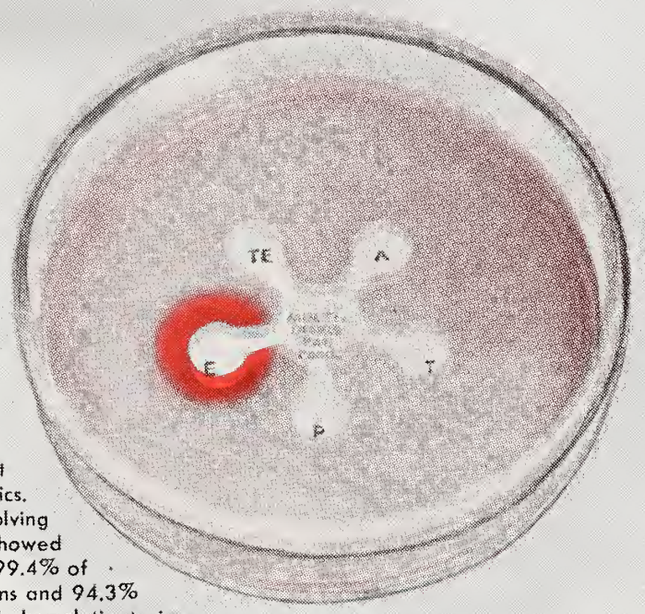
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Supplied: 2 cc. multiple-dose vial. For intramuscular and subcutaneous administration.

CHLOR-TRIMETON® maleate, brand of chlorprophenpyridamine maleate.

CT-J-58





DESTROYS ENTEROCOCCI

This blood agar plate shows a strain of *beta* hemolytic enterococcus. Note extreme sensitivity of this organism to ERYTHROCIN—yet it easily resists the other antibiotics. Additional data: A study[1] involving 202 enterococcic strains showed sensitivity to erythromycin in 99.4% of *alpha* hemolytic strains and 94.3% of *beta* hemolytic strains.

specific against coccic infections

Now, you can prescribe *specific therapy* against staph-, strep- or pneumococci by simply writing *Filmtab* ERYTHROCIN Stearate. Since this coccic group causes most bacterial respiratory infections (and since these organisms are the very ones most sensitive to ERYTHROCIN) doesn't it make good sense to prescribe *Filmtab* ERYTHROCIN when the infection is coccic?

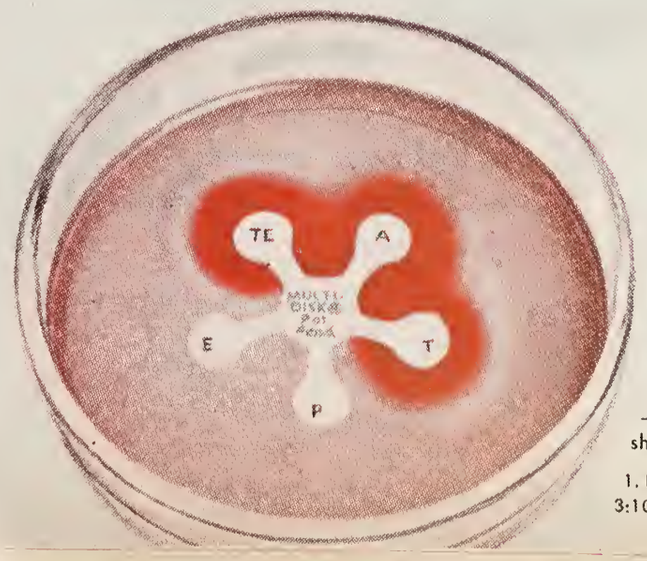
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STEARATE





SPARES

INTESTINAL FLORA

This sensitivity test shows ERYTHROCIN and the same antibiotics against a typical intestinal strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect this gram-negative organism —although the other antibiotics show marked inhibitory action.

1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

with little risk of serious side effects

Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to alter intestinal flora—with an accompanying low incidence of side effects. Also, your patients seldom get the allergic reactions sometimes seen with penicillin. Or loss of accessory vitamins during ERYTHROCIN therapy. *Filmtab* ERYTHROCIN Stearate (100 and 250 mg.) is supplied in bottles of 25 and 100 at pharmacies everywhere. Abbott

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(Erythromycin Stearate, Abbott)

STEARATE

† Filmtab—Film coated tablets; patent applied for.

509183

PREVENTION OF RHEUMATIC FEVER

(Continued from Page 1036)

penicillin. As with penicillin, the regimen of full therapeutic dosage for a full ten days should be followed.

The following therapy is not effective in preventing rheumatic fever when used as treatment for streptococcal infections: sulfonamide drugs; penicillin troches or lozenges.

Prevention of Streptococcal Infections in Rheumatic Individuals

Many streptococcal infections occur without producing clinical manifestations. For this reason, prevention of recurrent rheumatic fever must depend on continuous prophylaxis rather than solely on treatment of acute attacks of streptococcal disease.

General Rules for Prophylaxis

Who should be treated?
All individuals who have a well-established history of a previous attack of rheumatic fever or chorea or who show definite evidence of rheumatic heart disease should be placed on continuous prophylaxis.

When should prophylactic treatment be initiated?

Active rheumatic fever
As soon as the diagnosis of rheumatic fever is made or any time thereafter when the patient is first seen. The streptococcus should be eradicated with penicillin (see Treatment Schedules) following which the prophylactic regimen is instituted.

Inactive rheumatic fever
In inactive rheumatic fever prophylaxis should be instituted when the patient is first seen.

How long should prophylaxis be continued?
Throughout life, or until new knowledge makes this recommendation invalid.

Should prophylaxis be continued during the summer?
Yes, continuously. Streptococcal infections can occur at any season although they are more prevalent in the winter.

What are the exceptions to continuous prophylaxis?
Uncertainty as to the validity of a history of a previous attack of rheumatic fever or chorea.
Heart disease of questionable etiology.
In rare circumstances where exposure of the adult patient to streptococcal infection is unlikely.

Prophylactic Methods—Oral and Intramuscular.—Oral medication depends on patient co-operation. In most instances, failures of sulfonamide or penicillin prophylaxis occur in patients who fail to ingest the drug regularly. This can be avoided by long-acting depot penicillin given intramuscularly once a month.

Sulfadiazine Oral

This drug has the advantage of being easy to administer, inexpensive and effective (other newer sulfonamides are probably as effective). Although resistant streptococci have appeared during mass prophylaxis in the armed forces, this is rare in civilian populations.

Dosage—from 0.5 to 1.0 gm. taken each morning throughout the year. The smaller dose is to be used in children under sixty pounds.

Toxic reactions—Infrequent and usually minor. In any patient being given sulfonamides, consider all rashes and sore throats as possible toxic reactions especially if they occur in the first eight weeks. In patients on this prophylactic regimen it is hazardous to treat toxic reactions or intercurrent infections with sulfonamides.

Chief Toxic Reactions

Skin eruptions.—Morbilliform—continue drug with caution. Urticaria or scarlatiniform rash associated with sore throat or fever—discontinue drug.

Leukopenia.—Discontinue if white blood count falls below 4,000 and polynuclear neutrophiles below 35% because of possible agranulocytosis which is often associated with sore throat and a rash. Because of these reactions, weekly white blood counts are advisable for the first two months of prophylaxis. The occurrence of agranulocytosis after eight weeks of continuous prophylaxis with sulfonamides is extremely rare.

Penicillin-Oral

Penicillin has the desirable characteristics of being bactericidal for hemolytic streptococci and of rarely producing serious toxic reactions. A careful history of allergic reactions and previous response to penicillin should be obtained.

Dosage—200,000 to 250,000 units once a day, before breakfast.

Toxic reactions—Urticaria and angioneurotic edema. Reactions similar to serum sickness—includes fever and joint pains and may be mistaken for rheumatic fever.

Although many individuals who have had reactions to penicillin may subsequently be able to tolerate the drug, it is safer not to use penicillin if the reaction has been severe and particularly if angioneurotic edema has occurred.

Benzathine Penicillin G Intramuscular

Dosage—1,200,000 units once a month.

Toxic reactions—same types as with oral penicillin but occur more frequently and tend to be more severe. Some local discomfort usually experienced.

Protection of Rheumatic Fever Patients in Hospital Wards

Patients with rheumatic fever or rheumatic heart disease are often exposed to increased hazards in hospital wards as the result of contact with streptococcal carriers or patients with active streptococcal

(Continued on Page 1042)

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PREVENTION OF RHEUMATIC FEVER

(Continued from Page 1040)

infections. Protection of the rheumatic patient is imperative because of the high rate of recurrence of rheumatic fever following streptococcal infection. In addition to the customary precautions employed to prevent cross infections, the following procedures are recommended:

All hospital patients with streptococcal infections should be fully treated by one of the methods outlined in "Recommended Treatment Schedules" (See page 1036) in order to eliminate streptococci and avoid the carrier state.

Patients admitted with acute rheumatic fever should immediately receive a full course of antibiotic therapy, whether or not streptococci are isolated from the throat. (See "Recommended Treatment Schedules.") As soon as the therapeutic course is completed, continuous streptococcal prophylaxis should be instituted. (See "Prophylactic Methods—Oral and Intramuscular.")

Patients with inactive rheumatic fever or rheumatic heart disease should be placed on continuous streptococcal prophylaxis on admission to the hospital or as soon thereafter as the diagnosis is established. (See "Prophylactic Methods—Oral and Intramuscular.")

Prophylaxis Against Bacterial Endocarditis

In individuals who have rheumatic or congenital heart disease, bacteria may lodge on the heart valves or other parts of the endocardium, producing bacterial endocarditis. Transient bacteremia which may lead to bacterial endocarditis is known to occur following various operative procedures including dental extractions and other dental manipulations which disturb the gums, the removal of tonsils and adenoids, the delivery of pregnant women, and operations on the gastrointestinal or urinary tracts. It is good medical and dental practice to protect patients with rheumatic or congenital heart disease by prophylactic measures.

Recommended Prophylactic Methods

Penicillin is the drug of choice for administration to patients with rheumatic or congenital heart disease undergoing dental manipulations, or operative procedures in the oral cavity.

Although the exact dosage and duration of therapy are somewhat empirical, there is some evidence that for effective therapeutic prophylaxis reasonably high concentrations of penicillin must be present at the time of the operative procedure. The dosage regimens employed for long-term prophylaxis of rheumatic fever are inadequate for this purpose. There is reason to believe that continuous maintenance of penicillin in the blood over a period of several days will result in the death of those organisms which have lodged in the heart valve during the period of transient bacteremia.

Not only should penicillin prophylaxis be designed to afford maximum protection, but the method must also be practical. In general, the parenteral route of administration is preferred. All patients should be instructed to report to their physician or clinic should they develop a fever within a month following the operation.

Intramuscular Penicillin

Dosage—600,000 units of aqueous penicillin and 600,000 units of procaine penicillin in oil containing 2 per cent aluminum monostearate administered intramuscularly thirty minutes before the operative procedure.

Oral Penicillin

As an alternative, although considered less desirable, penicillin may be administered by the oral route.

Dosage—250,000 to 500,000 units one-half hour before each meal and at bedtime, beginning twenty-four hours prior to the operation and continuing for five days. At the time of the operative procedure it is advisable to give an additional 250,000 units.

Contraindications—Patients who give a history of sensitivity to penicillin.

Other Antibiotics

The broad spectrum antibiotics should be employed as prophylaxis in patients who are sensitive to penicillin or in those who are undergoing surgery of the urinary or lower gastrointestinal tract. Oxytetracycline, chlortetracycline, or erythromycin should be administered in full dosage for five days, beginning treatment the day prior to the surgical procedure.

.....

Copies of the above statement are available, free of charge, from the Michigan Heart Association, Doctor's Building, 3919 John R., Detroit 1, Michigan.

COMMITTEE ON PREVENTION OF RHEUMATIC FEVER AND BACTERIAL ENDOCARDITIS

T. Duckett Jones, M.D., *Chairman**
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Ann G. Kuttner, M.D.
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*Deceased November 22, 1954.

(Continued on Page 1063)



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AMA Washington Letter

THE MONTH IN WASHINGTON

Although very little health legislation actually was enacted in the first session of the 84th Congress, a number of important bills made enough progress to insure they will get serious consideration when the second session starts next January.

Foremost is a bill to amend the social security act, and, among other things provide OASI payments for disabled workers after age 50. The present provision (enacted in 1954) protects a disabled worker's pension so it is not decreased because of his years of unemployment, but payments don't begin until he reaches 65.

The new plan, sponsored by Democratic members of the House Ways and Means Committee, was rolled through the House after closed committee hearings. But when it got to the Senate, Chairman Harry Byrd of the Finance Committee held it up, saying it was too important to be reported out without the complete hearings he plans for next session.

The American Medical Association is flatly opposed to cash disability insurance. One important reason is the Association's conviction that federal machinery necessary to regulate disability examinations inevitably would project the government into the medical care field. There are many other reasons, including the relationship between cash payments for disability and the patient's interest in rehabilitation. The issue of disability pensions will be settled next year in the Byrd Committee or on the Senate floor.

A bill for $90 million in grants for building and equipping non-federal research facilities passed the Senate, and is awaiting action in the House Interstate and Foreign Commerce Committee. Hearings have been held on a bill for U. S. grants to medical schools and on another (Jenkins-Keogh) to allow self-employed persons to defer income tax payments on part of their income put into annuities.

Other bills that will be ready for action in January include legislation to stimulate nursing education, improve the medical care of military dependents, authorize health insurance for government workers, authorize U. S. guarantee of mortgages on health facilities, and offer military medical scholarships. The administration's bill for reinsuring health insurance plans by now is a little shopworn, but it still might be pushed again next year.

President Eisenhower has made it known he wants Congress to get to work on health legislation early next session. His urging might not be needed. Next year is a presidential election year, and both parties will exert themselves to enact, and take credit for, new health programs that carry public appeal.

Despite the hundreds of hours of hearings in Senate and House, not a single important permanent medical program was set up by Congress in the last session. A national mental health survey, supported by the AMA, was enacted, but the administration's plan for mental health grants will be up for action next year.

Ignoring protests of physicians and dentists, Congress extended the doctor draft act for another two years, after first adopting two amendments. It exempted all men over 45, and all 35 or older who previously had been rejected for medical commissions for physical reasons alone.

For almost four months Congressional committees pondered what to do about Salk poliomyelitis vaccine. At first there were two main questions: 1. How much money should Congress spend to buy vaccine for free shots, and who should get them? 2. How far should the federal government move into the picture to insure equitable allocation?

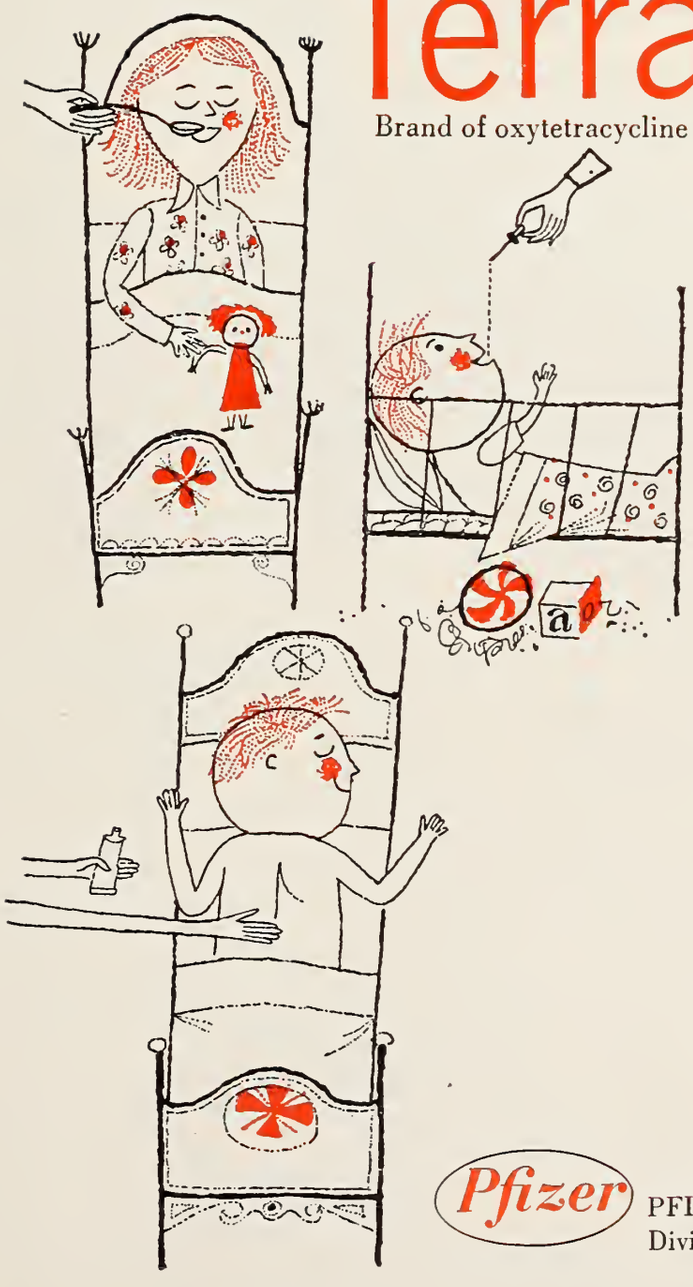
One of the proposals—this even got through the Senate—was to offer unlimited money to the states, which in turn could give free shots to any persons or group of persons under age 20. President Eisenhower's idea—which he urged on Congress several times—was simply to insure that no person in need of the vaccine would go without it for financial reasons. Eventually his view prevailed and the states now are drawing on a $30 million fund. This law expires next February 15.

As weeks passed, there was less and less enthusiasm for setting up a federal allocation system, which Secretary Hobby and Surgeon General Scheele repeatedly told Congress wasn't needed. Consequently, when the National Foundation announced it had all the vaccine it needed for its program, a voluntary allocation plan was put in effect. The plan has the support and co-operation of physicians, pharmacists, drug manufacturers, and the state health officers. The Department of Health, Education, and Welfare is the liaison between the pharmaceutical houses and the states, dividing the vaccine on the basis of the number of unvaccinated persons in the eligible age groups.

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Intravenous
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*Farley, W. J.: Oxytetracycline in Pediatrics, Internat. Rec. Med. *168*:140 (March) 1955.

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Home Medication . . .

The direction circular included in all packages of Bayer Aspirin has recently been published in full pages in leading national magazines reaching well over seventy-five million. Quoted below is a prominent paragraph from these directions.

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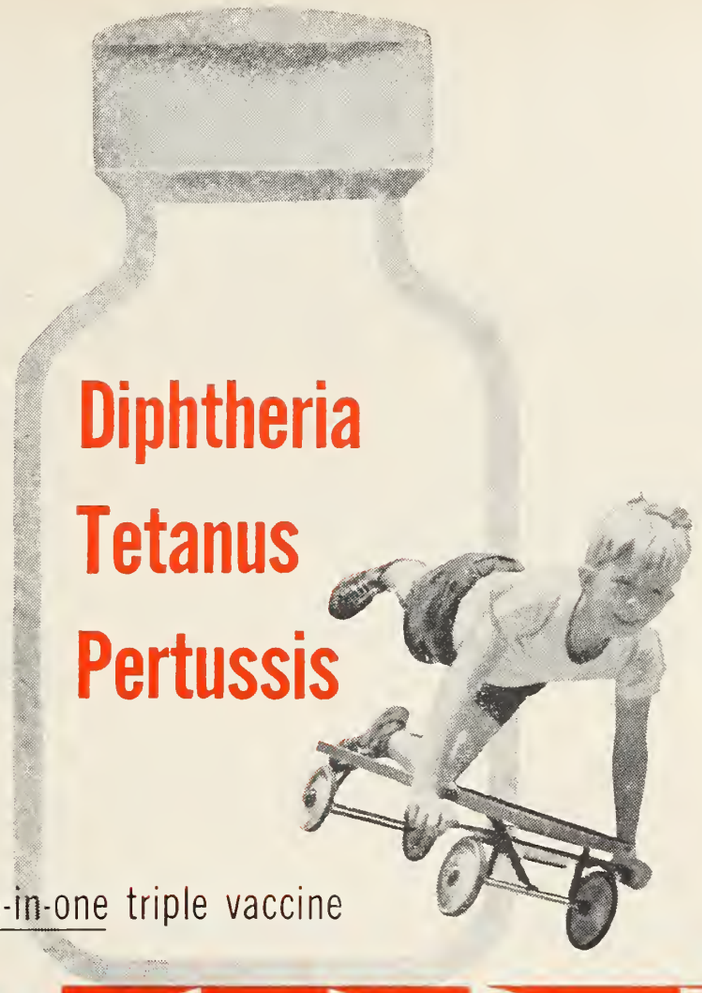
The dosages of Bayer Aspirin recommended in these directions are appropriate for the aches and pains that may be treated by home medication. If these dosages do not bring relief and the pain persists, it is an indication that this particular pain is of a nature that requires the attention of a physician. Under these conditions, don't experiment with any other home medications. Consult your physician. He is the only one qualified to diagnose the cause of the persistent pain and prescribe the remedy best suited to your individual needs. This is particularly true of continuing severe pains of Arthritis, Rheumatism, Sciatica, Bursitis and Neuritis.

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Supplied: Single and in five immunization packages
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Dosage:
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Phenobarbital ..... 8.0 mg. (⅛ gr.)
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Dosage:
While the dosage and indications are the same as for the full-strength tablets, this tablet allows greater flexibility in regulating the individual dose, and may be employed in less severe gastrointestinal conditions.

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Dosage:
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1. Rosenberg, S. and Oster, K. A., "Gelatine in the Treatment of Brittle Nails," *Conn. State Med. J.* **19**:171-179, March 1955.
2. Tyson, T. L., *J. Invest. Dermat.* **14**:323, May 1950.

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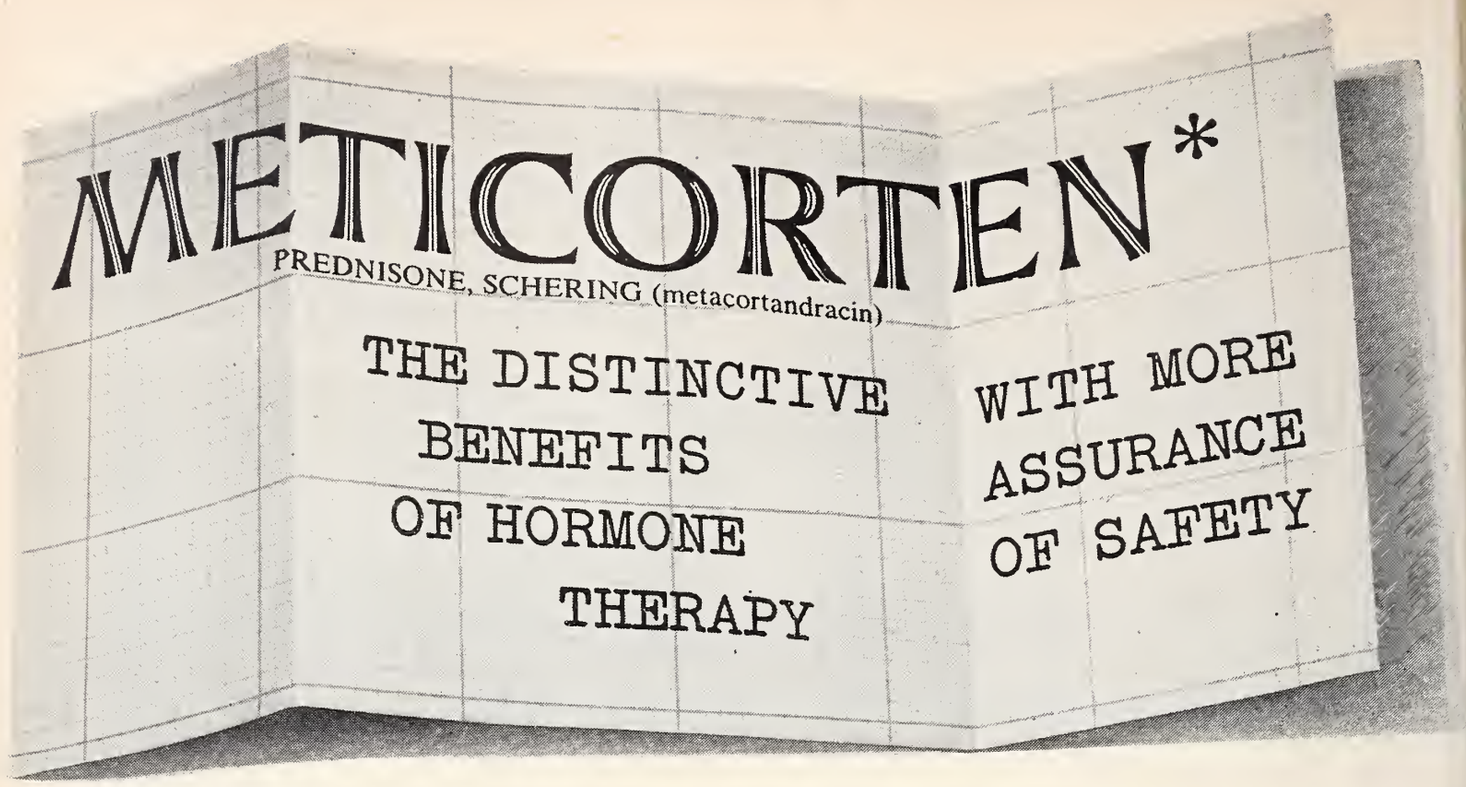
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'Hydeltra' is supplied as 2.5 mg. and 5 mg. scored tablets in bottles of 30 and 100.

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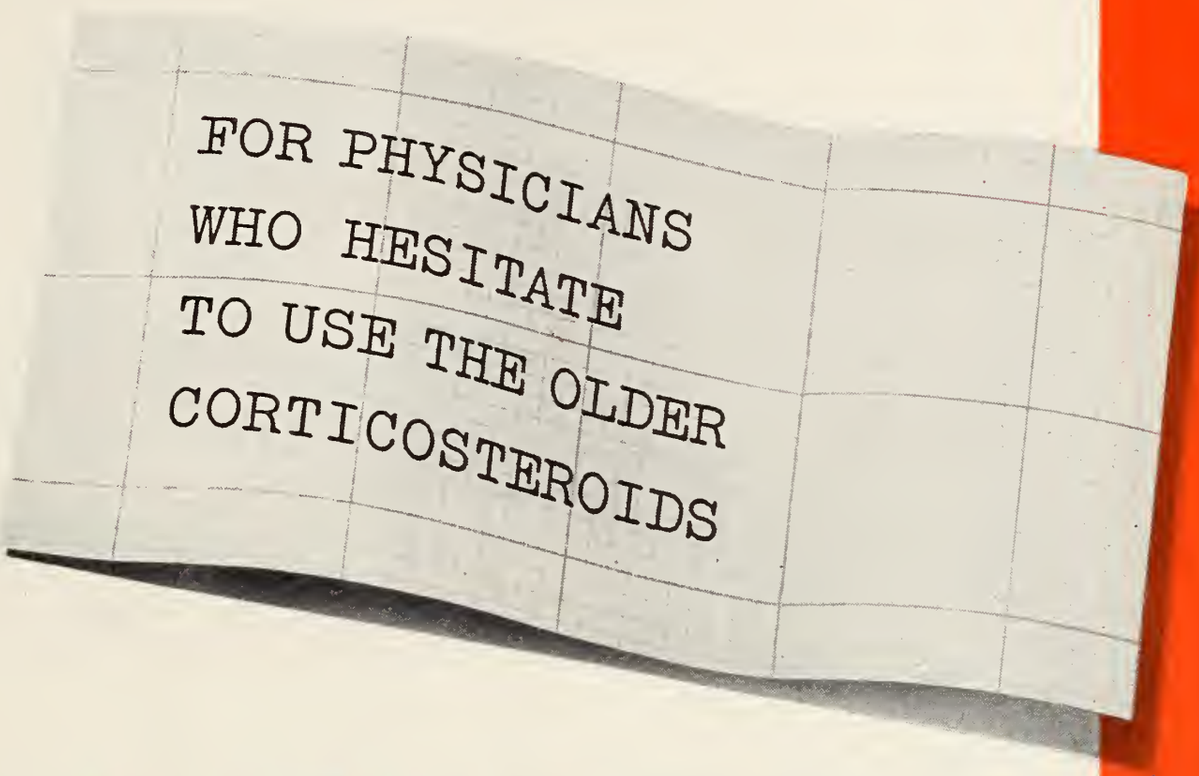
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*T.M.

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intractable asthma, rheumatic fever, nephrosis, certain skin disorders such as acute disseminated lupus erythematosus, acute pemphigus, extensive atopic dermatitis and other allergic dermatoses, and certain eye disorders



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Issued Monthly Under the Direction of The Council

VOLUME 54 SEPTEMBER, 1955 NUMBER 9

Visceral Injury Resulting from Non-penetrating Abdominal Trauma

By Grover C. Penberthy, M.D., F.A.C.S., and Charles R. Reiners, M.D.

Detroit, Michigan

ABDOMINAL visceral injury resulting from blunt trauma is becoming more and more of a major problem in recent years due to the steadily rising accident toll on our highways. The incidence of such injuries is relatively small as compared to the over-all incidence of accidental injuries of other types. It is an extremely important phase of the problem, however, since it is so readily missed in the first examination of the patient. Other more obvious associated injuries often tend to divert the attention of the examiner from the abdominal injuries which often may be more important than the more easily recognized wounds.

These problems can tax the perception and judgment of the most astute clinician. Early recognition and proper surgical therapy usually will lead to complete recovery, while the cost of undue delay in institution of surgery is often the death of the patient. Many of these cases will seem to improve for a period of several hours following the injury. This has been called the "period of illusion."[2] Following this there are signs of shock or peritonitis which progress with varying rapidity for a time, and finally, if surgery is still withheld, there is a precipitous deterioration in the state of the patient. By this time the diagnosis is usually evident, but the salvage rate of any type of treatment is depressingly low.

This is a problem which may confront any physician who sees and treats accident victims. It is important for every physician who treats trauma, even occasionally, to be constantly on the lookout for hidden abdominal injury, not only in the initial examination but during the later care and convalescence as well. In most of the recent reports on this subject, automobile accidents account for the majority of cases. It has become generally appreciated, however, that severe trauma is not necessarily a prerequisite. Serious intraabdominal injury may be sustained from relatively minor trauma such as a blow with a fist, falling against the edge of a table, or even having a piece of wood thrown against the abdomen by the blade of a mechanical saw. Many cases are documented in which the patient felt the injury was so trivial that he delayed many hours before seeking medical help.

It is important to emphasize at the outset that there is no laboratory examination or x-ray finding that can substitute for the frequent and painstaking evaluation by the alert clinician. The laboratory can in many cases suggest the diagnosis, but more often it is the hour-to-hour re-examination of the patient which first gives evidence that operation is required. Such frequent re-evaluation is necessary because of the rapidity with which these cases can progress to an advanced or terminal condition following the appearance of the full-blown clinical picture.

This is well demonstrated by the direct relationship between mortality and the time lapse between injury and operation in cases of small bowel perforation due to blunt trauma. In those cases operated on within the first six hours, the survival rate is 85 to 90 per cent. Within the first twelve

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hours approximately 65 per cent can be saved and after twenty-four hours, only about 20 per cent will survive. In cases with massive hemorrhage resulting from rupture of the liver, spleen, kidney, or mesentery, the need for urgent surgical intervention is usually much more imperative. The frequently observed cases of delayed hemorrhage from the spleen carry a high mortality because the early improvement of the patient lulls the physician into a false sense of security. The patient may be discharged without any admonition concerning the urgent need for re-hospitalization in the event that abdominal pain, weakness or fainting recur. Cases have been reported where the asymptomatic period was six weeks or longer during which the patient felt completely well, only to be seized with sudden upper abdominal pain followed shortly by weakness and collapse. There is usually no injury or unusual physical activity immediately preceding the late episode. At operation or (all too frequently) at autopsy, the abdomen is found to be full of blood. The spleen contains an old and often partially organized hematoma in the supcapsular area which has broken through the thin and friable capsule to allow the second and infinitely more serious hemorrhage.

The solid organs, kidney, spleen and liver, are the most frequently injured in spite of their relatively well protected locations. Their fixed position makes them unable to elude a crushing force. The pancreas and duodenum likewise are injured more frequently than might be suspected since a blow in the epigastrium can crush them against the spinal column. The small bowel is injured most often near its two fixed points, the ligament of Treitz and the ileocecal valve. We have observed one case where the ileum tore at the point of an adhesion to the anterior abdominal wall resulting from an old appendectomy scar. In general the small bowel ruptures on its antimesenteric border, probably because this site is weaker or less well buttressed than the mesenteric side. The urinary bladder is particularly susceptible to injury when distended, but can be injured in the collapsed state when the pubic rami are fractured. The urethra is a frequent site of injury in pelvic fractures. In the male the site is generally in the membranous urethra and is due more often to a sudden shearing force applied to the urogenital diaphragm than to its being pierced by boney spicules.

One additional point to be stressed before embarking on a discussion of the more detailed diagnostic techniques is that one physician should make himself personally responsible for the frequent re-evaluation of the case.[4] If a consultant is to be called in case operation is needed, then he should have the opportunity of seeing the case as soon as practicable and should personally follow it thereafter. If a case is followed by a succession of different members of the house staff, without the responsibility resting clearly on one person, then the subtle changes which would indicate early operation are likely to go unrecognized for a long period, often with disastrous results.

In the diagnosis of these cases the history is of more importance than might at first be presumed. The condition or state of the patient prior to injury may give a clue as to the site of injury. If the bladder was distended it is well to suspect that it might have been ruptured, especially if the injury was followed by a disappearance of the desire to void. If the patient has passed blood-free urine in the interval following the accident, it is presumptive evidence that the urinary tract has not been involved. If the patient was in the immediate post-prandial state, attention is directed to the upper gastrointestinal tract. Weakness or fainting following the injury suggests a hidden hemorrhage. It has been observed that a blow with a sharp object is more likely to injure the hollow viscera which presumably are impinged against the spinal column, pelvis or lumbar musculature. A broader or crushing type of injury more often affects the solid viscera, often with fracture of the lower rib cage. A blow in the flank can cause intra-abdominal and renal injury as well as can a blow in the abdomen.

The findings on physical examination vary so widely that considerable care must be exercised in their interpretation. On the one hand there is the picture of fully developed shock from intraperitoneal bleeding. This syndrome warrants no further discussion since in the absence of visible blood loss the assumption must be either intrathoracic or intra-abdominal hemorrhage. X-rays of the chest and abdomen can usually resolve this problem and can be made while the shock therapy is in progress and the patient being readied for operation since obviously haste is imperative.

If bleeding of lesser degree is suspected, blood pressure and pulse must be checked at frequent

intervals and the case followed with special vigilance. It is well to remember that free blood in the peritoneal cavity is not as irritating as spillage of bowel content, and consequently the tenderness may be minimal. The abdomen may have a doughy feel with the only tenderness localized to the area of the ruptured viscus. Diagnostic abdominal paracentesis with a 20-gauge spinal needle is often of great value in demonstrating free blood in the peritoneum and thereby obviating the delay and hazard of waiting for the degree of blood loss to become clinically obvious. We have found this procedure cautiously employed to be safe and quite helpful. Failure to recover blood on diagnostic tap does not mean that free blood is not present. Like so many other tests it is extremely valuable when positive, but a negative test means nothing.

In the evaluation of a doubtful case, the differentiation of tenderness due to injury of the abdominal wall can be quite confusing. In these cases, the tenderness is usually well localized and remains so, whereas the tenderness due to perforation of a hollow viscus tends to become generalized rather early. The absence of peristalsis is quite significant. If peristalsis is present on initial examination, it will often cease while the case is under observation.

The stomach should always be aspirated with a Levin tube early in the workup, and the tube is best left in place with suction until the diagnosis is established. This is helpful in several ways. It is important to know the nature of the gastric aspirate and whether it contains blood. It is therapeutic in cases of acute gastric distention which often occur following abdominal trauma, especially in children. This acute dilatation can be very deceptive and frequently mimics the tense, rigid, tender abdomen of advanced peritonitis, only to disappear completely following aspiration. Emptying the stomach in this fashion makes anesthesia safer and the surgery easier if the case eventually comes to operation. The continuous suction is also effective in preventing intestinal distention in case peritonitis develops, since most of the bowel gas in these cases is from swallowed air.

Investigation of the bladder and urethra should be made in all cases of fracture of the pubic rami. The presence of gross or microscopic blood in the urine must be determined. If the patient is able to void normally, this is worth knowing as mentioned earlier. If not, and lower abdominal or flank injury has been sustained, then he must be catheterized. If catheterization cannot be accomplished, a tear of the urethra must be presumed. If the urine is bloody and renal injury is suspected, then an excretory pyelogram is helpful in demonstrating the degree of impairment of function. This is of great importance preoperatively since the presence of one functional kidney should be established before undertaking an operation which may result in nephrectomy. If, however, bladder injury is suspected, a cystogram is indicated. It is now felt that injection and recovery of a measured amount of water or saline into the bladder is not a reliable guide to perforation.[1] A cystogram can readily be made without undue disturbance of the patient and gives the best information as to the condition of the bladder as well as some guide as to the location of the rent, if one is present.

X-ray examinations of the chest and abdomen are among our most helpful diagnostic aids. The initial studies should include a flat film of the abdomen, and an upright chest. Occasionally an upright film of the abdomen is helpful. Special studies for boney detail of the ribs, spine, and pelvis can be made as indicated. If the condition of the patient does not permit an upright film of the chest, then a lateral decubitus film of the abdomen should be made. This study is usually quite adequate for the demonstration of free intraperitoneal air. Actually only a small percentage of cases will show free air, but the finding is so conclusive when present that it should always be looked for.

A great deal of information may be gained from good x-ray studies. Fractured ribs in the lower chest, particularly the lower three or four ribs, immediately raise the possibility of a ruptured liver or spleen. Rupture of the diaphragm with herniation of the abdominal viscera into the chest is not uncommon in severe crushing wounds of the lower chest and upper abdomen. This diagnosis can be made with certainty only by x-ray. The finding of air in the retroperitoneal tissues indicates rupture of the bowel in one of its retroperitoneal positions. This is most often seen with rupture of the second or third part of the duodenum, but could occur with rupture of the colon in one of the positions where it is retro-

peritoneal. The most common picture is one of a bubbly appearance in the region of the duodenum or head of the pancreas. If allowed to progress, this air can dissect extensively in the retroperitoneal area until it outlines the kidney, psoas muscle, and entire right flank as in a retroperitoneal air study. A possible source of confusion is from dissection of air from fractured ribs with injury to the lung. The subcutaneous emphysema in these cases should not be confusing if the initial x-rays are taken early before the air reaches the retroperitoneal areas.

Obliteration of the normal markings such as the psoas and renal shadows by a diffuse haze is indicative of peritoneal fluid which in these cases is usually blood. If a case is observed late, this obscuration of normal markings could be the result of edema of the bowel and peritoneal exudation due to peritonitis, but by this time the diagnosis of peritonitis is usually obvious clinically.

The presence of a large localized density may indicate a loculated hemorrhage. If this density occurs in the left upper quadrant displacing the stomach medially, it is presumptive evidence of rupture of the spleen, or subcapsular hematoma of the spleen. Rupture of a kidney will produce a unilateral extravasation of blood in the retroperitoneal area with resultant obliteration of markings in this area.

A point to be stressed is that a single negative x-ray study of the abdomen can never be construed as excluding the possibility that serious intra-abdominal injury may still be present.

In the workup of these patients it is important that shock therapy be started immediately if clinical shock is present. If impending shock is suspected, an intravenous injection is started and blood cross-matched at once. The diagnostic workup can be accomplished while the shock treatment is in progress and should not interfere with it. In the election of time of operation in the more desperate cases, it is the policy to operate just as soon as the state of shock is corrected. All efforts are directed toward accomplishing this as soon as possible. Blood and plasma expanders can be pumped under pressure into multiple veins simultaneously. If even with this aggressive shock therapy the patient does not improve, it is well to hazard exploration in the hope that the bleeding may be controlled.

In the case where the diagnosis is in doubt, even after x-rays and other diagnostic procedures, the patient must be observed closely and reexamined frequently. During this period morphine or other analgesics or sedatives are usually withheld because of the possible masking of early signs of more serious damage. If, after six to eight hours of observation, there is persistent abdominal pain, spasm, and tenderness, then laparotomy is indicated. Associated injuries do not constitute a contraindication to laparotomy provided that the patient is not in shock and the respiratory system is intact.

We wish finally to emphasize the necessity for early surgical exploration of the injured abdomen before every evidence that warrants this act is at hand, because irreversible complications may appear with unheralded speed. These can best be dealt with before their occurrence, not after they hold the center of the stage.

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A common fault in treatment of skin cancer is the incomplete destruction or removal of the lesion.

* * *

The majority of intradural, extramedullary tumors are benign, arise from either the arachnoid, dura, or nerve roots and usually may be completely removed.

* * *

Meningiomas and neurofibromas occur with approximately equal frequency.

Lumbar puncture is of great value in the study of patients suspected of spinal cord tumor and always should be made.

* * *

In the presence of spinal cord tumor, the protein content of the spinal fluid is usually quantitatively increased.

* * *

Laminectomy is the only treatment of value available for spinal cord tumor.

Multiple Polyposis of the Colon

A Preliminary Report

By Frederick A. Coller, M.D., and C. Thomas Flotte, M.D.

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MULTIPLE polyposis of the colon is a rare familial disease in which there is an inherited tendency of the mucosa of the large intestine to proliferate with the development of polyps. These polyps seem to have a marked tendency to undergo malignant degeneration with the development of adenocarcinoma of the colon or rectum at an early age.

The polyps in multiple polyposis are true polyps or adenomas; that is, they consist of a stalk derived from the submucous fibrous tissue and are covered by an epithelial layer continuous with that of the bowel. The polyps are present literally by the hundreds and are scattered from the cecum to the anus (Fig. 1). The largest collections of polyps are usually found in the region of the hepatic and splenic flexures and in the sigmoid colon. The polyps may be sessile or pedunculated. They may vary in size from barely visible to several centimeters in diameter. When the polyposis is marked, it is sometimes difficult to find normal mucosa between the polyps.

Multiple polyposis must be distinguished from the adult or acquired polyposis in which one or several isolated polyps are found. In addition, the adult type of polyposis seems to develop at a later age. The acquired polyps frequently undergo malignant degeneration but usually not at the early age or with as great a frequency as in multiple polyposis. Ordinarily, the acquired polyps may be removed locally, and if the polyps are benign, the patient should be followed by repeated sigmoidoscopy and barium enemas to determine if further polyps have developed.

Pseudopolyposis of the colon is another disease that must be differentiated from multiple polyposis. Pseudopolyposis develops secondary to a diffuse inflammatory disease of the colon, such as nonspecific ulcerative colitis, tuberculosis or, rarely, typhoid fever. In pseudopolyposis islands and tags of mucous membranes spared by the ulcerative process become hyperplastic and swollen. This is the starting point for polyps which continue to develop even after the acute inflammatory reaction has subsided. It has been found that about 10 per cent of patients with ulcerative colitis later develop pseudopolyposis of the colon.

Multiple polyposis begins by a change or mutation taking place in the genes of some individual who does not personally have the disease but who passes the mutant gene to his descendants. The disease is transmitted by both sexes and occurs in both sexes. In most cases the disease is transmitted as a Mendelian dominant and only occasionally as a recessive characteristic. Reed and Neel estimate the frequency of multiple polyposis as 1:8300.

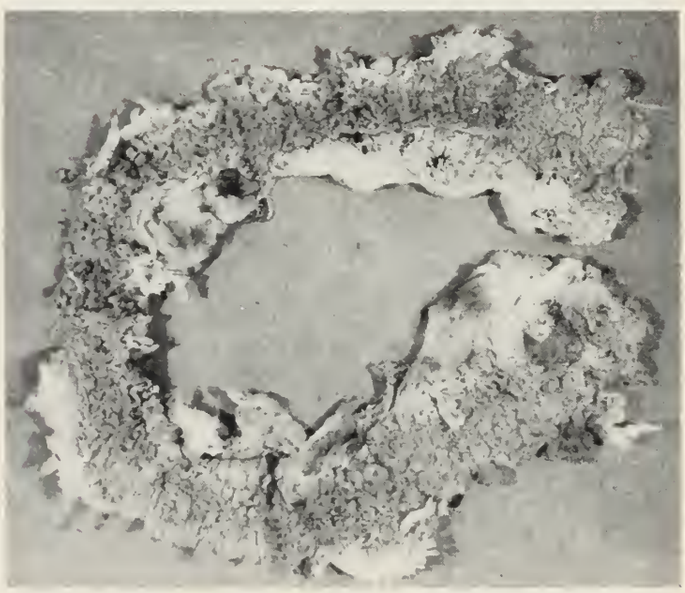


Fig. 1. Pathological specimen of typical multiple polyposis. No carcinoma was found.

It is generally felt that multiple polyposis, although hereditary, is not congenital; that is, the polyps are not present at birth. In most instances, the polyps have been found to develop at or about the time of puberty. However, Le Fevre and Jacques demonstrated multiple polyposis in a four-month-old infant. Others have reported examining patients in their late thirties and finding the colon normal, but at re-examiation several years later the typical findings of multiple polyposis are present.

Patients with multiple polyposis of the colon have many and varied symptoms and signs. Most commonly, the patients give a long history of recurrent episodes of abdominal discomfort asso-

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ciated with cramps and bloody diarrhea. Anemia, weakness, and weight loss are frequently present. Partial or complete intestinal obstruction occurs incident to the enlargement of polyps or to the development of carcinoma. Intussusception on the basis of multiple polyposis is not uncommon. In surveys of families with known multiple polyposis, there may be a few individuals who have typical multiple polyposis without signs or symptoms.



Fig. 2. Barium enema with air contrast technique demonstrating multiple polyposis.

The diagnosis of multiple polyposis can be established by sigmoidoscopic examination and barium enema, particularly with the use of the air contrast technique (Fig. 2).

The proper treatment of multiple polyposis is now well established. The impracticability of removing hundreds of polyps locally, and the establishment of the fact that carcinoma will develop in essentially all untreated cases has led to the feeling that colectomy is necessary in this disease. The ideal treatment is total colectomy with inclusion of the rectum and the establishment of a permanent abdominal ileostomy. However, since many of these patients are reticent to accept a permanent ileostomy, a somewhat less radical operation may be used in selected cases. A subtotal colectomy with an ileorectosigmoidostomy may be carried out with preservation of the continuity of the bowel. A subtotal colectomy, however, is only acceptable when: (1) the involvement of the rectum is such that the polyps there can be completely and safely removed by fulgeration; (2) there is no carcinoma in the recto-sigmoid or rectum, and (3) the patient is co-operative and will return at regular intervals for sigmoidoscopic examination and fulgeration of any recurrent polyps. In the operation of subtotal colectomy the anastomosis should be sufficiently low to permit visualization of the anastomosis and all of the remaining rectum by sigmoidoscopy.

In the past twenty years sixty-three patients with multiple polyposis of the colon have been treated at the University of Michigan Hospital.

Family History.—Thirty-four patients (54 per cent) were found to have relatives in one or more generations who were known or discovered to have multiple polyposis. Eight patients (12.7 per cent) had a suggestive but not definitely proven family incidence. Twenty-one patients (33.4 per cent) gave no history suggestive of a familial incidence of mutiple polyposis, and examination of other members of the patient's family failed to demonstrate the disease.

Age and sex.—The average age of the patients at the time the disease was diagnosed was 33.7 years. Thirty-nine patients (62 per cent) were males and twenty-four (38 per cent) were females.

Symptoms.—Eighty-two per cent of the patients had symptoms referable to the large bowel at the time the diagnosis of multiple polyposis was established. The range of duration of the symptoms varied from a few months to the extreme of twenty-two years. The most common symptoms were diarrhea or loose bowel movements, abdominal cramps, and blood in the stool.

Carcinoma.—In 59.2 per cent of the patients in whom operation was performed, carcinoma was present. The average age of the patients with carcinoma was 38.5 years. The youngest patient was thirteen years old.

Treatment

Fourteen patients have refused operation. Of this group two are known to have died of carcinoma of the colon.

Nine patients were found to have advanced carcinoma when first seen. In this group a biopsy or palliative resection was carried out. All are now dead; the average survival was of less than two years.

Total colectomy with the establishment of a permanent ileostomy has been carried out in fifteen patients. Ten of the patients had carcinoma at the time of operation. Four patients developed recurrent carcinoma and are now dead. There were three postoperative deaths. Eight patients with total colectomy are living and well. The average survival for the group is 4.25 years. One patient has now been followed for fifteen years.

Subtotal colectomy has been performed in twenty-five patients with multiple polyposis. Ten of the patients were found to have carcinoma at the time of operation. Four patients have died of recurrence of the carcinoma, and three patients have died of causes not related either to the operation or cancer. Three patients developed carcinoma in the remaining rectal segment six, seven and eleven years after the subtotal colectomy. Two of these patients had not been sigmoidoscoped for at least two years; combined abdomino-perineal resections were carried out, but both patients later died of recurrent carcinoma. The third patient was found to have malignant degeneration of a rectal polyp on routine sigmoidoscopic examination. This was removed and the patient has no evidence of recurrence in two years of follow-up. Eleven patients are alive and well and are returning for periodic sigmoidoscopic examinations and fulguration of recurrent polyps. The average length of time since subtotal colectomy in this group of patients is seven years.

Summary

Multiple polyposis is a rare familial disease in which hundreds of polyps develop in the colon and rectum, usually about the time of puberty. There is a great tendency for these polyps to undergo malignant degeneration while the patient is still at a relatively young age.

Forty patients with multiple polyposis of the colon have been treated with either total or subtotal colectomy. Ten patients have died of carcinoma, eight having had carcinoma at the original operation and two subsequently developing malignant degeneration of polyps in the rectal segment. Nineteen patients are alive and well without evidence of malignancy.

PREVENTION OF RHEUMATIC FEVER

(Continued from Page 1042)

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Note: This statement was prepared by the Committee on Prevention of Rheumatic Fever and Bacterial Endocarditis appointed by the Council on Rheumatic Fever and Congenital Heart Disease of the American Heart Association. The committee is cognizant of the fact that no recommendations of any group can be final at this time. The present approach may not be the eventual solution of the problem of preventing rheumatic fever. Revisions and changes will be made as new knowledge may indicate.

The Constipated Infant

By Harry A. Towsley, M.D.
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IT IS reasonably safe to assume that when Ted Thirlby started the long and successful practice of medicine, one of the most common complaints he had from the mothers of the infants under his care was "my baby is constipated." It is also reasonably safe to assume that many such complaints were more fantasy than fact. The same complaint is often repeated today, with perhaps a greater degree of fantasy and less of fact than in Ted's early years of practice, although constipation in infancy continues to be a real problem.

The definitions of constipation usually given are that intestinal evacuations are too infrequent, too small in amount, too firm or too dry. There are wide variations in individual babies which need to be considered in the normal range. Most infants will have a soft, unformed stool with each feeding for the first month or two of life. Others may have but one or two stools a day, occasionally missing a day. Some may have stools which appear firmer and drier than others but as long as the baby appears healthy, eats and sleeps well, is not disturbed by undue flatulence or anorexia, and does not have excessive straining at the time of emptying his bowels, the chances are he is not suffering from constipation, even though his mother may be very disturbed with the apparent infrequency and character of his stools. When constipation does exist, it is very probable that it is caused by one of the following: (1) dietary deficiency, (2) nutritional deficiency, (3) anatomic defect, either congenital or acquired, or (4) functional defect.

The most common dietary deficiency producing constipation is the failure of adequate food intake. Peristaltic motion is normally stimulated by the ingestion of food. Factors interfering with it getting into the intestinal tract in sufficient quantity may well result in fewer bowel movements. The most striking example of constipation associated with small food intake is that seen in the baby with pyloric stenosis at about two or three weeks of age.

The present-day practice of infant feeding has undoubtedly reduced the incidence of constipation associated with low food intake in the healthy baby. In contrast to thirty or more years ago, babies today, whether breast or bottle fed, are usually started on cereals, vegetables, fruits and meats by the time they are two months of age. Thus nutritional foods as well as bulk are added to the diet, where formerly infants existed on milk alone until they were six or eight months of age. Likewise, the rigid schedules of former years that allowed just so much formula every four hours have been replaced with the "demand" technique of more or less unlimited supply when the baby wants it. The giving of food not only in greater amounts but when he is hungry results in more relaxed, happier babies. Far less colic and restlessness are produced than would occur while waiting for the clock to tick off a four-hour interval, regardless of how hungry he might be.

Formula prescriptions high in protein, low in carbohydrate are very likely to produce dry, hard, putty-like fecal masses, which move slowly along the intestinal tract. Milk with high fat content likewise frequently produces large soapy curds in the intestinal tract which may interfere with normal bowel emptying.

The practice today of constructing the formula from milk, with not more than 3.5 per cent butter fat, and added carbohydrates that furnish at least 25 to 30 per cent of the total calories, has resulted in the production of a very digestible mixture which generally is not constipating to the artificially fed baby.

Babies with infections or those who lose their appetite from some other cause, such as hot, humid weather, for short periods of time may and will become constipated as a result of decreased food intake.

Constipation occurring from or associated with nutritional deficiencies is far less common in this part of the world than formerly, with the elimination of rickets and scurvy by the addition of proper vitamins. Although not to the same degree, the atomic, sickly child, with iron deficiency anemia and associated constipation, has practically disappeared as the result of adding iron-containing foods to the diet before the baby becomes anemic, as he used to do on milk only until six or eight months of age.

Babies chronically ill with very poor appetites and who are finicky in their eating, such as the infant with nephritis, neoplasm, or congenital heart

disease, may well develop constipation resulting from poor nutritional mixtures.

Constipation arising in the otherwise normal healthy infant may be the result of one of several anatomical defects. These conditions may fail to produce symptoms in the first few weeks of life or, if symptoms are present, they may be mild and overlooked in the early weeks, due in part to the minor change in the consistency of the stools at this time.

Anorectal stricture or stenosis is probably the most frequent of these defects and can be easily diagnosed by rectal examination. The sphincter of most infants is tight to the examining finger, but will usually relax a few moments after the well-lubricated finger cot is inserted on the examining finger. In the presence of stricture a tight band usually is felt 2 to 3 centimeters in the rectal canal. Such a band is the result of incomplete absorption of the membrane formed by the fusion of the hind gut and the proctoderm late in fetal life. Strictures of this sort have been reported by many observers, with frequency varying from 12 to 39 per cent.[2] The symptom of constipation, however, was present in less than a quarter of those with stenosis, and evidence of stricture subsided in the majority by the sixth or seventh month.

Occasionally, a long, redundant or tortuous sigmoid, or malrotation of the colon may account for persistent constipation. These entities can be recognized only by x-ray with contrast media. Their presence generally is rare.

The presence of fissure in ano resulting from the passing of a hard stool, the injudicious use of a rectal thermometer, unlubricated tip of enema tube, or other foreign body inserted into the rectum may easily produce constipation on a reflex basis. After a few painful defecations the infant will hold his stool rather than endure the pain involved. Thus a vicious cycle is established of further drying the stool, making it harder and more painful to pass. The older infant may recognize that the urge for a bowel movement is associated with the ingestion of food, and because of the discomfort accompanying defecation may eat less. The mother may become suspicious of a fissure, particularly when the baby's stool is streaked with fresh blood. Careful inspection of the anorectal mucosa in this situation should reveal the presence of the fissure.

Functional disturbances in the enervation of the gut are responsible for extremely severe constipation in infancy. Very often the symptom of obstruction is manifest in the first day or two of life, or in the milder forms within the first week or two. Zuelzer and Wilson[6] have described the condition as being due to "agenesis of the myenteric plexus." The studies of Swenson[4] and associates have demonstrated clearly the malfunctioning rectum and rectosigmoid as the etiology of Hirschsprung's disease.

The choice of treatment of constipation in infancy is largely dependent upon its cause. As with most pediatric problems, prevention, when possible, is the best cure.

Treatment

In the otherwise healthy, happy infant, the importance of establishing good bowel habits cannot be over-emphasized. Early in life when bowel movements may be associated with nearly every feeding, regardless of position or other stimuli, there is not much need or opportunity to attempt any "bowel habit training." When the baby reaches the age of three or four months and the number of stools daily have reduced to one or two, the mother may be encouraged to try to stimulate a little regularity in the infant either at bath time or after his first morning meal. Laying the baby on his back on a suitable table and flexing his thighs on the abdomen, with gentle pressure being exerted on the soles of his feet, simulating the sitting position on the toilet seat, may help condition the reflex of bowel emptying. At six or seven months, when the baby is sufficiently strong to sit for ten or fifteen minutes on a baby toilet seat securely fastened to the family toilet and equipped with a foot rest, at a definite time after a meal, encouraging a bowel movement may be helpful. Such occasion should not be a part of the baby's playtime, and attempts at coercion should be discouraged.

The majority of babies respond to this procedure very satisfactorily. Mothers should not expect their babies to be thoroughly bowel trained until after two or three years of age, when they can begin to understand why they need to go to the toilet. The above procedure is not aimed at "housebreaking" so to speak, but is merely an attempt to establish good bowel habits.

The use of enemas and suppositories should definitely be discouraged in this procedure, although occasionally the baby who is slow to respond when in this position will do so if a well lubricated rectal thermometer is gently inserted, and after a few

occasions may establish some degree of regularity. The thermometer so used may be helpful also with the baby who, because of some intercurrent infection and reduced appetite, has not had a stool for a few days.

If the stool is hard and dry, causing much straining with each attempt to pass it, the instillation of a few cubic centimeters of mineral oil into the rectum with a baby ear syringe may produce the desired effect. Mineral oil by mouth during infancy should be discouraged because of the danger of aspiration and subsequent lipoid pneumonia.

On rare occasions in the otherwise healthy baby whose food intake has not been sufficient to stimulate peristalsis through the rectum, a laxative may be helpful. The easiest one to use in this case is milk of magnesia, 2 to 4 cc. added to the formula. The addition to the formula of one-half to one ounce of Karo may be necessary with some infants to keep the stool soft. Also, the addition of fruits, particularly a little prune puree or prune juice, often is extremely beneficial as well as an increased amount of cereal and vegetables in the diet.

The constipated baby with malnutrition associated with chronic disease presents a greater problem, because of the general lack of muscle tone and, in particular, a lack of appetite. It is sometimes very difficult to keep his stool soft and easily moveable. Such an infant may require small amounts of laxative agents at frequent intervals, and possibly enemas, until his underlying condition is corrected. Soapsuds enemas have been widely used in this connection, but it is doubtful if the physician who prescribes such a measure has ever had one himself. They are very irritating, to say the least. A warm tap water enema of a few ounces works quite well. A much more satisfactory medication, which is not a laxative nor is it a lubricant is that of Aerosol O. T. (Dioctyl Sodium Sulfosuccinate)[5] which acts as a wetting agent in keeping the stool soft. This may be administered by mouth in a 1 per cent aqueous solution, 2 to 3 cc. added to the formula or fruit juices.

Methylcellulose[1,3] preparation added to the baby's diet is also helpful in increasing the bulk by virtue of its ability to hold water while passing through the gut. In unusually resistant constipation the combination of Aerosol and Methylcellulose has proved very helpful.

Constipation resulting from stricture in the recto-sigmoid area may require rather frequent dilatation which can be easily accomplished by the mother after a few instructions. It is very important that a very well lubricated finger cot be used on the dilating finger, and that the finger be placed far enough into the rectum to enter the stenotic ring. The finger should be held in place for at least four or five minutes each time. Because of the pain created by this procedure, a local analgesic ointment, like Nupercaine, may be necessary. The mother should be instructed to start with the little finger at first and gradually build up to the index finger. Occasionally, the stenotic area may be so tight as to require surgical intervention for relief. In these babies it is particularly important to keep the stool soft. Aerosol is very beneficial in this instance, as well as the other dietary measure of a low residue diet.

Anal fissures resulting from constipation and the passage of hard, dry stools, or from other causes, create a vicious cycle of further constipation and loss of appetite, and require very careful treatment in infancy. Local measures include relief of pain on defecation. An analgesic ointment may be employed for this purpose. However, small fissures frequently respond very well to the instillation of a few cubic centimeters of mineral oil into the rectum with a well lubricated tip of an ear bulb syringe. Aerosol administered either by rectum in a similar manner, using 1 per cent aqueous solution, 2 to 4 cc., or by mouth is particularly helpful in keeping the stool soft. If the fissures does not heal spontaneously after the stool is softened, application of silver nitrate to the denuded area may be beneficial. On rare occasions, the fissure may become deep and, surrounded by granulation tissue, require surgical excision.

In constipation resulting from a long, redundant colon, or mal-rotation of the colon, it is also essential to maintain a soft stool. Some of these conditions may correct themselves as the infant grows older and assumes an erect position. Others may occasionally produce symptoms of acute obstruction and require surgical correction.

Although there has been a great deal of writing on the medical management of the child with functional causes of constipation, it has been only recently that successful management of the megacolon associated with Hirschsprung's disease has been accomplished by the removal of the nonfunctioning segment of the rectosigmoid area, as described by Swenson.[4] The problem of clean-

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Obstructive Uropathy in Childhood

Diagnosis and Surgical Management

By Reed M. Nesbit, M.D., and
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OBSTRUCTION at the outlet of the urinary bladder is commonplace in senescent men, and physicians in general are aware of its frequent occurrence and are alert in recognizing it. Yet the occurrence of similar obstructive uropathy in children is less understood by the medical profession, with the result that physicians and parents alike often overlook certain abnormalities of micturitional behavior in infancy which if recognized would lead to early discovery. For the male normally urinates a forceful high trajectory stream, which is at once the object of curious pride to his mother as well as the envy of his male parent. and he empties his bladder with a continuous stream. Any male infant who does not emulate the boy made famous in the statue in Brussels and who urinates with an interrupted stream must be regarded with grave suspicion. Such a child probably has an impediment to the natural evacuation of his bladder, and, if this is allowed to progress untreated, may develop irreparable damage to the upper urinary tract.

Doctors routinely instruct mothers of newborn babies regarding the care of their infants and inform them about certain observations that should be made from time to time, for example, bowel habits, sucking techniques, et cetera. Equally important should be the observation of the act of urination. Any evidence of impediment should prompt early investigation. One of the present authors read a short report on this subject a few years ago, which was published in the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY. A few months later, he received a phone call from a physician in a nearby city who reported that his daughter-in-law and grandson were staying with him for a short time waiting the day of departure for Japan, where the doctor's son was in military service. Having recently read the article in question, the grandfather observed the infant void and was impressed by the degree of hesitancy and the interrupted nature of the child's stream. His anxiety led to an investigation which revealed the presence of obstructing valves in the urethra and the presence of residual urine amounting to 100 cc. The obstruction was easily corrected, and within a short time the infant was voiding freely and without interruption. The mother and child were able to fly on schedule to be with the father.

The symptoms that usually call attention to these disorders are likely to be the result of advanced complications of urinary obstruction. Thus, loss of appetite and apathy associated with uremia may cause the parents of a child to seek medical advice. More frequently the presenting complaint is recurrent urinary infection that fails to respond permanently to any form of antibacterial medication, for obstruction enhances persistent infection, especially when there is residual urine. Troublesome enuresis in some instances will be found to result from obstruction and associated residual urine, and urinary incontinence by day is often the result of an advanced stage of this condition. When complete decompensation of the bladder musculature has occurred, there may be an abdominal mass present which erroneously can be interpreted as the usual potbellied configuration of a child of this age. We recently saw a seven-year-old boy with this condition. His kidneys and ureters are dilated beyond hope of recovery. His mother states that she took the boy to a local physician at the age of two years because he had a protuberant abdomen and often wet himself during the day as well as at night. The physician examined the child and informed the mother that the boy was normal and that his protuberant abdomen was simply the normal situation in a child of his age. She was not reassured, so consulted a "specialist," who also found no cause for concern. In retrospect, it seems likely that the protuberance five years ago was due to bladder distention and that diagnosis then might have resulted in salvage of a condition now hopeless.

Indeed, the well-baby clinic is the first line of attack in the early recognition of obstructive lesions which if left alone and unrecognized will eventually result in permanent damage to the urinary tract.

What are these obstructive lesions? The scope, while not broad, includes both rare and ordinary lesions and must take into account acquired as well as congenital defects. For purposes of clarity, the following brief discussion of the commoner varieties encountered will be based on the anatomic order of their occurrence, from the urethral meatus to the bladder neck.

Meatal Structure

Congenital imperforate urethra occurs infrequently. Its detection is not long delayed, for a persistently dry diaper is quickly brought to the attention of the physician by the attending nurse or the mother of the child. Congenital narrowing of the urethral meatus is far commoner. It, along with acquired reduction in meatal caliber such as might occur after diaper meatitis in the recently circumcised baby or follow chronic balanitis in the uncircumcised phimotic boy, is less likely to be quickly recognized.



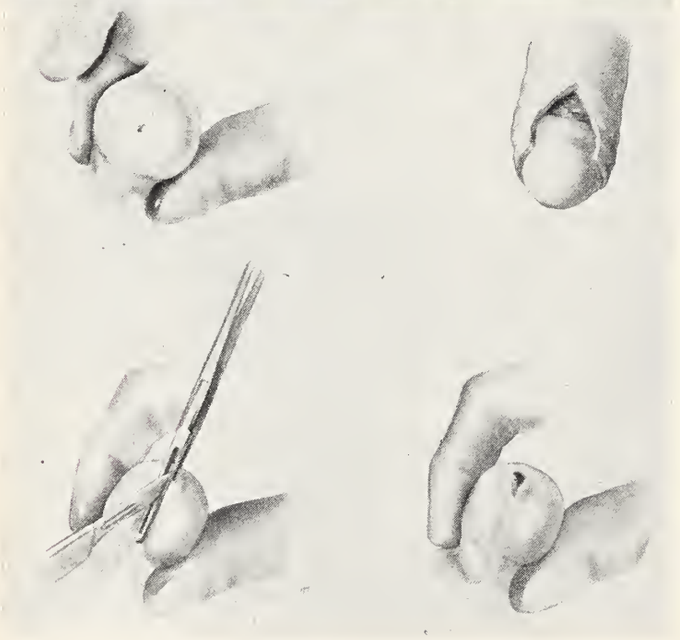


Fig. 1. *(above)* Cystogram showing massive reflux of radiopaque material injected into the bladder, completely outlining a vastly dilated upper urinary tract.
Fig. 2. *(below)* Meatotomy performed on a congenitally narrowed urethral meatus, discovered after dorsal slit of prepuce.

The adverse changes induced by this apparently simple lesion are illustrated in the x-ray (Fig. 1) of a thirty-two-months-old child showing an advanced stage of uropathy secondary to meatal stricture. This child shows massive reflux of radiopaque material injected into his bladder completely outlining a vastly dilated upper urinary tract.

The performance of meatotomy with subsequent dilatation of the meatus (Fig. 2) with a bougie for the following two to three days to prevent healing at the original small caliber is all that may be required when the lesion is discovered early. Circumcision in chronic recurrent balanitis and correction of diaper irritation are necessary accompaniments if these factors are present and predispose to perpetuation of the process. Diversion of the urinary stream by cystotomy is seldom necessary and is reserved for those cases where extensive renal damage can be demonstrated by cystography and pyelography and where restitution of kidney function is an obvious necessity before further investigation or definitive corrective procedures can be carried out.

Congenital Urethral Valves

The prostatic urethra may be the site of a variety of obstructive anomalies. Congenital urethral valves are found in this region. Some are filamentous or veil-like and, while attached to the surrounding tissues, seem quite different in character from the mucosal structures to which they adhere. Others take on the character of deep folds or redundancies and appear continuous with the bladder and urethral surfaces. Both groups are usually attached at one end to the verumontanum. McKay and Young have classified valves into three types (Fig. 3): (1) the membranes extend from the verumontanum toward the external sphincter; (2) the filaments extend back toward the vesical neck, and (3) the membrane extends across the urethra like a diaphragm. Perhaps a fourth category might be added, since frequently the valves may coexit with hypertrophy of the verumontanum itself.

If congenital urethral valves are suspected on the basis of existing signs and symptoms, additional diagnostic procedures may be employed to

substantiate this impression. If renal function is sufficient to allow concentration of intravenously administered contrast medium, the status of the kidneys may be easily determined by pyelography.

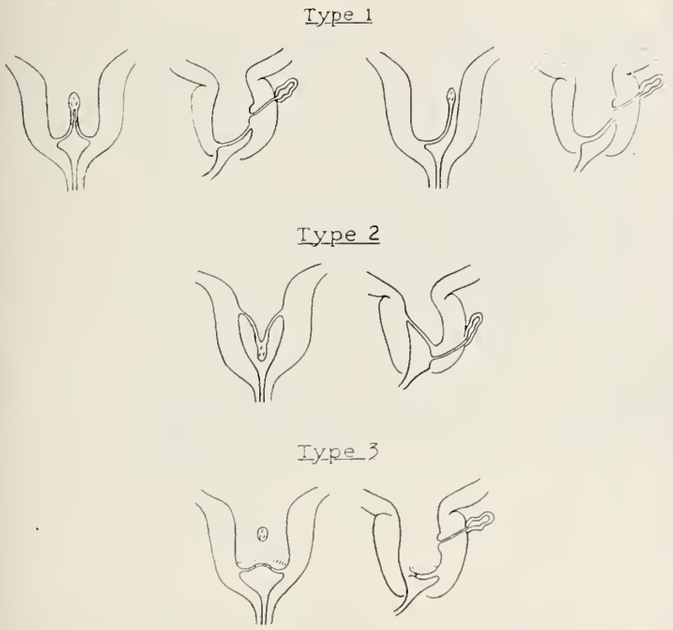


Fig. 3. The three types of congenital urethral valves, as classified by McKay and Young.

This alone may not suffice, for often intravenous pyelograms may appear quite normal, yet the cystogram (Fig. 4) performed with delayed exposures will show reflux of radiopaque material into the upper urinary tract. Of course, even without roentgenographic aids, considerable information may be secured by the introduction of a catheter after micturition into the bladder in order to determine the presence or absence of residual urine.

None of these techniques actually establish the diagnosis but only hint at its presence. Instrumental examination with the endoscope may supply the additional data needed. Such an examination is not without danger, however. The small urethra of infancy does not lend itself well to manipulation with a rigid device. The examiner is further hampered by visual and mechanical limitations imposed by an instrument of 12 F. caliber or less. Despite these drawbacks, such an examination is possible. In fact, in twenty-two of the last twenty-three substantiated cases at the University Hospital, diagnostic endoscopic inspection of the urethra was accomplished. In three of these cases, a perineal urethrotomy was performed to facilitate introduction of the instrument and thus avoid trauma.

Perhaps from the preceding discussion it might be assumed that instrumentation for purposes of diagnosis is regarded as routine. A word of warning in this regard may not be out of place. The

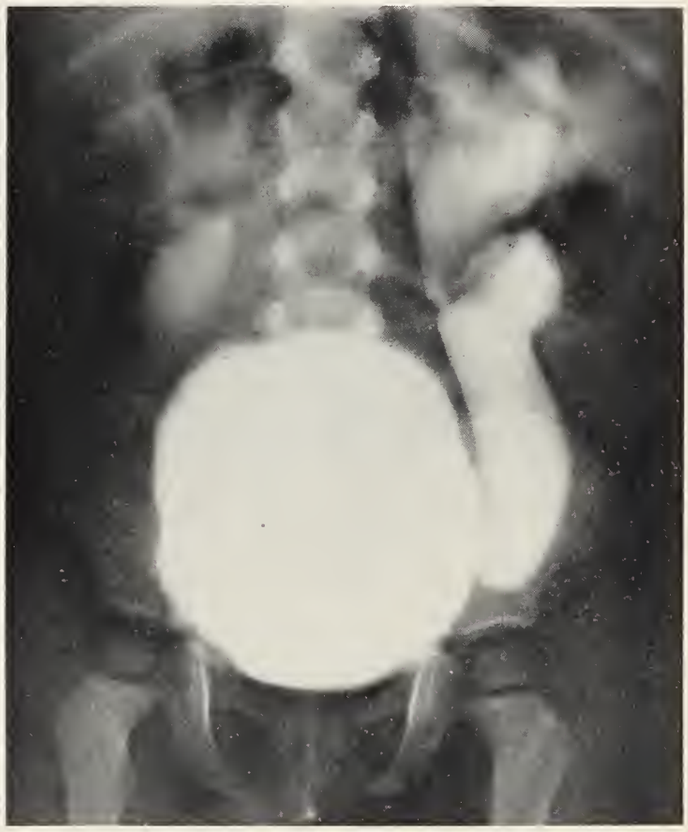


Fig. 4. Cystogram performed with delayed exposures, showing reflux of radiopaque material into the upper urinary tract.

child possessed of congenital urethral valves is frequently presented to the physician in what may appear to be reasonably good condition when in actuality his internal chemical environment is being maintained virtually on the brink of ionic disaster. If this anemic azotemic acidotic infant has introduced into the sterile cavity of his bladder a catheter or instrument with the inevitable accompanying bacterial invader, and if this catheter is then withdrawn, the organism may multiply in the most ideal of all culture media, namely, statis urine, and may choose to ascend the adynamic ureters and impose itself on an already weakened kidney, with inevitable pyelonephritis.

What conclusions may be drawn from this? Certainly, selected preliminary determinations of the chemical constituents of the blood should precede other diagnostic efforts. If the patient is in obvious jeopardy, then immediate suprapubic cystotomy will suffice to establish needed drainage with the least amount of trauma and danger to

the patient. All efforts may then be directed to the immediate problem at hand, the correction of chemical imbalance and restoration of homeostasis.

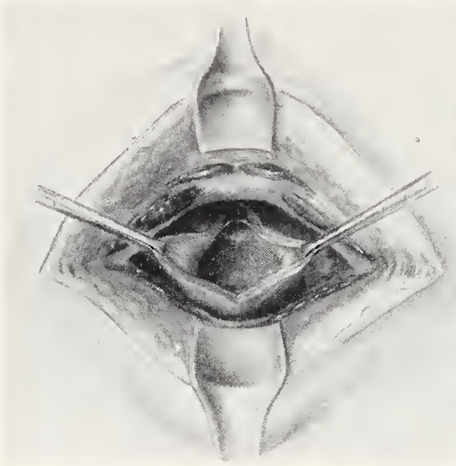


Fig. 5. Retropubic exposure of the prostatic urethra.

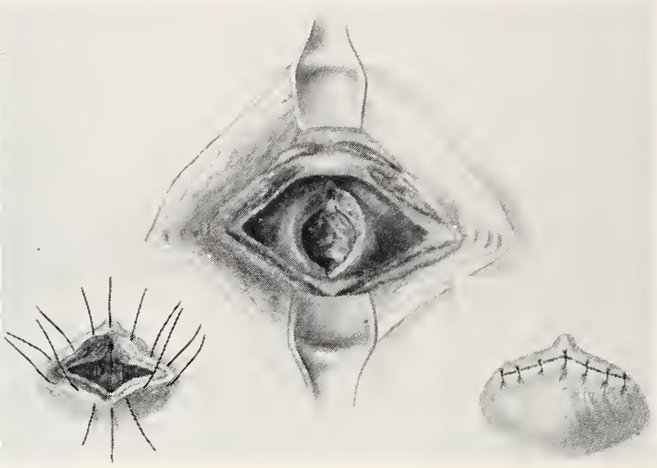


Fig. 6. Transverse closure of bladder neck for treatment of contracture.

If such preliminary investigations indicate satisfactory renal function, or if the performance of cystotomy is followed by reasonable restitution of kidney function and return of bladder tone, then definitive correction of the primary abnormality is the next logical step. The recent development of a transurethral resectoscope of infant size has enabled the urologic surgeon to correct this abnormality by excision of the valves under direct vision, an advantage not shared by the perineal and suprapubic approaches, the use of blind sounds, or the inaccurate application of fulgurating electrodes through the endoscope. Nevertheless, even those skillful in the manipulation of this instrument will admit that its size at times proves too great a barrier to accurate direction of the cutting electrode and that, in addition, there are those cases where it is actually impossible to introduce the instrument, even by urethrotomy. This is especially true of the very young patient and, of course, leaves cystotomy as the only alternative. Such a choice might be avoided if some other approach were reasonable. The answer may perhaps be found in the application of the technique of retropubic exposure of the prostatic urethra to the child (Fig. 5). Many surgeons have found that the visual picture it affords the operator is unexcelled. The prostatic urethra of the infant is even more accessible by this method than is that of the adult, and, in addition, there is the advantage of fewer blood vessels to interfere with exposure. Actual sharp dissection of the valves from their attachments to the bladder, urethra, and verumontanum, primary suture of bleeding points, and freedom from the adverse effects of thermal coagulation are additional benefits which favor this method.

Vesical Neck Contracture

Contracture of the vesical neck is another congenital anomaly whose presence may give rise to obstruction. In its childhood form it is histologically characterized by a local increase in connective tissue of the submucosa. These contractures produce the same upper tract damage as the other obstructions under question.

Before institution of therapy, it is etiologically important to rule out disease of the central nervous system in these cases. A discussion of the controversial features of neuromuscular structure and function of the bladder neck is not indicated here. Suffice it to say that in certain disorders of the nervous system examiners have observed what appears to be muscular spasm or hypertrophy of the vesical neck. Whatever its origin, it may visually simulate the changes seen in certain stages of congenital vesical-neck contracture. A careful neurological examination, cystometry, and detailed neurologic x-ray techniques may aid in the differential diagnosis, for neurological disease will not be corrected by operation.

In choosing a proper approach for the correction of vesical-neck contracture, the surgeon is beset by the same mechanical barriers already outlined in the consideration of surgery of congenital valves. In this instance, the nature of the tissue

present offers an additional problem, for transurethral resection will often be followed by subsequent recurrence of the constriction at the bladder outlet. For this reason many surgeons have come to rely again on the advantages offered by the retropubic exposure of the vesical neck (Fig. 6). The goal in this instance is not only a section of the contraction ring, but also a cystorrhaphy to widen the orifice. Dr. Bradford Young has recently re-emphasized the benefits of a vertical incision over the prostatic urethra, extending into the bladder neck. The exposure of bladder and prostatic cavities is thus easily accomplished, a wedge removed from the bladder neck by sharp dissection, the defect covered with mucosa, and, probably the most important step of all, the vertical wound then closed transversely, as might be done in a pyloroplasty. This widens the vesical orifice appreciably and mitigates against recurrence of the original problem.

Hypertrophy of the Vesical Neck

Closely related to vesical-neck contracture is another entity, considered to be rare, but perhaps, in retrospect, far commoner than is presently appreciated. Its clinical course is nicely illustrated by a seven-year-old girl admitted to the University Hospital for consultation. Her referring physician, a competent urologist, had treated her intermittently over a three-year period for recurrent lower-urinary-tract infection. During the initial phase of her investigation, cystoscopy was carried out, and pyelograms were made to rule out factors likely to contribute to the perpetuation of the process. None were found. The bladder was of normal capacity, its wall was smooth, and no residual urine was discovered. The vesical outlet was considered adequate. Three years later, discouraged by the persistent intermittency of this child's cystitis, the same urologist again did cystoscopy and on this occasion founded residual urine of 160 cc. Instead of a smooth-walled bladder, there was now gross trabeculation and a definite increase in total capacity. Pyelograms were still normal. The vesical outlet was considered adequate. Surprised by this obvious change in appearance with the passage of time and with no apparent reason for the change, the physician sought an additional opinion. The admission examination at University Hospital added no other information. There was no measurable neurologic deficit either on cystometry or on detailed neurologic tests. The child carried 160 to 180 cc. of infected residual urine after voiding without appreciable effort. Repeat cystoscopy showed the changes already described. At first glance, the vesical neck appeared quite adequate. However, on further visual evaluation, it seemed as if there might be some encroachment of the outlet laterally and superiorly on withdrawal of the instrument.

Because of these findings, the obvious progression of signs and symptoms, and the fear that continuation would eventually result in involvement of the upper urinary tract, it was decided to expose the vesical neck by the retropubic route. This was done. A vertical incision was made over the bladder outlet and an amazingly thickened musculature encountered, at least 2 cm. in depth. The rest of the bladder by comparison seemed relatively normal or perhaps slightly thickened. Trabeculation was seen. The vertical wound was closed transversely, and a catheter was left in the urethra for ten days as a splint and to accomplish drainage and was then removed, with immediate return to normal urinary function. The patient emptied her bladder without residual urine, and after discharge from the hospital, returned for a check-up examination four weeks later with again no residual urine and, interestingly, no infection, despite the fact that no medication was given at the time of discharge.

Is hypertrophy of the muscle of the vesical neck a congenial obstructive disease, such as is seen in pyloric stenosis, or is the situation seen here a panoramic view of what may occur in many children with recurrent cystitis, namely, infection, irritation, and secondary vesical muscular spasm with partial obstruction, followed by hypertrophy, trabeculation, and then, later, decompensation, and residual urine followed by ureterovesical incompetency with dilatation of the upper urinary tract? Obviously, additional investigation is needed to ascertain the significance of the changes observed in this patient and in others seen under similar circumstances.

Summary and Conclusions

The association of obstructive uropathy with the senescent stage of existence has, unfortunately, led to the supposition that its occurrence in childhood is, by contrast, rare. All evidence points to the contrary. The inarticulate child, the untrained parent, and the unsuspecting physician may

(Continued on Page 1080)

Clinical Significance of Hoarseness

By A. C. Furstenberg, M.D.
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THE laryngologists of today have a comprehensive grasp of the clinical manifestations of laryngeal diseases which, in nearly all instances, are characterized by an altered voice. It remains, therefore, the duty of this professional group to designate the etiological factors, describe the symptomatology, and establish principles of treatment for the common causes of hoarseness in the daily practice of medicine. Any effort on my part to correlate and publish our present-day clinical knowledge of diseases of the larynx would result merely in a repetition of medical history. At the risk of being censored and properly too by those who hold priority rights to original publications, I shall try to cover in a somewhat didactic manner those common diseases of the larynx which come to the attention of the doctor in the general practice of medicine.

Acute Laryngitis

Acute laryngitis, perhaps, is the most common cause of an altered voice. It is frequently preceded by an acute rhinitis or pharyngitis without a rise in temperature or any pronounced symptoms of a general reactive character.

In the laryngeal mirror, one notes a diffuse hyperemia of the laryngeal mucosa with swollen rounded vocal cords which approximate poorly on phonation. Occasionally one observes superficial ulceration of the vocal cords particularly in those individuals who abuse the larynx by incessant conversation or coughing during the acute episode.

There seems to be no specific treatment for an acute laryngitis. The virus of this disease does not seem to be favorably affected by any of the antibiotics or chemotherapeutic agents. The most important therapeutic measure is rest of the larynx. Codeine may be indicated whenever there is an annoying cough which traumatizes the acutely inflamed larynx and adds to the patient's discomfort. The disease runs its course, limits itself, and gets well spontaneously without being influenced to any great extent by any of the specific therapeutic agents now at our disposal.

I should like to state with all the emphasis of which I am capable that any individual who is hoarse for a period longer than two weeks should have a careful laryngeal examination. This is particularly true if he has passed the age of forty. Don't continue to treat a patient for acute laryngitis for an indefinite period. If the process has not resolved spontaneously in ten to fourteen days, there is reason to suspect that the lesion in the larynx is something more formidable than a simple acute inflammatory process.

Chronic Laryngitis

Chronic laryngitis is a prolonged inflammatory process within the laryngeal mucosa frequently observed in individuals who have repeated attacks of acute laryngitis and practice faulty voice production. Thus, we often see it in singers, public speakers, auctioneers, and foremen in factories who shout above the loud noises of machinery. People who have a high degree of nasal obstruction, a chronic nasal accessory sinus disease, or hypertrophied septic tonsils seem to be predisposed to this disorder. The abuse of alcohol and tobacco is undoubtedly a factor in the production of chronic laryngitis in some individuals.

No specific form of treatment seems to be effective in reversing this intralaryngeal condition. Vocal rest, a tonsillectomy when indicated, or relief of nasal obstruction and accessory sinus disease will occasionally result in definite improvement in the condition of the larynx and restore the voice to something that approximates its normal pitch and volume. In the long-standing cases where chronicity has been established in its fullest measure, one often finds an extensive edema of the vocal cords which, in effect, represents a polypoid change over their entire extent. In these patients, surgical interference is most effective. A direct laryngoscopy is performed under general anesthesia and both vocal cords are "scalped." The edematous mucous membrane is carefully peeled from one or both cords, leaving the tunica propria exposed but intact. Epithelial proliferation rapidly occurs bringing the cords more or less to their normal dimensions with a satisfactory restoration of the patient's voice.

This is frequently referred to as stripping or scalping the vocal cords. In those cases of edema

of the cords, with the formation of redundant tissue on their margins, the results of this operation in terms of voice rehabilitation are most gratifying.

Laryngeal Nodules

Vocal or singer's nodules (papillomata of the larynx) are a common cause of hoarseness. They are small fibromata which develop on the margins of the vocal cords due to vocal abuse or misuse. When the latter is practiced in the presence of an acute inflammatory process, these lesions are particularly prone to develop. They are most frequently found at the junction of the anterior and middle thirds of the vocal cords, the site of greatest impact during phonation.

In the laryngeal mirror, one sees the papilloma on the margin of the cord surrounded often with a zone of hyperemic mucous membrane. While these lesions seem small and trivial they nevertheless are frequently responsible for a marked alteration of the voice and excessive fatigue at the close of the day for patients whose occupation calls for the constant use of the voice. It is amazing the degree of exhaustion often observed in patients who have strained all day long to overcome the obstacle of a small papilloma of the larynx in bringing the vocal cords adequately together for audible phonation.

The nodules are easily removed by direct laryngoscopy and a cupped forceps. One must be careful to remove the papilloma without injuring the underlying cornus elasticus. The prognosis for prompt and complete restoration of the voice to normal is usually most favorable in these cases.

Laryngeal Paralysis

The etiological factors responsible for laryngeal paralysis may be central or peripheral in origin. It has frequently been stated that central lesions usually produce a bilateral paralysis of the larynx. While this is probably true, I am convinced that unilateral paralysis of central origin is not an uncommon condition. When both sides of the larynx are paralyzed, phonation and respiration are seriously disturbed and the condition of the patient becomes so grave that the laryngologist is promptly consulted. In the case of a unilateral paralysis, however, there is often but slight impairment of laryngeal function and because the associated neurological disturbances dominate the picture, the slight alteration of voice is considered too trivial to merit investigation. A routine study of many neurological cases over a period of thirty-five years has brought to my attention many examples of unilateral laryngeal paralysis and only a few in which the central disurbance involved the laryngeal nerves on both sides.

Dr. John E. Magielski of our staff has recently prepared a report on 739 cases of laryngeal paralysis examined in the clinic at University Hospital during a twelve-year period between July, 1938, and July, 1950. He has noted that the left cord was paralyzed about twice as often as the right because the nerve supplying the left side of the larynx traverses a much longer course than its counterpart on the right. Bilateral paralysis occurred seventy-nine times.

In the series studied by Magielski, sixty-nine cases were of central origin and 670 were peripheral. The diseases responsible for central paralysis were varied. The more common causes included luetic arteritis, bulbar palsy, developmental deformities of the base of the skull and brain, vascular accidents, tumor, trauma at the base of the skull, syringomyelia, multiple sclerosis, and bulbar poliomyelitis. In this central group, twelve instances of bilateral paralysis were noted, having been caused by progressive bulbar palsy, lues, or poliomyelitis.

Peripheral laryngeal nerve paralysis may be divided into five main groups, mechanical, traumatic, neoplastic, inflammatory, and idiopathic. The first, the mechanical group, implies conditions causing tension in some form upon the laryngeal nerve. Such a factor is evidenced occasionally by heart disease, pulmonary tuberculosis, aneurysm of the aorta, and right subclavian artery, and benign tumors of the thyroid gland. A common lesion of the heart which produces laryngeal paralysis is advanced rheumatic heart disease with mitral stenosis and left auricular enlargement causing the left pulmonary artery to compress the nerve against the aortic arch, adjacent lymph nodes, and ligamentum arteriosum. Two cases of hypertensive heart disease, one arteriosclerotic, and the other pericardial effusion, were responsible for paralysis in patients seen in our clinic. Cardiovascular lues was found in eighteen instances, all male and all unilateral. In this group, the left cord was involved fifteen times and the right three, the latter due to involvement of the ascending aorta in two patients and the right subclavian artery in one. Benign thyro-adenoma was the cause

of laryngeal paralysis in seventeen patients, both sides involved equally, but predominantly in the female, fourteen to three. In one instance, diffuse toxic goiter was the offender. The remainder of the group comprised deep neck infections, irradiation pneumonitis and vascular anomalies within the chest. The cases due to tuberculosis revealed the left cord more frequently involved whether parenchymal or apical scarring was the responsible lesion.

The traumatic group which comprised the greatest number of cases included surgical and non-surgical injuries to the nerve. Surgical injuries involved 323 cases of which thyroidectomy was responsible 300 times. The right and left nerves were affected about equally. The remaining twenty-three surgical injuries were caused by operations upon the chest, mediastinum, and various neck procedures for tumors and the drainage of abscesses.

Neoplastic causes for laryngeal paralysis were next in frequency. These in order of incidence were bronchogenic carcinoma, seventy-nine; metastatic carcinoma of the neck and chest, thirty-four; mediastinal tumors, twenty-seven; carcinoma of the thyroid, twenty-five; carcinoma of the esophagus, eighteen; and two carcinomas of the trachea. The left recurrent laryngeal nerve was more frequently involved in this group. The long intrathoracic course of the left nerve obviously makes it the site of predilection for neoplastic invasion. Vocal cord paralysis due to metastatic carcinoma were twice as frequent in the female as in the male. The primary tumors responsible were most often in the breast or pelvis. Carcinoma of the thyroid gland produced paralysis in twenty-five cases.

Inflammatory or toxic neuritis as a cause of paralysis was found in twelve cases, none bilateral. The left side seemed to be favored again, there being eight cases on the left and four on the right. These cases were classified as inflammatory or toxic because no specific cause for the disorder could be found other than an acute infection of some type occurring with the onset of the paralysis. These conditions were variously diagnosed as influenza, upper respiratory tract infection, cold or virus infection, occurring with or just immediately before the paralysis.

The group of patients in whom no cause could be found for the paralysis was classified as idiopathic. These comprised a total of fifty-eight cases, with thirty-three left-sided paralysis, twenty-four right, and one bilateral. The male was affected more often than the female. Three patients classified as idiopathic subsequently revealed the cause of their paralysis. One developed a generalized carcinomatosis and two others later disclosed clinical evidence of bronchogenic carcinoma. Instances of this character emphasize the need of thoroughness in the initial examination of a patient with laryngeal paralysis; a complete general medical survey, radiographic study of the neck and chest, endoscopy, and close observation for an extended period of time before the category of idiopathic is used.

Dr. Magielski's study of 739 cases of laryngeal paralysis indicated that the most common cause of this disorder was surgical trauma; thyroidectomy was by far the most common surgical procedure responsible for injury of the laryngeal nerves.

While laryngeal paralysis usually causes hoarseness, it is often astonishing to note how slightly the voice is altered by a unilateral paralysis. Some authors report that 25 to 30 per cent of these patients are asymptomatic. In a number of instances, however, the hoarseness is most marked and remains a constant source of embarrassment to those individuals whose vocations call for a great deal of conversation. In many patients over a period of time, the normal cord will compensate for the paralyzed one to the extent that phonation is altered but slightly or not at all.

To date, no one has been successful in obtaining a regeneration of the recurrent laryngeal nerve with restoration of the function of the cord by end to end anastomoses or a nerve implant. The nerve is small, its sheath thin, and its protection by adipose tissue minimal. There are other factors, however, responsible for our failure to obtain satisfactory regeneration of this nerve with which we are becoming more familiar through daily laboratory investigation. It would seem that some of them may be successfully overcome in the near future.

Cancer of the Larynx

In a discussion of laryngeal cancer, one must emphasize the importance of hoarseness; that it is an early symptom if the lesion involves the true vocal cords; that it may be a late manifestation if the cancer is in the ventricles or extrinsic on

the aryepiglottic folds, the superior surface of the ventricular bands or the epiglottis.

Grossly, cancer of the larynx manifests itself in so many different forms that any attempt to describe them would not establish specific entities and afford reliable data for diagnosis. Long ago we learned that a diagnosis of cancer cannot be made with certainty from the gross appearance of the lesion. However, experience has taught that the anterior two-thirds of the vocal cords is the area upon which carcinoma of the larynx is most frequently observed, that it may be hidden within the ventricles and remain unrecognized for a considerable time, but that it is seldom seen as a lesion in the posterior commissure.

It would be a simple matter to complete this discussion of cancer of the larynx by quoting from the books; but obviously this would offer nothing that you do not already know or cannot easily acquire from available texts. Unless book knowledge can be related to experience, it is a desultory form of instruction and offers the student nothing more than he can gain by his own initiative. If you will bear with me then, I should like to deal with that mysterious thing we call the clinical behavior of cancer.

Clinical behavior, while enigmatic and puzzling, must nevertheless challenge our constant interest and close study. It must not be overlooked in the final determination of the therapeutic procedures to be employed. At best the treatment of cancer is major and formidable. A decision as to when it is to be instituted is a responsibility always to be accepted with serious concern.

In our clinic we are consulted frequently by a patient who complains of an altered voice and presents some relatively minor and nondescript lesion of the larynx which is ill-defined and unclassifiable. It is not a typical papilloma, the edematous polypoid change of a chronic laryngitis, nor a definite constructive process with ulceration which would make its identity something more than speculation. Yet it is an obvious pathologic change characterized, somewhat vaguely, by thickening and irregularity of one or both cords with other changes not easily definable. A conference of laryngologists is held. One individual notes a hyperemia and exfoliation of epithelium and ventures a diagnosis of keratosis. Another describes a whitish area and expresses the belief that it is a leukoplakia. A third person, perhaps, calls it a chronic laryngitis, and then may follow a long list of possibilities in that broad range of questionable entities from pachydermia to scleroma. Finally comes the statement which has been withheld throughout this conference that a biopsy has been performed and that the diagnosis is squamous cell carcinoma. Everyone had the lurking suspicion that the lesion was at least precancerous, but no one saw enough characteristic changes to risk a diagnosis of malignant disease. Now comes the consummate answer, cancer.

Treatment is then the next concern. If one vocal cord is involved, laryngo-fissure may be advised; if both cords are affected, laryngectomy obviously must be considered; or on the side of conseravtism, roentgenographic therapy may be recommended. All methods of treatment are not without morbidity.

Come now to the frank gist of this discussion. Should we accept without equivocation a pathologic diagnosis of a lesion of the larynx in which the clinical diagnosis is so obscure? Should we act promptly and with finality on the basis that a pathologic report is infallible? I, for one, am reluctant to do so, particularly in those instances when the pathologic description and diagnosis are couched in terms which leave some question as to the pathologist's own convictions in the matter. The pathologist is an honest man but he is also human. If there is an uncertainty in his mind, he will express it. No one questions his unimpeachable integrity but there comes a time with him, as there does with all of us, when that margin between doubt and conviction is so narrow that a decision one way or the other is not an error of commission.

And so I make this earnest plea. Do not hasten to perform major operations upon the larynx for obscure lesions whose diagnosis is highly questionable from what you note in the history and see in the larynx. There need be no apprehension about taking a little time for clinical studies and deliberation. The lesion to which reference is made will identify itself by its behavior in due time, and, I am confident, also before it reaches a stage when it is out of hand. Perhaps you will wish to do another biopsy and in so doing, it might be well to strip the entire cord. I am confident, even without the proof of controls, that early carcinoma of the larynx has been cured by this conservative procedure.

It is only natural that these statements should provoke argument. Some of you will ask, what are the dangers of delay? The error of omission must be admitted but will be reduced to the minimum if the patient can be kept under close observation and critical study made of the clinical manifestations of his laryngeal disease. Conservative therapy may be utilized during this interval. Stripping the vocal cords has already been suggested. Voice rest and specific treatment may be employed if it is suspected that an inflammatory process is the underlying cause of the lesion. Consultation with men of wider laryngeal experience is a commendable procedure and evidence of a conscientious interest in the patient. To those who have misgivings concerning the preachment of this philosophy, I can only say that my files of the past thirty years contain too many records of patients who have been advised to have radical laryngeal operations because of positive pathologic reports of clinically unidentifiable lesions of the type described. These patients were not treated surgically or with irradiation and are alive after many years with larynges intact or have died of old age. While we must not err on the side of conservatism, I am convinced that often too little attention is given to the clinical behavior of laryngeal disease and too much value placed upon the pathologic diagnosis of the lesion. The result is obvious—radical therapy of doubtful need.

There remains, however, another important diagnostic aspect of carcinoma of the larynx, namely, our failure occasionally to get representative tissue on biopsy from a lesion which has all the gross characteristic clinical features of a carcinoma. We see a constructive process within the larynx. It is ulcerated and perhaps infiltrated deeply enough to have caused immobilization of one or both cords. By every clinical rule, it conforms to a malignant lesion. Yet one, two, three or more biopsies fail to give us the pathologic picture which we anticipate. Here we must not be dismayed. I have taken as many as five biopsies from a lesion before its true identity was revealed. One of my colleagues, an experienced and highly skillful laryngologist, tells me that a lesion under his scrutiny did not give up its identity until the seventh biopsy had been performed. Thus we have the other side of the picture. A lesion which because of its clinical appearance and behavior is obviously a cancer, yet its true significance may be overlooked were one to rely solely upon the first, second, or even the sixth biopsy report.

Differential Diagnosis

It would be a waste of your time to discuss the laryngeal triad and to reiterate what has been said over and over again in regard to the differential diagnosis of cancer, tuberculosis, and syphilis. In this modern era of laryngology, no one is any longer in the dark as to the criteria which establish the identity of these diseases. Laryngeal tuberculosis is invariably secondary to an advanced pulmonary tuberculosis while laryngeal syphilis is rightfully suspected when there is a history of infection, evidence of tertiary lues elsewhere in the body, and a positive serological test. A therapeutic test may be tried in suspected laryngeal syphilis when other evidence, including a positive serological test, is discovered. One must always recognize the possibility of the co-existence of two or even three of the lesions of the triad. Some time ago, a patient in our clinic with an extensive lesion of the larynx was discovered to be the victim of the complete triad, cancer, tuberculosis and tertiary syphilis.

Conclusions

1. Chronic laryngitis and papilloma of the larynx are common causes of hoarseness. The former is manifested by thickened, hyperemic vocal cords without ulceration but frequently involved in an edematous change of the character of polypoid degeneration. Vocal rest may be effective in some of these patients. In others, direct laryngoscopy and scalping of the cords is a most satisfactory therapeutic measure.

The laryngeal papilloma or nodule is quickly identified in the reflected image of the larynx in the mirror. Surgical removal is the only satisfactory method for its removal.

2. Laryngeal paralysis which usually produces some degree of hoarseness can occur as the result of pathologic conditions along the course of the recurrent laryngeal nerves, centrally or peripherally; at their cells of origin in the nucleus ambiguus of the medulla or along the corticobulbar fibers which carry motor impulses to the lower motor neurons which supply the larynx. In

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Hypothyroidism, a Dangerous Disease

By Nelson Taylor, M.D., Myer Teitelbaum, M.D., and Ichiro Tokuyama, M.D.
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HYPOTHYROIDISM is probably the cheapest and easiest disease to treat, a tablet or two before breakfast and the results are often dramatic. Diagnosis, too, is frequently very simple, with the classical features of increasing apathy, somnolence, morning fatigability, cold intolerance, dry skin, and constipation.

While the obvious case is the rule, the obscure one presents a challenge which is most gratifying to meet and to correct. The benefits to the patient, too, are far out of proportion to the ease of therapy.

Symptoms

In addition to the common symptoms mentioned above, there may be a gradually developing loss of memory, deafness and labyrinthine vertigo. Occasionally the apathy may be so profound that psychosis is considered and the patient referred for psychiatric care. Instead of the customary indifference, a paradoxical appearance of hyperactivity may obscure the problem as the patient attempts to compensate for the decreased efficiency by greater drive resulting in "nervousness" and irritability.

Joint pains with muscle stiffness may also be noted. The hair is usually dry but may be either coarse or fine, is scant and falls out readily. The beautician may be blamed because a permanent wave does not take well.

Dyspnea may be mentioned, particularly if the patient is obese which is true in about 60 per cent of the cases.[5] There may also be angina pectoris and peripheral edema.

Vague gastrointestinal symptoms occur which include dysphagia, a sense of fullness after meals, anorexia and yet a tendency to weight gain associated with the customary constipation.

Variations in the menstrual cycle may range from amenorrhea to menorrhagia. Libido and potentia may be reduced, infertility is common and if fertilization does occur the pregnancy may not be carried to completion.

Physical Findings

Upon physical examination of the well-established hypothyroid, the apathy, and mental torpor are outstanding, movements are slow and often awkward. The patient responds slowly to questions and to instructions but usually is cooperative in a dull, listless manner with notable lack of affect.

Skin changes in association with hypothyroidism are many, but the ones usually considered characteristic are the cool temperature, dryness, coarse texture and subdermal thickening; thick and scaly skin may actually be a manifestation of vitamin B complex (niacin?) deficiency. Abnormal pigmentation may be patchy and areas of atopic eczema and xanthomatosis are not uncommon. Carotenemia may be apparent, particularly on the plantar surfaces. Finger nails usually grow slowly, are thick and break readily.

Scalp hair is often dry and brittle with patches of alopecia. The outer thirds of the eyebrows are frequently thinned, axillary and pubic hair may be sparse and in men the beard may be reduced. Some of these changes doubtless are due to vitamin A deficiency secondary to impaired hepatic conversion of carotene.

Puffiness about the eyes is common and in cases of long standing thyroid deficiency, sclerotic changes of the retinal vessels are apparent. Impaired hearing may also occur. A thick, swollen tongue is frequently described, but this sign is not particularly reliable. However, hoarseness of the voice with thickened vocal chords are characteristic findings.

The thyroid gland may be absent such as is the situation in postthyroidectomy myxedema. The structure may be atrophic, normal size or there may be a large nodular gland and occasionally the hard ligneous mass of Riedel's struma may be present.

The heart may be enlarged and not infrequently pericardial effusion can be demonstrated clinically. Arteriosclerosis is common in established hypothyroidism, and this, associated with the often concomitant vitamin B deficiency, may account for the occasional irreversible heart failure. Coronary arteriosclerosis[2] is statistically increased. There is usually a bradycardia but arterial hypertension occurs in about half the cases.

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The respiratory system is usually not clinically altered nor are there major changes in the abdomen or genitalia except for sparseness of pubic hair.

The gait is usually slow, deliberate and may be clumsy. Deep tendon reflexes are occasionally hypoactive, but one significant finding is a slow return of the Achilles tendon reflex.[1]

A major consideration in hypothyroid patients is the marked sensitivity to hypnotics and sedatives. Caution must be exercised in this respect if the patient should require surgery.

Laboratory Findings

Many tests have been utilized to aid in the diagnosis of thyroid dysfunction and currently there is considerable discussion relative to the merits of at least three. The basal metabolic rate is still the most generally available and when supervised and calculated by a careful, capable technician it can be a most valuable test. Radioiodine (I^{131}) uptake studies when radioisotope facilities can be utilized may eventually become the screening method of choice while further modification of the protein bound iodine (PBI) determination may make this a general laboratory procedure. However, none of these tests will supplant the others since each in a rather gross fashion measures a different function.

I^{131} uptake studies measure the ability of the thyroid to trap iodine; PBI is an approximation of the circulating thyroid hormone while the BMR is an estimation of end organ response. Determinations of serum cholesterol are reportedly elevated in 90 per cent of hypothyroids[7] but actually there is more value in following serial determinations during therapy than in utilization of serum cholesterol as a diagnostic aid. The electrocardiogram may give a clue to otherwise unsuspected hypothyroidism when there is low voltage, low QRS complexes, and low or flat T waves.

Problems in differential diagnosis are not uncommon, particularly with regard to obesity, senility and chronic nephritis. The most difficult problem, however occurs with the differentiation between primary and so-called pituitary myxedema occurring in the hypopituitarism of Simond's disease or Sheehan's syndrome. This differentiation is vital to insure proper management of the myxedema in panhypopituitarism. Here the secondary adrenal failure must be corrected before the patient receives desiccated thyroid. If this sequence is not followed, adrenal crisis may be provoked.

History and physical examination do not always clearly delineate the picture so that laboratory aids are frequently necessary. In primary hypothyroidism urinary gonadotropins may be low, normal or absent. The determinations of 17-ketosteroids have proved to be most valuable as they are extremely low in cases of myxedema secondary to pituitary failure and usually only slightly depressed in primary thyroid deficiency. The most important aid, however, is radioiodine uptake before and after the administration of thyrotropin (TSH). In primary hypothyroidism the thyroid gland is not capable of responding to stimulation and thus the administration of TSH results in no appreciable increase in I^{131} uptake. Conversely, even in longstanding panhypopituitarism TSH administration will elevate radioiodine uptake levels to euthyroid range.

A corollary to this has recently been reported by Schneeberg, et al.[6] They feel that thyrotropin may be used to establish the diagnosis of primary hypothyroidism with more assurance than in the identification of hypothyroidism due to pituitary failure.

Therapy

The therapy of uncomplicated mild primary hypothyroidism may be started with a dosage of desiccated thyroid which can usually be well tolerated, 0.032 gm. (½ gr.). After intervals of four to six weeks this may be increased by multiples of the initial dose until the patient becomes euthyroid or symptoms of hyperthyroidism supervene. When the latter situation occurs the dose is then reduced to the preceding asymptomatic level. *The patient should then be cautioned never to discontinue therapy unless advised to do so by a physician* and should be followed thereafter for recurring evidences of thyroid deficiency. There is at present no established indication for the clinical use of thyroxin or the more recently available preparation, triiodothyronine.

Usually the management of hypothyroidism from diagnosis through control is remarkably simple and gratifyingly effective. However, one of the dangers has already been mentioned in the use of thyroid therapy before a hypopituitary patient has been adequately protected by adrenocortical therapy. Other dangers are inherent in

too aggressive therapy in the aged or longstanding primary hypothyroid. Doses of desiccated thyroid in the range of 0.006 gm. (1/10 gr.) to 0.008 gm. (⅛ gr.) should be used initially and increased with extreme caution in order to avoid anginal episodes or even myocardial infarction. Mental aberrations have been reported[3] including acute psychoses.

But while these dangers are quite generally appreciated, the greatest hazard lies in the neglected mild case whose arterial system gradually develops sclerotic changes and who quietly retrogresses into a hapless vegetative existence. Too often the diagnosis is made too late to alter irreversible changes or therapy is inadvertently discontinued to be followed by insiduous recurrence of myxedematous effects.

Case Reports

Five recent fatal cases* will serve to illustrate the extremes of these hazards.

Case 1.—This sixty-seven-year-old white woman was admitted to hospital with severe shortness of breath and cough productive of yellow sputum. The patient was obese, disoriented, dyspneic and orthopneic with moderate left ventricular hypertrophy; the voice was low, croaking and the skin and hair were typical of hypothyroidism. Thirty years previously thyroidectomy had been performed and desiccated thyroid therapy had been inconstant. Active cardiac and antibiotic regimens were unable to correct the congestive failure and pneumonia. The patient expired seven days after admission. No thyroid therapy was used.

Case 2.—This sixty-eight-year-old white man was a known severe myxedematous patient for many years. It was established that a severe degree of atherosclerosis had developed and his resistance to infection was poor. Death was brought about by severe renal and cardiac failure with superimposed pneumonitis and multiple pulmonary infarcts which were the result of emboli from the right atrium of the heart. It is probable that the myocardium would have held up longer had it not been for the presence of numerous old myocardial infarctions and the mucoid degeneration characteristic of myxedema. The patient received thyroid therapy in cautiously increased doses for two months preceding death.

The following are the combined anatomic and histologic diagnoses:

1. Pyelonephritis, chronic with hydronephrosis:
   (a) Uremia (clinical).
   (b) Pericarditis, fibrinous.
   (c) Cystitis, hemorrhagic.
2. Thyroid—atrophy and fibrosis:
   (a) Myxedema, clinical.
   (b) Hypertrophy and dilatation, myocardium.
   (c) Fibrosis, myocardium.
   (d) Degeneration, mucoid, slight, myocardium.
   (e) Mural thrombosis, right auricle.
   (f) Thrombosis, right coronary artery, old.
   (g) Infarction, pulmonary.
   (h) Atherosclerosis, generalized.
3. Pneumonitis, right lower lobe, middle lobe and left lower lobe.
4. Cholecystitis with lithiasis.
5. Hernia, umbilical and inguinal.

Case 3.—This fifty-three-year-old white female cretin was admitted in acute congestive failure. Desiccated thyroid 8 mg. and later thyroxin 0.05 mg. combined with intensive cardiac therapy failed to alter the downhill course. The patient quietly expired on the tenth hospital day.

Case 4.—This fifty-four-year-old white woman was admitted following the onset of severe crushing retrosternal pain. She received customary therapy for myocardial infarction for the first two weeks and then desiccated thyroid 8 mg. daily was administered with no alteration in the gradual downhill course and the patient expired on the forty-fifth hospital day. The final diagnoses were:

1. Arteriosclerotic cardiovascular disease.
2. Coronary arteriosclerosis, severe with recent thrombosis.
3. Myocardial infarction, recent, massive.
4. Mural thrombi, left ventricle and auricle, and right ventricle.
5. Pulmonary embolism with infarction.
6. Pneumonitis, bilateral.
7. Atrophic thyroid—myxedema.

Case 5.—This fifty-seven-year-old white man was hospitalized because of severe congestive failure. He was known to have used desiccated thyroid for hypothroidism for three years. The dose was 0.032 gm. (½ gr.) daily but was taken irregularly and none had been taken for at least six weeks previous to radioiodine tracer studies. The uptake of I^{131} was 14 per cent in twenty-four hours and after three days of thyrotropin, 30 mg. daily, the uptake was only increased to 16 per cent indicating primary hypothyroidism.

Cardiac catheterization revealed significant increase of the pulmonary artery systolic and right ventricular systolic pressures. Oxygen saturation of brachial artery blood was much lower than normal.

The patient improved with digitalization and diuresis and was discharged on a dose of 0.008 gm. (⅛ gr.) desiccated thyroid daily. Because of the persistence of marked hypothyroid symptoms the amount was increased to 0.016 gm. (¼ gr.) daily but congestive failure recurred. The patient was readmitted but vigorous cardiac therapy was ineffective and the patient expired on the fourth hospital day in one of several Stokes-Adams attacks. The final diagnoses were:

*These are brief summaries of cases studied in detail by the authors, Doctors William Maddock, Alvin Paulsen and other members of the teaching staff at Wayne University College of Medicine and Detroit Receiving Hospital.

1. Arteriosclerosis, generalized.
2. Arteriosclerotic heart disease.
3. Hypothyroidism.

All of these cases represent instances of primary hypothyroidism which were untreated or inadequately treated and eventuated in well advanced arteriosclerosis directly contributing to death.

This evidence of self-neglect may be contrasted with the other extreme of thyroid administration somewhat indiscriminately to the aging group.[4] The reasonable approach would appear to be that of assiduous search for all patients with hypothyroidism and then *emphasis on the importance of continuing therapy.*

Comment

A review of major symptoms and signs in hypothyroidism has been presented with emphasis on the common features of apathy, somnolence, morning fatigability, cold intolerance, constipation, cool, dry skin, bradycardia, and slow return of Achilles tendon reflex. Interesting added findings may be the thick, dry, scaly skin which responds to vitamin B complex therapy alone emphasizing the need for this treatment concomitantly. The dry, brittle hair which falls out readily may also be a vitamin A lack due to impaired hepatic conversion of carotene.

Laboratory diagnostic aids include the generally available basal metabolic rate which is still an extremely valuable test when capably, conscientiously and quietly performed. Protein bound iodine determinations still present technical problems and there are insufficient radioisotope laboratories to make radioiodine uptake and conversion studies generally available. However, when all three can be utilized they complement each other in measuring different functions related to the thyroid. Serum cholesterol determinations, usually elevated in hypothyroidism, are helpful in following therapy.

The most important diagnostic differentiation is from the myxedema associated with hypopituitarism. The use of radioiodine uptake studies before and after thyrotropin stimulation is the key in this problem.

Treatment with desiccated thyroid is usually very simple but can represent a major hazard with a too aggressive therapeutic program. Another major hazard is the progressive development of arteriosclerosis in the untreated or inadequately treated hypothyroid. Thus, discontinued treatment or the neglected mild case may well represent the major hazards in hypothyroidism. Brief summaries of five fatal cases emphasize these dangers.

Conclusions

The major hazards involved in the management of hypothyroidism are:

1. The neglected mild case.
2. Unwarranted discontinuance of therapy.
3. Too aggressive therapy in the presence of arteriosclerosis.

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OBSTRUCTIVE UROPATHY IN CHILDHOOD

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inadvertently allow perpetuation of this error. The child whose micturitional habits are characterized by hesitancy, infrequency, and a poor stream productive of small volumes of urine, or the child who is beset by enuresis, or who may be the victim of recurrent urinary-tract infection, while not necessarily possessed of obstructive disease of the lower urinary tract, is at least a candidate for investigation to rule it out.

A plea is made for physicians to include in their instructions to the parents of newborn children information regarding the need for observance of micturitional behavior. When this is not normal, an early investigation should be advised.

Experiences with Metacortandracin (Meticorten) in Severe Bronchial Asthma

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THE clinical usefulness of corticosteroids (cortisone, hydrocortisone) and corticotropins in the symptomatic control of severe bronchial asthma has been well established.[1,6] The severe side effects related to the metabolic influence of these substances frequently necessitate their withdrawal or a reduction in dosage below therapeutic effectiveness. Therefore, any steroid which would effectively control the asthmatic paroxysms without producing serious side reactions would be desirable.

Bunim, Pechet and Ballet,[5] working with two new synthetic steroids—metacortandracin* and metacortrandralone—observed that these steroids possessed the physiological activity of an adrenal cortical hormone. Furthermore, they demonstrated that these drugs were several times more potent than cortisone or hydrocortisone as anti-rheumatic and anti-inflammatory agents, and that the undesirable side effects were less frequent and less severe. Because of the profound anti-inflammatory effect of these agents it would seem logical that they would be useful in a control of allergic disorders, especially bronchial asthma. Preliminary reports by Arbesman,[2] Skaggs et al,[10] Schwartz,[8] Rose,[7] Barach,[3] Brown,[4] and Sheldon[9] would suggest that these delta derivatives of cortisone and hydrocortisone are effective agents in the symptomatic control of severe asthma, and furthermore that they do not carry the degree of risk of undesirable reactions observed with other steroids.

The purpose of this paper is to present our experiences and observations on a group of fifty-one patients with severe asthma who have responded poorly to other accepted methods of therapy. We shall also detail the metabolic studies on fifteen patients that have been observed for the longest period of time. The entire group consisted of twenty-six females and twenty-five males varying in age from eight years to seventy-one years. Cases selected are rather unusual in that eleven of them are known "aspirin-sensitive" patients, without other etiological triggers, and twenty-three of the subjects were diagnosed as infectious (intrinsic bacterial) asthma. The remaining seventeen cases were of the mixed type, or due to extrinsic protein sensitivity. The duration of the asthma varied from five months to twenty-four years.

Thirty-six of the patients had previously received cortisone, hydrocortisone or corticotropin, and eleven of this group had taken a daily dose of 75 to 200 mg. of cortisone continuously for a period of from three months to three and one-half years previous to transfer to Meticorten. Initial observations on in-patients, or approximately one-third of the patients, were obtained for a period of eight to twenty-one days, while the remainder of cases were observed at weekly intervals as out-patients.

In all of our hospital cases daily blood pressure determinations were recorded; patients were weighed each morning before breakfast; total eosinophil counts and vital capacity determinations were recorded daily; twenty-four-hour urinary 17-ketosteroid determinations were made before and at varying intervals after the administration of Meticorten; a routine urinalysis was made each week and the chest was examined each day. Upon discharge these studies were repeated at weekly intervals. A similar investigation was carried out in all cases managed as out-patients. Three of the patients initially had sodium restricted to 800 milligrams daily for a period of five days, and then these patients were permitted to have salt freely in the diet. The remaining cases were permitted a general diet without potassium supplement except that some patients were taking potassium iodide as an expectorant. Bronchial dilators were continued if they were being administered previous to Meticorten.

We have had an opportunity to observe the individual patients for a period of from twenty-four to 191 days. The initial dosage of Meticorten consisted of divided doses of 25 milligrams daily in forty-six instances and 35 milligrams in five patients. When maximum improvement with complete asthmatic control occurred, the Meticorten dosage was reduced by 5 milligrams per

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*This drug, under the name Meticorten, was supplied through the courtesy of the Schering Corporation, Bloomfield, N. J. It is also known as Prednisone and is commercially available under other trade names.

day, the reduction occurring at three to four-day intervals until a minimum daily maintenance dosage was established. Complete withdrawal of Meticorten has been possible in only three patients. In one patient an interval of eighty-six days has elapsed without a recurrence of her asthma, although there has been a slight (300 cc.) reduction in her vital capacity. The other two patients have remained well for about two months since withdrawal of Merticorten. One patient's minimal daily requirement was found to be 2.5 milligrams every twelve hours, four patients required 25 milligrams in divided doses, while the majority remained asymptomatic on five milligrams every twelve hours.

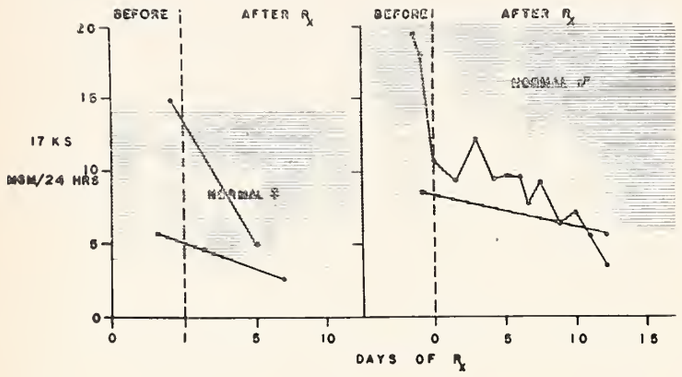


Fig. 1. Graph showing the typical response of the twenty-four-hour urinary 17-ketosteroids obtained on patients V.S., P.M., H.H. and P.F. before and after Meticorten therapy.

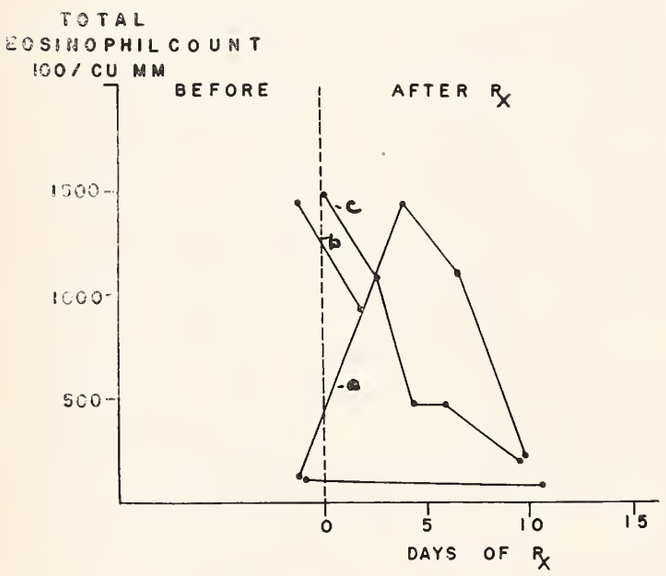


Fig. 3. A. An example of the temporary rise in circulating eosinophils observed following withdrawal of cortisone, hydrocortisone or corticotropin even though Meticorten has been immediately substituted. Lines B and C on graph represent the usual eosinophil response to Meticorten.

In fifteen cases 24-hour urinary 17-ketosteroid determinations were made before and during the administration of Meticorten. A marked reduction of ketosteroid value was observed in all instances (Fig. 1).

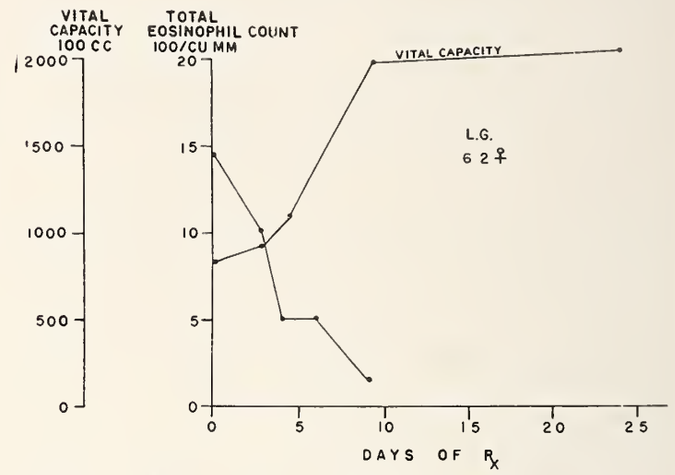


Fig. 2. Data on total peripheral circulating eosinophilia and vital capacity gathered on patient L.G. This is a typical example of the results obtained on other patients.

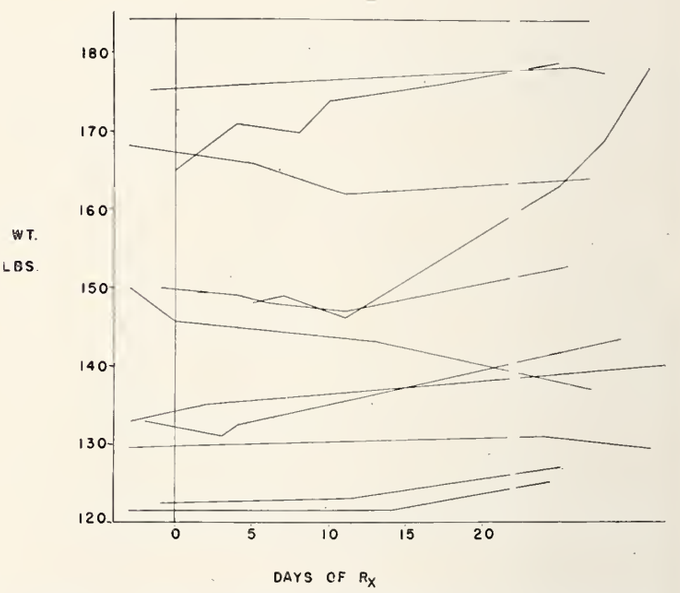


Fig. 4. Graph showing examples of the actual weights of patients while on Meticorten therapy.

In fifteen patients a definite fall in the total eosinophil level occurred (Fig. 2), although one patient who had previuosly received 150 milligrams of cortisone daily experienced a rise (Fig. 3) to 1,100 eosinophils per cubic millimeter upon changing to Meticorten; but when Meticorten had been administered for six days (35 milligrams daily) there was a definite eosinopenia. Weight gain was usually observed and varied from 1 to 22 pounds (Fig. 4). It was thought that the

gain in weight was a reflection of the improvement of the general health of the patient associated with an increased appetite, rather than a water and electrolyte effect of Meticorten. In two of the patients there has been an elevation in both the systolic (20 millimeters of mercury) and diastolic (10 millimeters of mercury) blood pressure. Four patients have failed to show changes in serum potassium, serum sodium and CO_2 combining power following 25 milligrams of Meticorten daily for seven days. Tibial edema has not been observed.

In the way of side effects or untoward reactions we have observed moon facies in eighteen instances. However, one patient with marked mooning and other features of Cushing's syndrome completely reverted to normal after transferral to Meticorten. In two cases insomnia was extremely bothersome; two patients developed gastrointestinal symptoms necessitating temporary discontinuance of Meticorten. Gastrointestinal x-ray studies were negative and Meticorten was reinstituted without return of symptoms.

Subjective improvement usually was observed within eighteen to forty-eight hours after starting Meticorten. However, satisfactory control of the respiratory embarrassment often did not occur until after three to four days of therapy, and maximum improvement as measured by timed vital capacity or M.B.C. usually did not occur until the drug was given for five to seven days. These observations regarding the time required for clinical control are somewhat different from other reports but perhaps may be explained on the basis of smaller initial dosages of Meticorten used by us.

In eleven patients receiving 75 to 200 mg. of cortisone daily and uncontrolled so far as asthma and undesirable metabolic effects were concerned, we were able to substitute Meticorten for the cortisone and satisfactorily control the asthma both from the objective and subjective viewpoint. Furthermore, this group of cases either improved so far as the undesirable metabolic effects were concerned or the side effects were completely obliterated. Figure 5 illustrates the objective data obtained on one of these eleven patients. The improvement in vital capacity is similar to that observed in all of the asthmatics although the degree of improvement varied.

Of the fifty-one patients studied, fifty were completely relieved of asthma provided the dosage of Meticorten was continued at the level required for the individual patient.

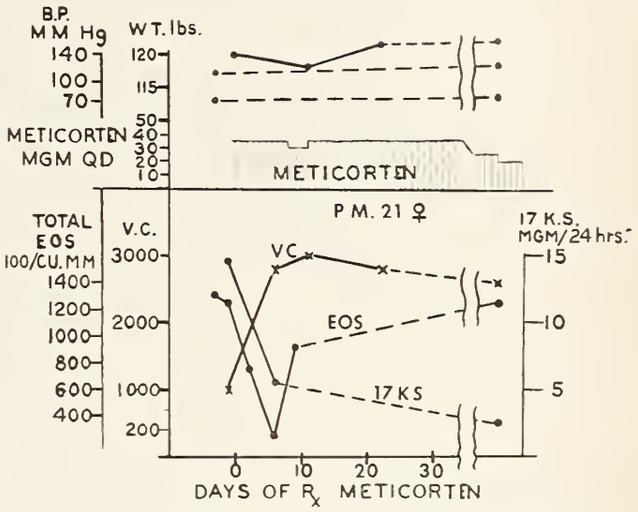


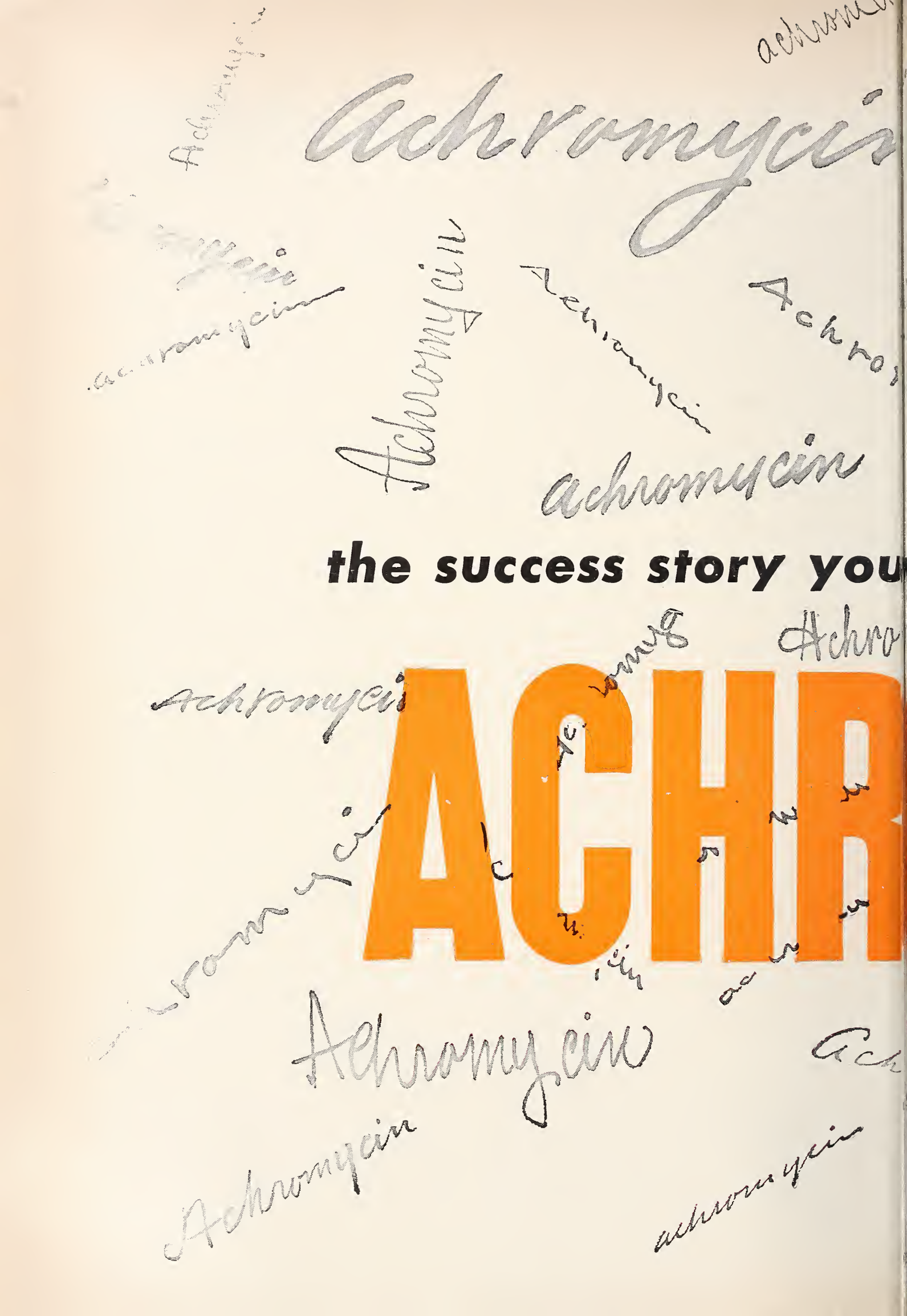
Fig. 5. Represents the type of study carried out on the majority of patients. The vital capacity, peripheral eosinophilia counts, and twenty-four-hour-urinary ketosteroid determinations are those typically observed.

Summary and Conclusions

Our experience with metacortandracin (Meticorten) in fifty-one severe bronchial asthmatic patients shows it to be a very potent drug for the temporary, symptomatic relief of bronchial asthma. In all but one instance satisfactory clinical control has occurred over the period of observation. However, as is the case with other steroids, relapse has been the usual experience when the drug is withdrawn. Hence, metacortandracin is not a substitute for specific etiologic management of the asthmatic patient. We have observed, however, a number of instances where this drug proved to be more satisfactory than other steroids or adrenocorticotrophic hormone in providing symptomatic relief of severe bronchial asthma. Undesirable side effects appear to be less frequent than with other hormones and dietary restriction has not been necessary with the low dosages employed by us. The period of observation is far too short and the number of patients observed is too few to permit final conclusions, particularly in regard to possible side effects from prolonged treatment.

Since preparation of this manuscript we have had an opportunity to substitute metacortandralone (Meticortelone) for metacortandracin (Meticorten) in seven patients. It would appear that

(Continued on Page 1093)


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Glandular Type Exophthalmos

By A. D. Ruedemann, M.D.

Detroit, Michigan

EXOPHTHALMOS, or proptosis, presents an exhausting study in differential diagnosis and when one uses all the knowledge now available, it still presents a most difficult problem. The first question is: is it a true exophthalmos or merely an edema of the lids? Edema of the lids is caused mainly by three conditions, the first of which is hypometabolism, the second is allergy and the third is hypertension. True lid edema is much more common than is exophthalmos and should be definitely ruled out before one puts the patient through studies for the cause of protruding eyes. When one can prove that it is an exophthalmos associated with the lid edema then two main questions present themselves. First, is it a bilateral exophthalmos or is it a unilateral exophthalmos? If it is a bilateral exophthalmos, it is usually due to some general condition such as hypermetabolism and/or hypometabolism, some general allergic state, or hypertension with orbital edema and associated hypermetabolism.

In general, one can exclude the glandular exophthalmos cases if only one eye is involved. Occasionally, however, one must take into consideration the fact that the one eye may protrude earlier than the other, or more than the other, and the exophthalmos be unequal rather than unilateral. As one reasons further in regard to the cause of the exophthalmos, the anatomical-physiological changes must be considered. First, is the exophthalmos due to a diminution in size of the orbit, or is it due to an increase in orbital volume, or thirdly, is there a combination of the two? Intracranial lesions do not as a rule produce exophthalmos unless they invade the orbit or cause pressure on the cavernous sinus or some other obstruction to the venous outflow. By far, the most cases of exophthalmos are produced by increase in orbital volume. This is usually brought about by increase in fluid volume within the orbit and not by increase in a true orbital tissue, except in the cases of new orbital growth.

The diagnosis of exophthalmos is produced by exclusion of all possible factors. Every available means at the physician's command must be used to make the definite diagnosis, and certainly no surgical interference should be attempted before one is positive or as near positive as can be in regard to the diagnosis. One does not explore the orbit unless it becomes absolutely necessary to protect the eye against loss.

The patients that we are discussing here, with so-called glandular exophthalmos, have a peculiar pathological physiology of the orbit in which there are several factors. First, there is the factor of overstimulation of the muscles when the levator palpebrae retract; however, this occurs only in those patients whose condition is due to hyperthyroidism; this is the "staring reflex." This levator retraction is only seen in cases of hypermetabolism or in cases with thyrotoxicosis, and also there are cases in which there is a mixed gland type of reaction. Sometimes preceding the levator retraction there is some excess tearing, this being the earliest eye sign seen, and it is brought about by an overstimulation of the lacrimal gland. The levator retraction may precede the exophthalmos by several months, and then the tissue of the orbit may slowly become edematous, and if the edema is present long enough, one gets some round cell infiltration followed by fibrosis with secondary muscle deviations due to the fibrosis of the muscles and fixation of the globe as to its position.

There are nearly thirty different eye signs associated with exophthalmos, most of them associated with the hyper group. A most important one for the ophthalmologist is that of convergence insufficiency which definitely interferes with the individual's ability to work and to concentrate and continue his occupation. This sign comes on rather early and may be present without any other eye signs of hyperthyroidism or hypothyroidism. It is extremely annoying to both the patient and the doctor because it is so difficult to treat. It persists long after thyroid treatment has been undertaken and frequently is not corrected at any time. This sign is frequently seen in people during the menopausal period and is the most persistent eye sign associated with general malaise as well as in exophthalmos. It is my studied opinion that much of the convergence insufficiency is due to a diminution sensitivity of the foveas as well as some edema of the ocular muscles including the ciliary muscle (accommodation).

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The pathology within the orbits varies all the way from a low degree of protrusion to those in which the eyes are proptosed outside of the socket and lids. In repeated studies on the normal positions of the eyes within the orbit one gives them a very wide range of normal covering from an anterior posterior position of 14 mm. to that of over 20 mm. With Hertel's exophthalmometer we consider normal at 20 mm. and anything beyond that must be either due to high myopia or we begin to study patients for causes of the protrusion.

The cases we are discussing are those who have had previous hyperthyroidism that was treated or in some instances not diagnosed, who have been under treatment or may have had surgery, and/or because of the persistence and progress of the exophthalmos and most of the signs associated with it, must be reconsidered as they are the mixed gland type of exophthalmos. The purpose of this paper is not to discuss all the types of exophthalmos associated with glandular disease but the very special type that we have been studying over a period of some years, the so-called mixed gland type. In this combined study with Corrigan and McKean, we have been primarily interested in attempting to solve the progressive exophthalmos question, using our clinical changes as the primary reason for giving them a thorough study. All these patients, as we have studied them, are in trouble and this trouble has ranged all the way from a low-grade muscle instability with a slight loss of vision, to the individual whose vision went down to moving shadows with terrific exophthalmos and disc edema. There are numerous possibilities all of which are not present in the same individual.

One of the patients is Mrs. A. F., who had exophthalmos and a muscle error with edema of the orbit and the lids. The edema of the lids is definitely improved under treatment, as is the muscle error, and only a slight degree of exophthalmos has remained.

Mrs. B. D., who was sent to me because of vertical diplopia, required surgical interference with diplopia, but her general condition is so improved that she has entirely recovered from her previous nervousness and irritability, and her eyes are nearly normal in position.

Mrs. C. L., whose exophthalmos was rapidly progressive after her husband had returned to the Air Force, was definitely benefited by radioactive iodine and when last seen was entirely comfortable under treatment for her low thyroid activity.

Mrs. P. V. had marked exophthalmos with edema of the lids, convergence insufficiency, edema of the optic nerves with loss of vision down to moving shadows. It was necessary to do orbital decompressions in her instance, and since then she has recovered most of her sight as well as general control for her exophthalmos and convergence insufficiency.

Mrs. A. S. had an anterior posterior position in each eye of nearly 27 mm. with definite lid edema. She has been put on treatment with an excellent recovery.

We have now studied over thirty-odd cases of this mixed glandular type of exophthalmos and are satisfied that the method of therapy is a marked improvement over that we had previously tried. A great deal of the credit reflects on Corrigan and McKean, who with differential diagnosis and treatment have studied and treated these patients.

In summarizing this group of cases, certain definite factors should be revealed. (1) The exophthalmos is due to edema with some associated muscle involvement such as levator retraction. (2) These are all mixed gland type of exophthalmos; those of true thyrotoxicosis and those of hypermetabolism have been excluded. (3) In my experience I have never seen a case of exophthalmos caused by any type of pituitary lesion whatsoever; this includes acromegalia and all the other types of tumors and conditions associated with the pituitary gland. (4) This mixed gland type may occur in people who have not had a thyroidectomy and at no time during their career have they been aware of any thyroid involvement. Finally, in this mixed gland group the progression of the exophthalmos may be due to lack of control of the thyroid or lack of thyroid, as well as being an overstimulation due to the small islands of hyperactivity. It is the first time in my experience that we have had something to offer these people who are suffering from low degree of progressive exophthalmos as well as the other distressing eye signs that accompany it.

Use of Compound F in Common Lesions of the Upper Extremity

By Carl E. Badgley, M.D.
Ann Arbor, Michigan

ANATOMICALLY isolated soft tissue lesions, occurring in the upper extremity particularly, have been recognized clinically for a long time. Unfortunately, the knowledge of these lesions was limited to a very few. Localized pain and discomfort associated with limitation of function in the proximity of a major joint has been the chief symptomatology, usually associated with sharply localized tenderness at an anatomical site.

In the past, these symptoms were generally regarded as evidence of a type of arthritis or were very commonly thought to be of neuritic origin. The present-day term "hand-shoulder complex" with the symptoms of pain and discomfort in the shoulder and radiating throughout the arm associated with swelling and diminished function of the hand led easily to such a concept of the etiology.

Throughout the years, however, various observers have carefully studied pain and discomfort in the upper extremity. Surgical and anatomical study have led to the recognition of a series of anatomically located lesions. The etiology and pathology of these abnormalities have been demonstrated. *The unknown has become the known.*

In the years of the domination of Billing's concept of focus of infection theory, this group of patients suffering from this series of disorders were frequently the victims of tonsillectomies, teeth extractions, and even cholecystectomies and appendectomies.

The tricks of the cultist of laying on the examining hand at the site where the patient complained of pain, and localizing a tender spot (which served to convince the patient that he knew his difficulty) was rarely done by the medical man, secure as he was in his questionable concept of a hidden focus of infection. The relief of pain afforded by manipulative procedures was based upon the entirely faulty concept of the bone setter of a part out of joint, giving the cultist a distinct boost in the mind of a patient already distressed by the loss of teeth or tonsils without relief of symptoms. The relief that the public has obtained from manipulative and local therapy to the affected part has convinced them of the value of such procedures.

In 1930 or thereabouts, we presented to the Traverse County Medical Society a paper with the title "A Group of Allied Conditions Occurring in the Upper Extremity Commonly Regarded as Arthritic or Neuritic in Origin." The interval of time has definitely established the accuracy of the classification of the lesions discussed at that time. A few additional lesions, particularly the result of calcification appearing in many locations, can be added to this list.

These soft tissue lesions may be classified roughly into three main categories:

1. Tenovaginitis.
   A. Trigger finger-trigger thumb.
   B. Radial stylalgia-de Quervain's disease.
2. Bursitis.
   A. Radiohumeral bursitis-tennis elbow.
   B. Subdeltoid bursitis.
3. Calcification.
   A. Shoulder.
      (1) Supraspinatous.
      (2) Supscapularis.
      (3) Any part of musculotendinous cuff.
   B. Insertion of deltoid.
   C. Radiohumeral bursa.
   D. About the wrist in soft tissue in various areas.

Tenovaginitis occurs as a rule at an anatomical site where interference of function of the sliding mechanism of the tendon might occur. It is usually found in the tendon sheath at the superior edge of the ligamenta vaginalia in the palm flexors and at the first thumb crease in the long thumb flexor. Their fixed structures and abuse or overuse undoubtedly produce a traumatic inflammation. A synovitis with increased fluid and fibrin deposit, later organizing and producing a local stenosis of the tendon sheath, results. This constricting ring of the tendon sheath tends to produce a bulbous swelling of the tendon proximal to it. Thus, when the finger is extended, the enlargement of the tendon must pull through the stenosed area of the sheath. This is done with a snap, often with pain, hence, the name trigger thumb or finger.

De Quervain's disease or radial stylalgia is produced beneath the annular ligament in the synovial sheath of the abductor and short extensor of the thumb. Frequently a third tendon is formed

here which is a definite factor in the production of the lesion.

In the early formative stage of the lesion, rest with appropriate splinting, allowing motion a few times daily, may correct the process. In the chronic form, surgical incision or excision of the tendon sheath can be done very successfully.

We have not, however, until now, had any specific treatment, in the stage of inflammation before stenosis has occurred.

It has been demonstrated by numerous investigators in the last three years that hydrocortone acetate, compound F, has a very beneficial effect upon non-specific inflammation of the tendon sheath. Cyriax and Troisier[3] reported in 1953 that hydrocortone in contact with the fibrous tissue lesions of tendons, ligaments, and joint capsules exerts a strong anti-inflammatory reaction. Lesions of tendons produced by trauma or overuse can be cured outright. Numerous others reported upon the value of hydrocortone in 1953.[5-7] We will not discuss here its distinct value in osteoarthritis. Duff et al[4] have written in detail about the value of this drug in their experience in osteoarthritis.

We have been amazed at the prompt and frequently complete relief of symptoms by injection of compound F into the tendon sheath in the early cases of stenosing tenovaginitis. The prognosis for recovery without operation is good in the early stages. Early ganglia, really outpouchings. usually from the joint capsule, so far have had relief of pain and have disappeared. They may return. The chronic thick walled ganglia will still come to surgical excision in all probability.

The amount of cortisone injected is usually 25 to 40 mg. Repeat the injection in one to two weeks. If symptoms are not improved sufficiently in four injections, other therapy is indicated. Surgical excision is the usual means of a cure.

Tennis Elbow—Bursitic Radiohumeral Bursa—Epicondylitic Humeri

Usually one can sharply localize an area of tenderness just between the head of the radius and the external epicondyle of the humerus. The patient has pain and discomfort, difficulty in tying his tie, holding a cup of coffee, lifting by dorsiflexion of the wrist, shaking hands, et cetera.

Osgood et al demonstrated a fairly constant lesion between the superficial and deep tendinous origins of the extensor mechanism of the forearms. Although usually a self limiting lesion, which recovers spontaneously after two to three years, it interferes sufficiently so that relief is most welcome.

Novocaine injections have been permanently helpful in some. Others have had relief with x-ray therapy. None, however, have had the amazing and really brilliant success that is produced by local injection of compound F. More than one injection is required only infrequently. There may be severe pain at first lasting twenty-four hours. As a rule the symptoms are permanently relieved after this.

Subdeltoid Bursitis

Bursitis of the shoulder occurs frequently without any evidence of calcification. Calcification of the supraspinatous tendon often cures itself spontaneously, however, by rupturing through the floor of the bursa and producing a bursitis which may disappear without persistent symptoms or may produce a persistent bursitis.

Bursitis of the subacromial area may be associated with an extensive lesion called adhesive tendinitis and capsulitis. The biceps tendon may develop a tendinitis associated with capsular inflammatory changes. Severe shoulder pain and marked limitation of motion may develop, which not infrequently results in the fixed shoulder called periarthritis of the shoulder.

Negative x-rays serve to eliminate calcification as the primary factor in these cases, and the signs of a painful fixed shoulder without arthritis clinches the diagnosis. In the early phase of therapy in the past, it has been essential to establish rest for the shoulder, preferably by traction. Manipulation of the shoulder in this phase of activity often served to increase the irritability and fix the shoulder. It is in this early phase of the lesion that compound F may quickly alleviate the pain and discomfort and allow early return to function and full motion. Usually, however, by the time the patient visits the doctor firm adhesions have resulted.

The treatment of adhesions has been debated by clinicians with advocates of the manipulative procedure and strong antagonists to such a method of therapy. One author of a text on the shoulder states dogmatically that manipulation of the shoulder should never be performed. He is correct

if it is done without regard for other structures. Forcible manipulation in one sitting, breaking up adhesions, can produce many catastrophies, even to a complete brachial plexus palsy.

On the other hand, manipulation done under complete anesthesia, gently forcing the muscles to relax, can be felt to break up the soft adhesions. If you cannot gain motion, never use force, but repeat the procedure under anesthesia as often as five manipulations at about three days apart. With pentothal sodium the patients do not object to this multiple procedure. The adhesions soften so that eventually, usually by the third manipulation, the adhesions tear gently like tissue paper.

I have seen, as a result of powerful, forceful manipulation of the shoulder, five cases of dislocation of the shoulder associated with more or less extensive brachial plexus palsies. These are the result usually of inadequate anesthesia with the patient's own muscles reacting against the operator's force, producing dislocation, or the result of a tear of the capsule by the force of the manipulation with a resultant dislocation, pressure, and hemorrhage about the nerve structures.

Compound F injected into the subdeltoid and musculotendinous cuff area has been reported as very successful following manipulation of the shoulder by Stein and Stein. The cortisone apparently suppresses reformation of adhesions, as Carstam[1] demonstrated in rabbit experiments on the tendo Achilles. Periarthritis in itself has not responded alone to cortisone after well-formed adhesions have developed, according to the usual findings reported in the literature.

Calcification of the supraspinatous tendon or other musculotendinous cuff structures occur with great frequency. It has been demonstrated in 25 per cent of some 6,000 people studied for life insurance examinations.

Calcification

Calcification can occur in the fibrous tissue particularly at tendinous attachments to bone, such as the attachment of the deltoid to the humerus, the gluteus maximus to the femur, the gluteus medius to the trochanter. Calcification also can occur within or about the tendon.

Calcification in itself is not painful. It can lie in the capsular or tendinous structures and be completely asymptomatic. When, however, extracellular fluid softens and distends the calcification, a structure under tension very much like a boil develops. Severe pain is associated with this marked increase in pressure and size due to fluid increase. Spontaneous rupture allows the calcification to exude and ultimately disappear. Relief of symptoms when this occurs is dramatically immediate. This is nature's method of spontaneous cure.

Frequently, however, this spontaneous cure is incomplete, as only a portion of the calcium is extruded, and repetition of the process can then occur. Aspiration of the calcium by needling can also give relief which may be permanent or may recur.

For this reason, we have usually preferred excision of the calcification and included tissue. Complete relief without recurrence has been the rule in our cases following operational excision.

Cortisone acetate at the time of surgery seems to lessen the postoperative pain, and the use of cortisone postoperatively has seemingly hastened the return to early function in the few cases in which we have employed it.

In conclusion, there is a group of lesions occurring in the extremities which are anatomically located in tenosynovial areas. Overuse or trauma tends to produce an inflammatory lesion which produces pain and discomfort and disability. Early recognition of these lesions can be made readily in the early phases of irritation by the knowledge of these anatomical clinical syndromes. Compound F injected locally into the inflammatory tissue has been demonstrated experimentally and clinically to be of real value in reversing the process of inflammation and adhesions formation and restoring the part to normal. The earlier the diagnosis can be made, the more responsive the tissues will be to the treatment. It would seem logical to presume that many of the lesions recognized early might respond to compound F alone. Surgery might be avoided by this early therapy.

The patient with early symptoms must learn to consult his physician. The relief of the symptoms of these lesions is so dramatic, and the diagnosis so accurate, that the patients are profoundly impressed. This should lead the patients to seek early treatment and to inform others of the value of early medical care.

The compound F is no panacea but so far it seems it has definitely been a distinct aid in the

(Continued on Page 1141)

Cortisone as an Adjunct in the Surgical Treatment of Suprasellar Cysts

By Edgar A. Kahn, M.D., Holbrooke S. Seltzer, M.D., and John S. Tytus, M.D.
Ann Arbor, Michigan

THE close anatomical relationship of most suprasellar cysts* to the hypothalamus is believed to be the cause of the high mortality associated with their surgical excision. In a series of fifty-one consecutive cases reported in 1949 by Gordy, Peet and Kahn,[1] the operative mortality was 41 per cent.

It was believed that this almost forbidding mortality resulted from damage to the hypothalamus. We now believe that an equally important factor is that of long-standing direct pressure effect on the pituitary gland itself.

Patients in whom the anterior lobe of the pituitary gland has been compressed with resultant hypopituitarism are a poor risk for any type of surgical procedure. They may die of adrenocortical collapse either during or shortly after an operation. Even in patients without preoperative evidence of hypopituitarism, removal of a craniopharyngioma may necessitate extension of the dissection into the sella turcica with resultant damage to the hypophysis. This may lead to loss of endogenous adrenocorticotrophic hormone upon which survival depends.

By the use of cortisone preoperatively and postoperatively, the physical effects of operative trauma to the hypothalamus and pituitary gland seem to be counteracted to a large extent, for our immediate postoperative results are vastly improved. We believe, therefore, that acute and chronic anatomic injury to the hypothalamus and pituitary gland can be counter-balanced by metabolic changes resulting from the administration of cortisone.

We are reporting a series of twenty-two patients all operated upon by one of us (E.A.K.) since 1936, with attempted total excision of the tumor when it was deemed possible. Since there has been little change in operative technique over this period of time, it is our opinion that the greatest variable affecting the markedly improved postoperative survival has been the use of cortisone. With this drug it has been possible to prevent postoperative adrenocortical failure and to combat hyperthermia effectively, which in itself may cause death. With the reduction in postoperative complications that the administration of cortisone has permitted, total extirpation of these tumors should be attempted in many more cases.

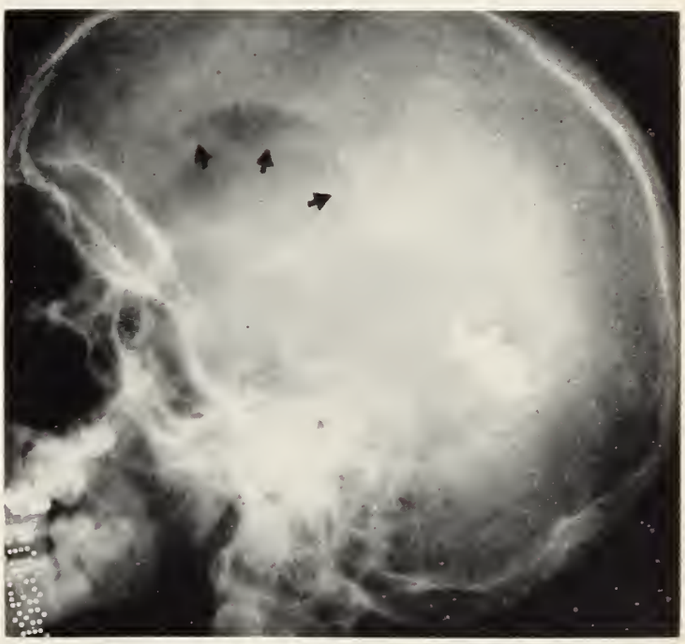


Fig. 1. Ventriculogram from Case 8 in Table I. Arrows show elevation and filling defect of left lateral ventricle resulting from huge suprasellar cyst (infundibuloma). This cyst wall was totally removed but some solid tumor was left within the sella turcica.

In 1952 Ingraham, Matson and McLaurin[2] reported good results with the use of cortisone in operations upon five patients with craniopharyngiomas and with ACTH in another patient. These operations, however, were in general not as radical as those we have attempted. Raaf, Stainsby, and Larson[3] in 1954 reported on eighteen consecutive patients with tumors in the region of the sella turcica who were prepared for operation with ACTH. There were no deaths in this series, though in the only two craniopharyngiomas total removal was not carried out.

Operative Results

Fourteen patients were operated upon before cortisone was being used on the Neurosurgical Service.[4] Four showed definite signs of hypo-

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*By suprasellar cysts are meant the craniopharyngiomas or adamantinomas and the much rarer cysts in the sellar region, such as the infundibuloma.

pituitarism and all died within twenty-four hours postoperatively of circulatory collapse and/or hyperthermia. Of the ten patients who did not have definite signs of hypopituitarism, three died

TABLE I. POSTOPERATIVE RESULTS, SUPRASELLAR CYSTS PREPARED WITH CORTISONE

Age and Sex	Date of Operation	Estimated Removal of Tumor	Maximum Rectal Temperature	Follow-up
1. 2 M (probable hypopituit.)	1951	Complete	101.6°	Diabetes insipidus 1 month. Alive and well. Preoperative blindness continues.
2. 17 M (hypopituit.)	1951	Incomplete	102.8°	Diabetes insipidus 1 month. Died 3 months later. 3 days p.o. recurrence in spite of preparation with cortisone.
3. 2½ F (? hypopituit.)	1951	Complete	102.4°	Diabetes insipidus persists. Alive and well.
4. 4 F	1952	Incomplete	103°	Died 2 months later in circulatory collapse 4 days p.o Torkildsen procedure for recurrence. Not prepared with cortisone at this time.
5. 11 M	1954	Complete (?)	102°	Diabetes insipidus. Alive and well.
6. 4 F (probable hypopituit.)	1954	Complete	102.8°	Well 6 months. Died unexpectedly, ? hypoglycemia.
7. 13 M	1955	Incomplete	101.6°	Diabetes insipidus. Alive.
8. 11 M	1955	Incomplete (tumor infundibuloma)	103°	Alive and well.
9. 10 M (hypopituit.)	1955 (reoperation)	Incomplete	103.6°	Blind. Doing well otherwise.

of circulatory collapse in the first forty-eight hours with temperatures of 108°, 106.4°, and 103.6°, respectively.

Of the nine patients treated preoperatively and postoperatively with cortisone, one died in hyperthermia following an unwise second attempt to remove a tumor which was adherent to the wall of the third ventricle. The highest recorded rectal temperature in the eight surviving patients was 103.6° and this lasted but a short time.

Endocrinological Aspects

Extirpation of the anterior lobe of the normally functioning pituitary gland abruptly interrupts secretion of four important hormones, each of which stimulates its specific "target organ": (1) somatotrophic or growth hormone, (2) the gonadotrophic hormones (follicle stimulating hormone, luteotrophic hormone and luteinizing hormone), (3) thyrotrophic hormone, and (4) adrenocorticotrophic hormone. Lack of trophic hormone secretion is signaled clinically by subnormal function of the target organ, and if all trophic spheres are involved a state of panhypopituitarism exists. It should be noted that one cannot assay the presence or absence of growth hormone in an adult, just as one cannot determine clinically the status of the gonadotrophic sphere in a prepubertal child. In addition, evaluation of adrenocortical status is frequently inconclusive in children because of practical difficulties in obtaining accurate urine collections and because urinary steroid values are low even in normal children. It should also be emphasized that the eosinophil response to a test dose of 25 milligrams of intramuscular aqueous ACTH is not a reliable criterion of adrenocortical reserve, since this minimal stimulus may cause an entirely normal eosinopenia even though there actually exists dangerous incapacity of the cortex to respond to the major stress of surgery.

Of practical importance is the fact that, when decrease in anterior lobe function is gradual rather than abrupt—which may occur if a neoplasm either directly invades the adenohypophysis or causes atrophy by external compression—evidence of target organ deficiency usually appears in a selective and teleological sequence. *The trophic hormones least necessary for survival disappear first, while the one most vital for survival is the last to go.* Thus, growth hormone and gonadotrophic hormones disappear first, thyrothropic hormone next and adrenocorticotrophic hormone last. In patients with suprasellar cysts, therefore,

one frequently finds delayed somatic growth, arrested sexual maturation, and manifestations of hypothyroidism, but with apparently intact adrenocortical function and reserve. On the other hand, if there is evidence of adrenalcortical insufficiency there are usually deficiencies in all other trophic spheres as well.

However, even if all preoperative data indicate entirely normal function of the adenohypophysis, one should not depend upon the continued integrity of the pituitary-adrenal axis in the precarious postoperative period. Preparation with the adrenosteroids of patients with suprasellar lesions is still advisable for two reasons:

1. Unless time-consuming tests of adrenocortical reserve are done, one cannot be sure that an apparently intact pituitary-adrenal system will be capable of responding normally to the stress imposed by surgery.

2. In order to achieve gross total removal of the neoplasm it may be necessary to damage the adenohypophysis. Adrenocorticotrophic secretion could cease as of that moment and adrenocortical collapse might occur within twenty-four hours.

Summary

A series of twenty-two patients with suprasellar cysts (twenty-one craniopharyngiomas and one infundibuloma) is presented, in all of whom gross total removal of the tumor was attempted by the same surgeon. Nine of the cases received intramuscular cortisone before and after surgery.

Six of the fourteen patients who were not given cortisone died within forty-eight hours of their craniotomy either from hyperthermia or peripheral vascular collapse; and one patient had persistent hyperpyrexia and expired on the tenth postoperative day, a mortality rate of 50 per cent.

Eight consecutive patients treated preoperatively and postoperatively with cortisone, survived an initial attempt at extirpation of a suprasellar cyst; one survived radical reoperation. The highest temperature recorded in these nine instances was 103.6°

One patient died at reoperation in hyperthermia in spite of cortisone as an adjunct to the procedure.

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SEVERE BRONCHIAL ASTHMA

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metacortandralone has the same metabolic and clinical effects as metacortandracin and may be substituted one for the other in the same dosage range.

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Surgical Treatment of Patients with Jaundice

By M. M. Zinninger, M.D.
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I AM SURE that you are aware that there are three kinds of jaundice: (1) hematogenous, due to abnormal destruction of red blood cells; (2) hepatogenous, or hepatocellular, due to disease of liver cells which renders them unable to remove all pigment from the blood; and (3) obstructive, due to reabsorption of pigment after it has been excreted by the liver cells into the bile ducts.

Hematogenous jaundice is generally easy to recognize, and therefore presents no problem in differential diagnosis. In addition it does not usually require surgical treatment, and it will not be discussed further at this time. On the other hand, hepatogenous jaundice and certain types of obstructive jaundice may mimic one another so closely that differential diagnosis may be quite difficult. Nevertheless it is important to make a differential diagnosis because patients with hepatogenous jaundice should not be operated upon, for operation is of no value to them and may even be harmful, while obstructive jaundice nearly always requires operation.

How then does one make the differential diagnosis? First, by careful history, because certain types of obstructive jaundice may be diagnosed fairly accurately by history alone, e.g., typical stone in the common duct, with chills, fever, cramping abdominal pain, nausea, vomiting and jaundice, or stricture of the bile ducts in which the history reveals known injury to the ducts or a previous repair of a stricture.

Second, by physical examination. This is usually not of much help, unless there is an enlarged gall bladder palpable through the abdominal wall. One never sees a distended gall bladder in hepatogenous jaundice, because not enough bile is secreted in such a condition to distend the gall bladder. It is however, the classical picture in obstructive jaundice due to tumor of the head of the pancreas or of the ampulla of Vater.

Third, by a series of liver function tests. There are a whole battery of these, and the combined findings constitute what is called "the liver profile." Which of the many tests are of most importance? In our clinic we make use of the following ones:

1. Serum bilirubin—the quantitative Van den Bergh. The report is returned in mg. per cent of the "direct" and of the "indirect" reaction. The "direct" component is supposed to represent the jaundice due to obstruction and the "indirect" the part due to hepatogenous jaundice. While there is some question as to the absolute validity of this conception, when the clinician sees a marked preponderance of one over the other, he can regard this finding as significant.

2. A group of flocculation and turbidity tests—the cephalin flocculation, the thymol flocculation and turbidity, and the $ZnSO_4$ turbidity. These are reported as negative or as 1+, 2+, 3+, et cetera, or in units. One should memorize the normal values for each in order to be able to evaluate them. In general, all these tests should more or less parallel one another—they show as negative or as low values in the absence of hepatic disease but show elevated values in hepatocellular injury.

3. Serum alkaline phosphatase. Many factors may alter this level. Normal values are 3 to 5 Bodansky units. In hepatocellular jaundice this may rise to a magnitude of 7 to 10 units. In high grade obstruction, however, it may go to quite high levels, 18 to 20 even above 30 units. We regard 10 units as a rather critical level dividing hepatic from obstructive jaundice. It is of practical importance to remember that if the flocculation and turbidity tests are low or normal, and the alkaline phosphatase is above 10 units, the jaundice is probably obstructive.

4. The prothrombin time. In prolonged jaundice due either to liver disease or obstruction this always drops. However, its reaction to therapy with vitamin K is of some diagnostic significance. In obstructive jaundice there is usually a prompt return to normal when vitamin K is given. A slow or negative response may be obtained in hepatogenous jaundice.

5. Total lipids and ester fraction are of some interest but seldom have they seemed to me to be very helpful.

6. Urobilinogen in the urine and stools. This may be of great importance in certain cases. It would take too long to outline the circulation of urobilinogen, but it is of practical importance to know that total absence of it in the urine indicates that no bile is getting into the intestine. If this finding is constant it is strongly suggestive that there is a tumor compressing the lower end of the bile ducts.

When we evaluate all these tests we often get a clear-cut picture of either obstructive or hepatogenous jaundice. Not infrequently, however, the various tests may seem to be contradictory, some of them pointing in one direction, and others in

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the reverse. Then we may speak of a "mixed" jaundice and I believe it is easy enough to see how this can exist. For example, in hepatocellular disease, there may be enough swelling and edema of the liver tissue so that there may be some element of obstruction of what little bile is formed, especially in the smaller ducts. In obstruction, if it is of long duration or if it is associated with ascending inflammation of the ducts, it is not difficult to imagine that cellular disease is superimposed upon obstruction, thus giving the "mixed" reaction. In such circumstances it becomes the duty of the clinician to assemble all the information available to determine whether the primary disease is obstructive or due to cellular damage.

Of help in making such a decision we believe is the use of needle biopsy of the liver. Dr. Leon Schiff and his associates in the department of medicine have been using this procedure at our institutions and have now accumulated an experience with more than 1,000 examinations. When used with suitable precautions, we believe this method is safe and very helpful. The helpfulness depends to a large extent on the accuracy of the pathologic interpretation of the tiny specimen. With the large number of examinations we now have, which have been correlated with findings at operation or autopsy, or clinical progress in certain cases, we have come to regard with confidence the report returned by our pathologists.

One other new method, still in the experimental stage, is the use of Cholegrafin or Biligrafin. This material when injected intravenously is excreted in the bile in sufficient concentration to cast an x-ray shadow of the ducts. We have used this material in a relatively small number of cases, and our films never have been as clear or definite as those published by the drug firm selling the product. One really should not expect too much of this method in high grade jaundice either cellular or obstructive. However, if a dilated common duct can be demonstrated, it would be indicative of obstruction.

Once the differential diagnosis is made, and I believe this is the joint responsibility of the medical man and the surgeon, and the jaundice seems to be due to obstruction, it is desirable from the point of view of the surgeon that further differentiation be made as to the probable cause of the obstruction. While there are many different causes of obstruction there are three main ones: (1) stone in the ducts, (2) tumor in the ducts or of the pancreas compressing the ducts, (3) stricture of the ducts. I would like to discuss each of these separately.

Stone in the Common Duct

There is usually a history suggestive of gallbladder disease. Pain is a prominent symptom and is likely to be severe, cramp-like and intermittent. Jaundice also is as a rule intermittent. The classic picture of stone in the common duct is that of a patient with Charcot's intermittent fever, which may be described as follows. The onset is sudden with a chill, which is accompanied by pain in the epigastrium and frequently by nausea with or without vomiting. Fever rises rapidly often to 102° to 103°. The pain usually radiates around to the back. The attack persists for a variable period of time from thirty minutes to several hours, and then subsides rapidly. The fever drops and the patient makes a dramatic recovery. Some six to twelve hours later, it is noted that the patient is jaundiced. Such attacks may be repeated with free intervals of from one to several days in between. The temperature chart looks something like that of a patient with malaria except that there is no regularity or periodicity. This group of symptoms is usually produced by a solitary, round stone in the common duct—a stone which is too small to block the duct until it gets to the narrow part near the ampulla. There it acts like a ball valve. The bile is then dammed back into the liver, producing the pain and nausea. The bile is usually infected, and this sets up an ascending cholangiitis which accounts for the chill and fever. The jaundice cannot be recognized until the obstructed pigment has had a chance to stain the tissues. The attack subsides when the stone slips back up into the wider part of the duct, allowing the bile to flow past it into the bowel. From a practical point of view, the combination of intermittent pain, chills and fever, followed by jaundice means almost surely that the patient has a stone in the common duct.

Like almost everything in medicine, this classic picture is not always presented. In some patients we find the so-called "silent" stone in the common duct. This descriptive term is used in those patients who have a painless or relatively painless jaundice due to stone; i.e., the stone is "silent" so far as pain is concerned. Another group of patients with stones in the common duct may have

relatively insignificant symptoms and perhaps no jaundice or very slight jaundice. In such instances there may be found multiple faceted stones filling the common duct. The reason for the lack of symptoms is that the stones are relatively fixed in position, and the bile flows freely in channels around and between them. Finally, there is the patient who starts out with pain, chill and fever just like the Charcot intermittent fever, only in this case, the stone does not become dislodged and the attack persists. The fever and the jaundice rise progressively and within twelve to twenty-four hours the patient is extremely ill, toxic and often delirious or semi-comatose. Such cases are, I believe, acute surgical emergencies demanding prompt opening and drainage of the common duct.

The treatment of patients with stone in the common duct, should be, I believe, as follows: If the attacks are intermittent, try to operate in an interval between attacks if possible. It is usually wise to give vitamin K for several days prior to operation. If chills and fever have been present, antibiotics should be used also. At the time of operation, the surgeon should be prepared to do an operative cholangiogram, though in many instances this is not necessary, because the presence of a stone or stones can be determined by palpation and other methods. I personally do not use operative cholangiogram routinely. However, I think every surgeon should familiarize himself with the method and have the proper equipment and technical help from radiology and from the anesthetist, to allow good pictures to be made. This usually requires actual experience in the operating room in order to avoid all the pitfalls which may lead to an inaccurate or confusing interpretation.

The technical details of how to best assure detection and removal of all stones in the common duct can also be learned only by actual experience in the operating room. Care in manipulations is essential in order to avoid trauma to the duct. Careful palpation of the duct over a probe, washing the duct repeatedly with warm saline solution, et cetera, are important methods. I like to dilate the ampulla moderately—say up to 5 to 6 mm. before concluding the procedure. After the duct is presumably clean, it is desirable to drain it either with a T-tube or by a straight catheter inserted through the cystic duct if this can be done. A cholangiogram can then be made and the closure of the abdomen started while the film is being developed.

Tumors of Ducts or Pancreas Compressing the Ducts

These are considered together because they pr duce in general the same clinical picture though their treatment may be different. In general, the clinical syndrome is one of a painless or relatively painless jaundice which is progressive in character. The classical picture is presented when in addition there can be palpated a large, distended, but painless gall bladder. Since progressive painless jaundice may also occur with hepatocellular disease, it is these cases that may present the most difficult problem in differential diagnosis between obstructive and hepatogenous jaundice. The finding of a large gall bladder in conformity with Courvoisier's law is therefore of tremendous value and is a positive indication that the jaundice is obstructive. It is in these cases of tumor that complete absence of urobilinogen in the urine is likely to develop as the disease progresses. X-rays may be helpful in differentiating between cancer of the head of the pancreas and cancer of the ampulla of Vater, by careful study of the appearance of the duodenal loop. In general, it has been my experience that cancer of the pancreas is more likely to be associated with pain than is ampullary cancer. One other point of some value is that ampullary lesions usually show occult blood in the stools while this is absent in cancer of the pancreas.

At exploration, after suitable preoperative preparation, the differentiation may be quite obvious. In cases of doubt, regarding the ampulla, I believe that duodenotomy should be performed, the ampulla inspected and frozen section obtained if necessary. If ampullary cancer is established, I believe radical resection of the entire duodenum, head of the pancreas, and lower end of the common duct should be performed, i.e., some modification of the operation devised by Whipple, Mullins and Parsons in 1938. This is best performed in one stage, with anastomosis of the common duct and the pancreatic duct into the jejunal stump proximal to the gastro-jejunostomy. This operation has led to cure in a sufficiently large number of patients to justify its continued use.

In frank cancer of the head of the pancreas causing jaundice, I do not believe radical resection should be carried out. My own experience and that of my colleagues and associates has been most disappointing so far as cure by resection is concerned. None of our patients has survived more

than nine months, and the usual time is less than that. Actually a number of our patients with cancer of the pancreas have survived longer with palliative anastomoses than with resection. Anastomosis of the gall bladder or common duct to a defunctioned loop of jejunum (Roux Y procedure) plus a gastro-enterostomy has been used in these cases. The gastro-enterostomy is done in order to off-set possible occlusion of the duodenum by the enlarging pancreatic neoplasm.

Every now and then one is faced with the problem of a small firm mass deep in the head of the pancreas producing jaundice. If the jaundice is of high grade, this is almost certainly a cancer, either of the pancreas or of the common duct above the ampulla. Diagnosis may at times be established by opening the common duct and obtaining biopsy material with a scoop from inside the duct. In cases of doubt I believe radical resection should be undertaken for this type of lesion in the hope that the carcinoma originates in the duct.

Stricture of the Common Bile Duct

This is almost invariably preceded by an operation on the gall bladder or ducts, at which time the duct is either cut, clamped or ligated, though it may occasionally occur following a severe crushing injury to the abdomen. Three clinical pictures may be recognized.

1. Progressive painless jaundice begins six to eight weeks following an operation on the gall bladder. Often there may have been excessive bile drainage postoperatively, but this may have ceased, to be followed later by progressive painless jaundice. The lesion in such cases is probably due to clamping the duct without cutting or ligating it. The duct continues to function for some weeks until the clamped area is slowly but steadily replaced by scar tissue and complete obstruction develops.

2. External biliary fistula persists after surgery on the gall bladder or ducts. In these cases there may be no jaundice unless the fistula closes—then chills, fever and jaundice may develop—relieved by opening the fistula. Cholangiogram with radiopaque dye through the fistula may be very helpful in establishing the diagnosis and location of the stricture in such instances.

3. Symptoms are similar to common duct stone with cholangiitis, i.e., pain, nausea, itching, chills, fever and jaundice. This symptom complex is most frequently seen in patients who have had one or more operations to repair a stricture with recurrence of an incomplete stricture. As a result of stasis and infection, small clumps of bile pigment precipitate out in the dilated proximal part of the duct, and these with or without accompanying mucous plugs may occlude the narrow opening and behave just like a stone blocking the ampulla. Such attacks may be controlled for some time by the use of antibiotics, but eventually the stricture usually gets so tight that reoperation is necessary.

The treatment in all these types is reoperation after careful preparation with vitamin K and blood transfusions and antibiotics if indicated. Patients with external biliary fistula may be more depleted than those with jaundice for they have often lost electrolytes as well as fluid and any such imbalance should be corrected before operation.

I will mention only briefly some of the methods used for repair of stricture. The most essential and at times the most difficult part of the operation is to find the proximal, dilated portion of the duct. This can usually be found by following the lower scarred margin of the right lobe of the liver along the old gall-bladder bed. This usually has to be done by sharp dissection just keeping out of the liver substance. Colon and duodenum are often adherent here and the dissection is quite tedious. In the liver hilum the three important structures are the common duct, the hepatic artery and the portal vein, and of these the common duct is farthest to the right and also most superficial, therefore, if one keeps close to the liver and approaches the hilum from the right, the duct should be reached before the artery or vein becomes endangered.

The most desirable repair is end-to-end anastomosis of the proximal and distal ends of the duct. Cattell has pointed out that injuries to the common duct at operation almost always involve the part of the duct superior to the duodenum, and that by freeing the superior and right border of the duodenum and mobilizing it to the left, it is often possible to find the distal end of the duct behind the duodenum. In such case end-to-end suture over some form of removable tube is carried out.

If the distal end of the common duct cannot be found, it becomes necessary to anastomose the proximal end of the duct to the intestinal tract. This should be done by careful suture of the mucosa of the duct to that of the intestine either directly to the duodenum or by means of a defunctioned loop of jejunum (Roux Y procedure). There are proponents of both methods. Some surgeons are very critical of direct suture to the duodenum because of the hazard of ascending infec-

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Rheumatic Fever

A Critique of Recent Progress in Diagnosis

By Herman H. Riecker, M.D.
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THE diagnostic features of rheumatic fever as we learned them thirty years ago have changed gradually and are no longer pertinent to the recognition of the disease today.

Formerly an exudative disease, it now has become largely proliferative and insidious, but nevertheless a relentless and destructive process.

At present in most cases one must diagnose rheumatic fever by the signs of acute carditis. The exudative manifestations, so accurately described by older authorities, are seldom seen. They consisted of acutely inflammed joints, hyperpyrexia, hyperhydrosis, pancarditis, leukocytosis, chorea, and not uncommonly a fatal termination in the first attack. Today these features are present in but ten of 100 cases.

It is because of this fact that a relentless search is being made for a specific laboratory test to establish the diagnosis of rheumatic fever. It is unfortunate, however, that the present-day medical graduate is obliged to rely upon an examination of the patient, however arduous, in order to make a diagnosis of rheumatic fever. A carefully taken family and personal history, and month after month of bedside evaluation of the patient and the heart sounds, scarcely can be avoided. Experience becomes invaluable and laboratory findings of scant significance.

In an evaluation of the laboratory findings in rheumatic fever, I will refer to Dr. Leo Taran's recently published statistics in 100 consecutive cases.[3] These effectively dispose of the value of laboratory tests, when compared with the evidence to be obtained by careful observation of the patient at the bedside, in the diagnosis of rheumatic fever. "Since only one-third of the cases had an elevated sedimentation rate at the time of admission, and all became normal within a short time, this test is of little use in the determination of active carditis."

TABLE I

Egg	Per cent
Crude arrhythmia	2
Prolonged A-V conduction	17
Prolonged QT_c	72
Abnormal P waves	27
Other changes	5
Blood and Urine	**Per cent**
Sedimentation rate (Above 12 mm./hr.)	35
Hemoglobin (Less than 12 grams)	32
White Blood Count (More than 10,000)	5
Urinalysis (Albumin and red blood cells)	19
Immunologic	**Per cent**
Antistreptolysin titre (More than 250 units)	80
Antistreptokinase (Over 1+)	69
Antihyaluronidase (Over 64 units)	31
C-Reactive protein (Over 1+)	7

The various immunological tests are listed in Table I. While the antistreptolysin titre seemed to offer some hope in the Taran series, the carditis continued unabated while the titre returned gradually to the normal level. The only definite correlation between the various tests was that of the age of the patient; the older the child, the more likely was there a rise in the streptococcus immune bodies.

The electrocardiogram in Taran's series proved much more helpful in that abnormal or notched P waves were present in 27 per cent of the cases, while variations in the PR interval almost invariably were present. It is my practice in hospitalized patients to take daily electrocardiograms, using the second conventional lead, in order to note variations in the PR interval, and in the character of the P wave.

To summarize the values of laboratory data, it is our experience that the hemoglobin level and the electrocardiographic changes are of considerable help in confirmation of a diagnosis already made by an examination of the patient and the family. It might be said that the hereditary features of rheumatic fever are of more importance in confirming a diagnosis than is the mass of laboratory data.

Clinical Findings

Austin Flint in 1854[1] described rheumatic fever as an affection of the joints, the "articular rheumatism" of younger people with a strong hereditary tendency. In 1880[2] he said, "An important feature of acute articular rheumatism is its tendency to invade certain of the structures of the heart. Endocarditis occurs in a considerable proportion of cases. It is, however, less frequent than has hereto

From the Medical Staff of St. Joseph Mercy Hospital, Ann Arbor, Michigan.
Presented at the Coller-Pemberthy Clinic in Traverse City, August 26, 1955.

TABLE II. CLINICAL MANIFESTATIONS OF RHEUMATIC FEVER IN 100 CHILDREN ON ADMISSION

*Polyarthritis	2%
*Arthralgia	22%
*Myalgia	20%
Abdominal pain	32%
Epistaxis	39%
Personality changes	28%

*Not clear-cut in the mind of a child

TABLE III. DIAGNOSTIC MANIFESTATION OF MILD CARDITIS

Tachycardia	83%
Labile pulse	53%
Progressive pallor	60%
Fatigue	40%
Metronomic rhythm	56%
Changing murmurs	86%
Cardiac enlargement	37%
Low grade fever	47%

fore been supposed." I quote Flint from the fifth edition of his textbook in order to contrast the viewpoint of 1880 with that of 1955 in respect to rheumatic fever.

In the absence of the time-honored rheumatic manifestations of rheumatic fever the diagnosis of carditis is our present-day problem. We are obliged to study the heart by every possible means. The tachycardia, labile pulse and tick-tock, metronomic, or tumultous rhythm, low grade fever and finally the rheumatic fever pallor, are outstanding and characteristic findings in the usual case. Changing murmurs are most helpful as well as the changing intensity of the various heart sounds.

Fever, with a rapid pulse, the metronomic rhythm, and signs of heart failure, the anemia and gradually enlarging heart mean a prolonged course and poor ultimate prognosis. However, some of the most severe cases make an astounding recovery.

In general, it is a good rule not to make a diagnosis of rheumatic fever unless one can demonstrate the presence of carditis. Looking back to the time of Flint, this statement seems revolutionary. The character of the disease, or our ability to diagnose it, and perhaps both, have changed radically during the past seventy-five years.

Surgical Approach to Mitral Stenosis

Apparently a number of physicians have learned to recognize stenosis of the mitral valve, without however, having considered the life history of the disease and particularly the almost universal presence of pancarditis. Surgeons in certain medical centers have been interested in relieving the obstruction by an operation called mitral commissurotomy.

It is my impression that the ultimate usefulness of the operation will be severely restricted and that far too many cases already have been subjected to it, in an attempt to cure a relentlessly progressive

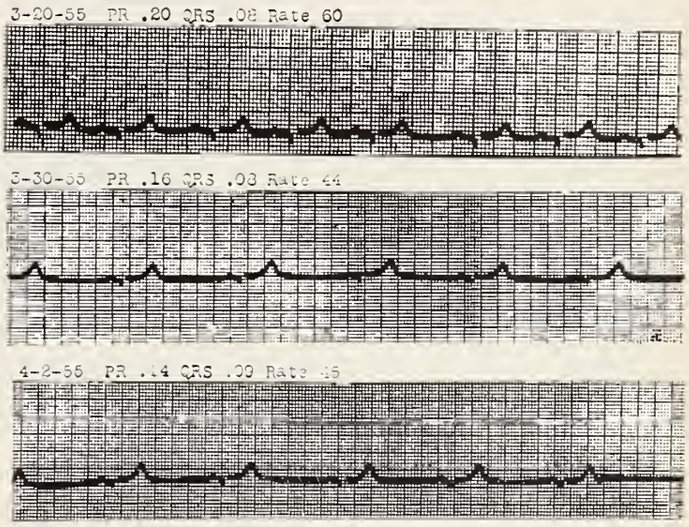


Fig. 1. Illustrating changes in the heart rate and P-R interval in the case of a thirteen-year-old boy with acute rheumatic carditis.

lesion of relatively minor importance in the total pathological picture of rheumatic carditis; in the majority of cases it is failure of the inflamed myocardium, rather than mechanical valvular obstruction, which leads to heart failure. The complications resulting from the operation are somewhat impressive:

1. Thromboembolism (5 to 10 per cent).
2. Reactivation of rheumatic fever (25 per cent).
3. Pericarditis.
4. Right heart failure.
5. Cardiac enlargement.
6. Major irregularities of the heart rhythm.
7. Gradual return of the original lesion.

Contrast these findings with the fact that after the age of forty-six, of the patients who have quiescent rheumatic valvular disease, 75 per cent live five years, and 58 per cent live ten years. These are the only cases which meet the recognized requirements for the mitral valve operation. However, the rheumatic activity seldom completely ceases, and is often measured by the life span of the patient. The Aschoff body may be found in microscopic sections of the myocardium for several decades after the initial attack. This finding is a specific indication of activity of the rheumatic process, as well as a prime contraindication to mitral commissurotomy.

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Cost of Medical Education

By Alexander G. Ruthven, Ph.D.
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IT IS at the written request of Dr. Coller that I am making these comments. There was at least one reason why I could not decline. After suggesting that I review some phase of my philosophy of education, he said in effect: I am now going abroad and cannot be reached.

Knowing that my remarks should be brief, I shall limit my discussion to a subject which should be of interest. I propose to discuss the cost of medical education as I have studied it during a long career as a teacher of biology and as a university administrator.

From my first years in college I have heard many many times complaints about the cost of making doctors. Criticisms have come from parents, educators, economists, and legislators. These have usually appeared to me as being naïve and unintelligent. Of course it costs more to prepare a doctor for service to society than it does to train a lawyer, a philosopher, an historian, or a specialist in English literature. Of course the cost of medical education can be reduced by shortening the training period, by engaging less expensive professors, by refusing to purchase improved teaching aids, and by discouraging research and postgraduate instruction. Of course we can have cheaper education, but only if we are willing to have a poorer product.

But I did not intend to discuss the obvious. One conclusion I have reached is that not only must our medical schools not spend less, but they should spend more on their programs. In this statement I am not referring to the need for new buildings, higher salaries, or more equipment, but to student aid. And by financial assistance to students, I do not mean scholarships, fellowships, and grants in aid, important as these are. It is my opinion that the education of college students is as much a public responsibility as is the teaching of pre-college boys and girls. In other words, I believe for good reasons that our colleges should charge no fees and in other ways attempt to reduce costs to the students. Ability and ambition to achieve success are not related to the economic status of parents. As every teacher knows, there are more potentially good doctors among the young people who through no fault of their own are unable to go to college than are now being turned out by our medical schools.

Among the objections to my conclusion two strike me as little short of ridiculous. I have heard it argued that since doctors become wealthy within a few years after graduation, they should as students pay the entire cost of their training. There are several fallacies in this argument. If our doctors are making too much money, which of course they are not, it would make more sense to take it away from them after, instead of before, they have made it. It may be noted also that if the medical student should pay all of the cost of his education, so should all other college students, for some of the graduates of other schools are destined to become wealthy automobile executives, lawyers, bankers, or some other type of economic royalist.

Another objection to the conclusion that education throughout our school system is a public responsibility is expressed in the form of a trick question addressed to college administrators. It is sometimes asked: "How many youngsters do you know who are unable to go to college because of the costs involved." The answer must usually be few if any. But the answer is really meaningless. If the question were presented to high school teachers and parents rather than to college presidents and deans, who are inclined to look at the educational scene through the wrong end of the telescope, the reply would be disturbing to many of those who like to think of the United States as a land of opportunity.

A legitimate question that can be asked of college professors, not of college executives, is: "Do not many students pay too high a price for their education?" The answer will usually be "yes," for it is becoming more and more difficult for the student to work his way through college, as the saying goes, without missing educational advantages which should be his.

My philosophy of education rests firmly on the belief that our society needs, for its successful operation, equality of educational opportunities. There are brains on both sides of the tracks. They should be fully utilized in medicine. We should seek for talent, not wait until it comes to our schools and, above all, we should not discourage ambition by creating economic barriers, even to de-

(Continued on Page 1104)

Recent Advances in the Treatment of Pernicious Anemia

By Raymond W. Monto, M.D., John W. Rebuck, M.D., Ph.D., and James T. Howell, M.D.

Detroit, Michigan

PERNICIOUS anemia is a deficiency disease arising from the failure to absorb 1/1,000,000 of a gram of vitamin B_{12} daily from the gastrointestinal tract.[2] This defect results in altered systemic cellular metabolism characterized clinically by a macrocytic anemia, gastrointestinal and central nervous system manifestations. When Minot and Murphy announced twenty-five years ago that pernicious anemia could be treated successfully with whole liver, this disease was removed from the category of uniformly fatal refractory anemias.[9] Our understanding and hence our treatment of the illness has been refined until today the medical profession can count pernicious anemia as one of its therapeutic triumphs.

From Castle's analysis of pernicious anemia we think of this deficiency disease in terms of an extrinsic or food factor, an intrinsic or gastrointestinal factor and the ultimate physiological utilization of both factors in the production of normal erythrocytes.[3] Most of the recent advances have been in the realm of extrinsic factor. From the time that whole liver was found essential in the therapy of pernicious anemia the anti-anemia factors which liver contains have been investigated. First was the development of a parenterally injectable extract of liver and then the refinements of liver extracts pointing toward the isolation of the specific active ingredient. This experimental work then led to the vitamin B complex including pteroylglutamic or folic acid, citrovorum factor or folinic acid, and finally to cyanocobalamin or vitamin B_{12}.

The isolation of the lactobacillus factor from liver and later its synthesis as pteroylglutamic acid presented in 1945 an active hematopoietic agent for the nutritional macrocytic anemias. Pteroylglutamic acid, popularly known as folic acid, is concerned with nucleoprotein metabolism in the formation of purines and pyrimidines from simpler amino acid precursors.[5] In pernicious anemia folic acid stimulates a red blood cell response but does not possess the completeness of therapy to maintain the remission from the disease. We must further emphasize that it does not improve or protect against the neurological complications.[4]

An intermediate in the metabolism of folic acid and an active principle in liver and yeast extracts is the citrovorum factor or folinic acid. It is closely related to pteroylglutamic acid structurally and does possess as great or greater hematopoietic activity.

In 1948, a red crystalline substance was isolated from the active principle of liver extracts.[13,14] This material, cyanocobalamin or vitamin B_{12}, is the specific anti-pernicious anemia factor now recognized as the extrinsic factor of Castle. It, like folic acid, is concerned with nucleoprotein metabolism but at a later stage, namely, the synthesis of nucleosides such as thymidine from the purines and pyrimidines. It will effect and maintain a complete hematological, gastrointestinal, and neurological remission in pernicious anemia.

Contrary to our knowledge of vitamin B_{12} as the specific intrinsic factor, we cannot yet fully identify the intrinsic factor. It is established that a thermolabile fraction of the gastric juice is essential in potentiating ingested hematopoietic substances.[6] At present this factor seems to be a mucoprotein which binds or combines with vitamin B_{12} or conditions the gastrointestinal mucosa enhancing the absorption.[8] Vitamin B_{12} bound to fractions derived from hog stomach has been prepared recently for possible use in the oral therapy of pernicious anemia,[15] and some have received approval of the U.S.P. Anti-anemic Preparations Advisory Board.

In the therapy of pernicious anemia, we have a potent specific factor, vitamin B_{12}. The array of hematinic and alleged adjuncts such as multiple vitamins, iron, and hydrochloric acid are known not to be essential principals in the treatment of the anemia. The transfusion of blood is still important when the degree of anemia is sufficient to produce cardiac insufficiency and, in general, is to be considered when the red blood count is below 1,000,000 cells per cu. mm. In modern pernicious anemia therapy the use of crude liver extract cannot be justified.[12] While potent refined

From the Hematology Division, Henry Ford Hospital, Detroit, Michigan.

Read before the Section of Internal Medicine at the AMA Meeting in San Francisco, June, 1954.

liver extracts produce a satisfactory remission from the disease, most hematologists prefer the specificity of vitamin B_{12} (crystalline or concentrates). Coupled with the fact that larger amounts can be administered with little discomfort, there are fewer allergic reactions, and there is less cost to the patient. It is true that folic acid is essential in certain of the nutritional macrocytic anemias but cyanocobalamin is the *sine qua non* in pernicious anemia. Undoubtedly the therapy for the disease in complete relapse is parenteral vitamin B_{12}.[1] The dose regimen recommended is actually "massive" in that it greatly exceeds calculated requirements in most instances.

A standard treatment program in this disease cannot be uniformly prescribed because of the variability of the response, the severity of the disease, and finally because of the presence or absence of complicating factors in each patient. Usually 15 micrograms are given each day intramuscularly for one week and twice weekly until full hematological remission is obtained. Figure 1 illustrates a typical response to this program of therapy. Daily reticulocyte counts after the initiation of therapy are important in determining the adequacy of therapy and in early confirmation of the diagnosis. Maintaining the patient in remission will depend upon progress observation of the erythrocyte count and the improvement of symptoms, but in general we have found that the parenteral administration of 45 micrograms of vitamin B_{12} every four weeks will provide excellent control of the disease.

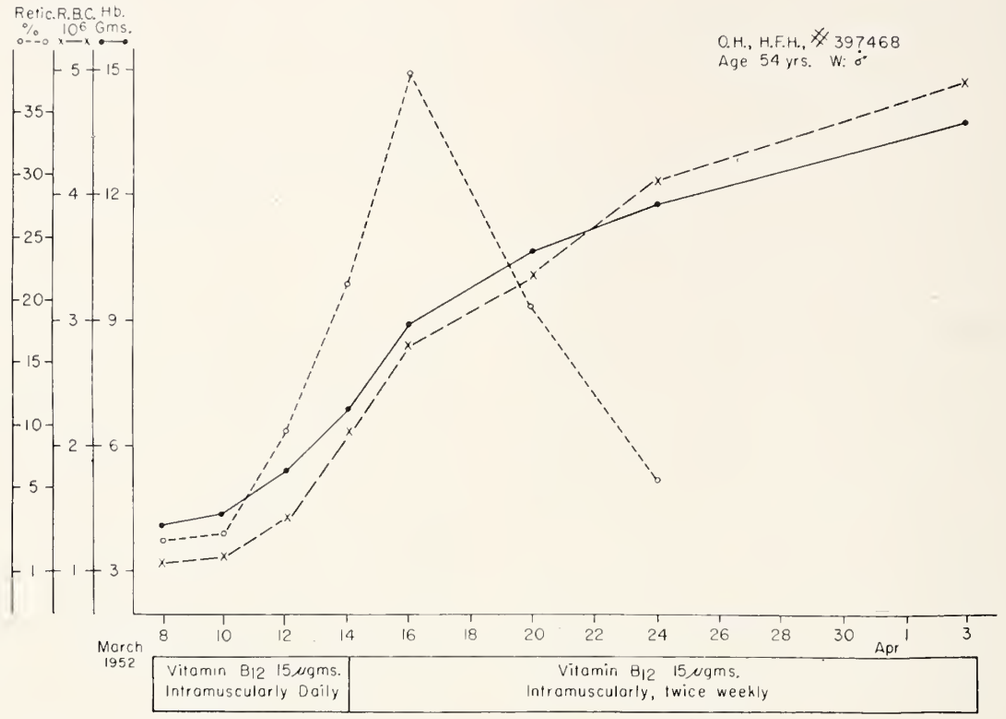


Fig. 1. Parenteral vitamin B_{12} therapy in pernicious anemia.

The patient whose illness is complicated by chronic disease or sepsis might require more intensive therapy and certainly the patient with overt neurological components will need an altered therapeutic program. The advanced neurological case requires intensive therapy for periods up to one year despite adequate hematological response.

Oral therapy with vitamin B_{12} alone is effective only with varying huge amounts which are at present uneconomical. Recently interaction products of fractions derived from hog stomach with vitamin B_{12} have shown promise as an effective oral treatment of pernicious anemia. These are given as tablets or capsules swallowed by the patient one to three times daily. We have used several experimental oral preparations. They have varying therapeutic potency but Figure 2 shows a good response to oral medication. Some of these may eventually prove to be effective therapy in the uncomplicated case.

At the Henry Ford Hospital we have been interested in the administration of vitamin B_{12} by the respiratory tract.[10,11] It is the ready availability of the large capillary bed of the respiratory

mucous membranes which suggested this as an advantageous therapeutic route. Aerosol inhalation of crystalline vitamin B_{12} can be demonstrated to produce complete hematological response in pernicious anemia patients as shown in Figure 3. Similar responses result from the inhalation or nasal insufflation of vitamin B_{12} lactose powder.[7] A single application of 150 micrograms of B_{12}

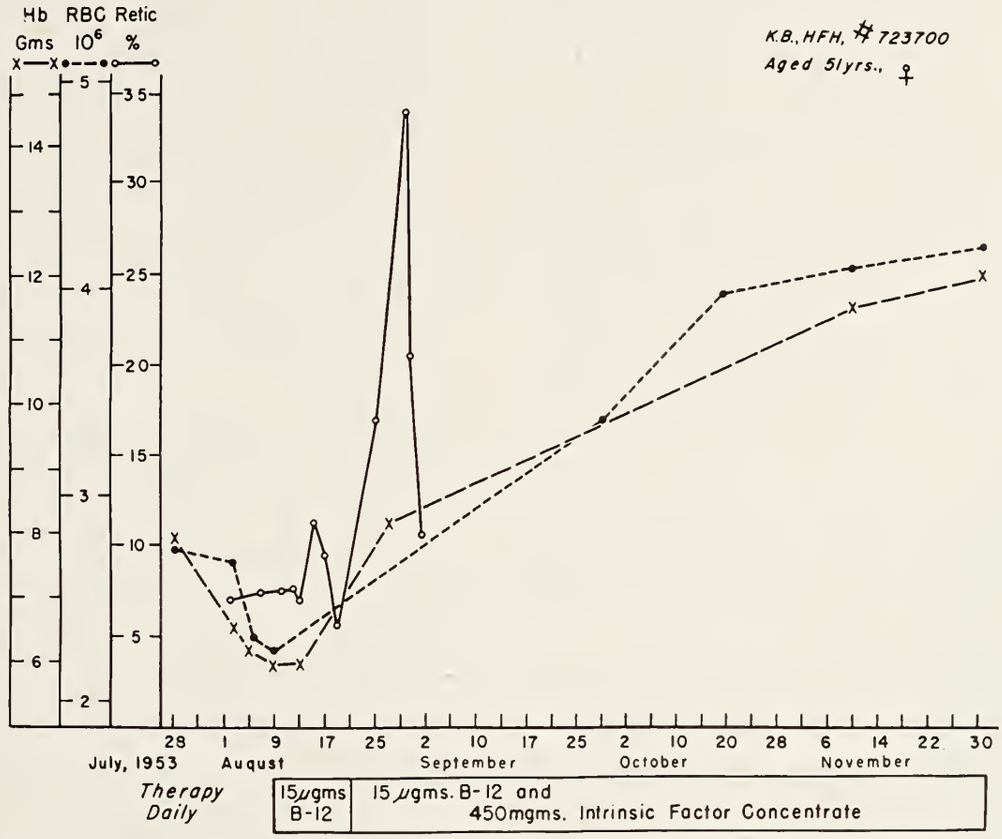


Fig. 2. Oral treatment of pernicious anemia with B_{12} and intrinsic factor concentrate.

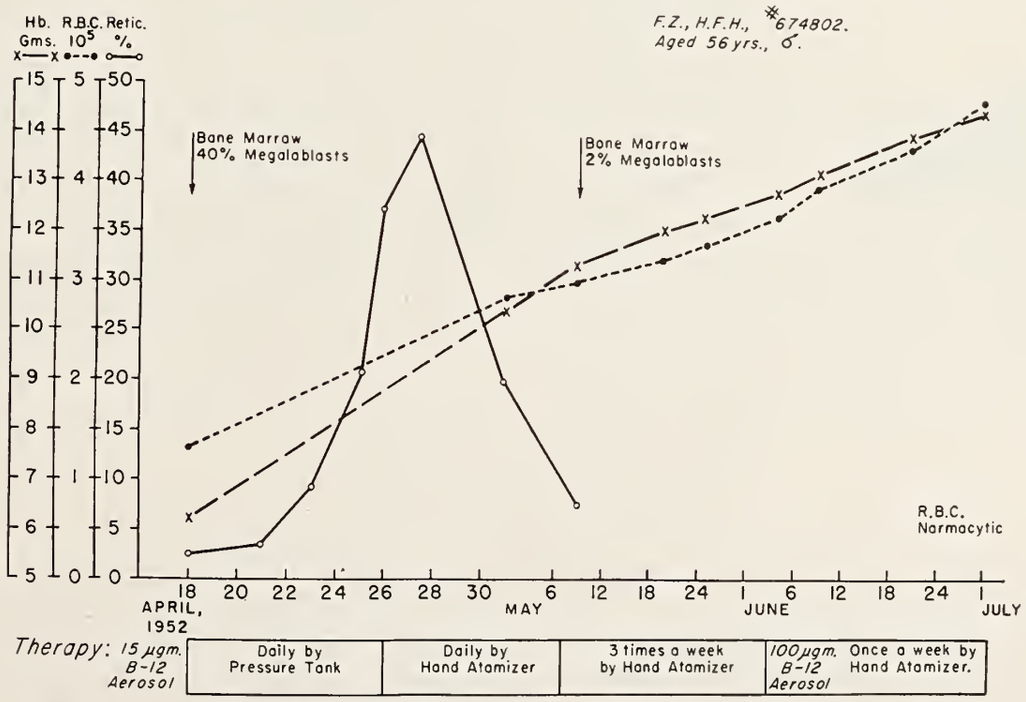


Fig. 3. B_{12} aerosol treatment in pernicious anemia. (Reproduced from an article by: Monto, R. W.; Rebuck, J. W., and Brennan, M. J.: Crystalline B_{12} inhalation therapy in pernicious anemia. Am. J. M. Sc., 225:113, 1953. By permission of the editor and publisher.)

crystals on the nasal turbinate mucosa gave a complete remission lasting for three months. In addition to the resolution of the anemia we encountered complete relief from the gastrointestinal symptoms and improvement in the neurological manifestations comparable to parenteral therapy.

Summary

The specific anti-pernicious anemia substance or extrinsic factor of Castle is believed to be vitamin B_{12}. The intrinsic factor remains to be completely identified. At present parenteral vitamin B_{12} is the treatment of choice for pernicious anemia. The near future may demonstrate the complete effectiveness of oral or nasal medication, thus simplifying further the therapy for the pernicious anemia patient.

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PATIENTS WITH JAUNDICE

(Continued from Page 1097)

tion, which is, they believe, obviated by the use of the defunctioned loop. My own experience leads me to believe that while the Roux Y technique is preferable, the method of direct anastomosis is an acceptable procedure. If the opening is sufficiently large, ascending infection does not actually seem to present a problem and I have had some of my best and longest successful repairs by this method—used in most instances at the end of a long, tedious, bloody operation when I thought that rapid conclusion of the operation was more important than the use of a defunctioned loop which of course requires an additional anastomosis.

There are of course other causes of obstructive jaundice, such as congenital anomalies, atresias, intestinal parasites, pancreatitis, et cetera, but these are relatively uncommon as compared with the three main types and will not be discussed.

COST OF MEDICAL EDUCATION

(Continued from Page 1100)

crease public support for the schools.

At this point one may expect to hear the cry, "Socialism." It has in fact already been raised. Personally, I am not concerned with this label as applied to my thinking. I have my own term for my view, "Social Justice." The only legitimate objection to the costs of medical education that can be made today is that too great a burden is being placed upon the student. It is my considered opinion that this burden should be lightened at least by eliminating all fees, even though this procedure would add to the worries of college presidents and deans. And why worry about them? After all they have chosen their pro-crustean bed.

President's Message



Swan Song

By the time this appears in print, another President will have assumed this honorable office, and the State Society will have embarked on another year of progress. But I cannot fail to record my deep appreciation for this memorable year in my life. I find words inadequate to express the pride and satisfaction I feel for having been chosen to this high office in the Michigan State Medical Society.

The deep and abiding friendships with the Officers and Councillors has been most gratifying. I can only heap more praise on the chairmen and members of our numerous committees. Our progress has been dependent on the combined, generous co-operative efforts of all.

One of my last major assignments was to appoint a study committee to consider possible revisions of the fee schedule for services rendered to patients holding contracts with Michigan Medical Service The efforts of this special committee are of prime importance to the entire membership of the MSMS. Once again, you will be given an opportunity to evaluate your services. This calls for a forward look, since our services are now subject, in large part, to the bargaining tables between Labor and Management.

Let us hope that the accomplishments of this new committee will truly reflect the thinking of the rank and file of our profession. And we trust their conclusions and recommendations will be in the best interests of both the public and of medical practice.

Robert H. Baker

President, Michigan State Medical Society

Postgraduate Continuation Courses--

Wayne University College of Medicine

September 12-December 3, 1955

These courses are open to all qualified persons.

Veterans receiving benefits under the G. I. Bill should contact Dr. Arthur Johnson, Veterans Administrator at Wayne University, 666 Student Center Building, 5050 Cass.

Registration for these courses should be made in the office of Postgraduate Medical Education at the College of Medicine, 1401 Rivard.

Title of Course	*Place*	*Time*	*Fee*
	MICROBIOLOGY		
Microbial Genetics	College of Medicine	Mon. & Wed. 4-5	$15.00
Seminar	College of Medicine	Fri. 3-4	$15.00
	PHYSIOLOGICAL CHEMISTRY		
Seminar	College of Medicine	Weds. 3-4	$15.00
Special Topics	College of Medicine	Mon. 1-2	$15.00
	PHYSIOLOGY & PHARMACOLOGY		
Cellular Physiology	College of Medicine	Tues. 1-2 Thurs. 1-5	$30.00
Seminar	College of Medicine	Tues. 4-5	$15.00
	PATHOLOGY		
Beginning Hematology	College of Medicine	Mon. 1-5	$50.00
Gynecologic Pathology (Limit 40)	Woman's Hospital (Jackson Mem. Audit.)	Weds. 1:30-5	$50.00
Pathology of Heart	College of Medicine	Thurs. 1-3	$50.00
	DERMATOLOGY		
Seminar in Dermatology	Receiving Hospital	Weds. 10-12	$15.00
Dermopathology Seminar	Receiving Hospital	Weds. 1-2	$15.00
	INTERNAL MEDICINE		
Medical Conference	Receiving Hospital 243 Farwell Annex	Thurs. 5-6	$15.00
Gastroenterology Clinic	Receiving Hospital 243 Farwell Annex	Sat. 8-9 a.m.	$15.00
Medical X-Ray Conference	Receiving Hospital 243 Farwell Annex	1st, 3rd, 5th Tues. 11-12	$15.00
Medical Pathologic Conf.	Receiving Hospital 243 Farwell Annex	Weds. 11-12	$15.00
	ONCOLOGY		
Cancer Detection	Yates Clinic	Weds. 3-5	$25.00
	SURGERY		
Seminar	645 Mullett, 4th Floor	Mon. 4-5	$15.00
	(Beginning first Monday in October)		
	COMPREHENSIVE UNIT COURSE		
Basic Ophthalmology	Rm. 106 Kresge Eye Bldg., 690 Mullett	Full Time	$500.00
	PSYCHIATRY		
Psychosomatic Conference	201 Farwell Annex Receiving Hospital	Tues. 11-12 (Oct. 4, 18, Nov. 1)	$15.00
Psychoanalytic Psychiatry	201 Farwell Annex Receiving Hospital	Mon. 11-12	$15.00

Editorial

THIRTY-FOUR YEARS OF MEDICAL PROGRESS

IN 1921 Frederick A. Coller, M.D., newly appointed to the Department of Surgery, University of Michigan Medical School, found a situation he did not like. Many of the doctors of the state expressed open criticism and resentment against the University Hospital as being in direct competition in the practice of medicine. Dr. Coller felt that a state medical school could exist and become great only through full co-operation with the medical profession of that state.

With characteristic Coller drive, a number of meetings were arranged with county medical societies during the vacation period. Thus Dr. Coller and LeRoy C. Abbott, M.D., of the Department of Orthopedics, met Edwin L. Thirlby, M.D. They found that Dr. Thirlby had made arrangements for a social day of fishing and dining followed by the formal medical talks on the next day. All members of the Grand Traverse-Leelanau County Medical Society attended both meetings and became convinced that these doctors from Ann Arbor were thoroughly dedicated to teaching and totally interested in advancing medical knowledge and skills amongst the doctors of the state. On the other hand, Dr. Coller found a group of doctors eager for new knowledge, attentive, and appreciative of his efforts.



THE BIG THREE AT THE COLLER-PENBERTHY CLINIC

Grover C. Penberthy, M.D., Detroit; E. L. Thirlby, M.D., Traverse City (*center*); and F. A. Coller, M.D., Ann Arbor (*right*).

During this two-day meeting, the frequent talks between Dr. Coller and Dr. Thirlby resulted in the start of an intimate friendship which became increasingly close throughout the following years. During these talks, it became evident that both doctors thought alike: that the rural physicians were in need of a continuing educational program which would bring to them knowledge of the advances in medical techniques, and that the University had much to offer in supplying this knowledge. As a result, plans were made for an annual meeting at Traverse City.

Dr. Coller further realized that here was an opportunity to observe closely the results of postgraduate medical teaching and to evaluate techniques in presentation of medical knowledge. From time to time the program was changed in character. Emphasis was placed on common disease conditions, knowledge of which could be used in the daily practices of the audience. Information was brought to the group regarding the results or the prospects of various research projects at the University. Experiments were conducted in the various methods of subject presentation. For speakers, Dr. Coller brought in the top talent of the University, representing all the specialties of medicine, and later invited speakers from Wayne

Coller-Penberthy Clinic—1955

The thirty-fourth annual Coller-Penberthy Clinic was held at the Traverse City Golf and Country Club, Traverse City, August 25 and at James Decker Munson Hospital, August 26.

Speakers at the Country Club included Carl E. Badgley, M.D., Paul S. Barker, M.D., Frederick A. Coller, M.D., Marion S. DeWeese, M.D., Thomas N. Evans, M.D., Albert C. Furstenberg, M.D., Edgar A. Kahn, M.D., Isadore Lampe, M.D., Reed M. Nesbit, M.D., Herman H. Riecker, M.D., John M. Sheldon, M.D., and Harry A. Towsley, M.D., all of Ann Arbor; and Homer A. Howes, M.D., Richard M. McKean, M.D., Grover C. Penberthy, M.D., Laurence Reynolds, M.D., and Albert D. Ruedemann, M.D., all of Detroit.

Dr. Alexander Grant Ruthven, Dexter, Michigan, immediate Past President of the University of Michigan, was guest speaker at the dinner. His interesting subject was "The World We Live In."

Surgical clinics were held at Munson Hospital the following day.

A total of 167 registered at the 1955 CP Clinic—the largest in the history of the organization.

University, and occasionally from other parts of the country. Grover C. Penberthy, M.D., of Detroit, early became an interested and enthusiastic supporter and promoter of these meetings.



SIX PAST PRESIDENTS ATTEND 1954 COLLER-PENBERTHY CLINIC

Grover C. Penberthy, M.D., Detroit; the late Claude R. Keyport, M.D., Grayling; Louis J. Hirschman, M.D., Traverse City; Alexander G. Ruthven, Ph.D., Ann Arbor; Howard H. Cummings, M.D., Ann Arbor and Edward F. Sladek, M.D., Traverse City. All are Michigan State Medical Society Past Presidents except Doctor Ruthven, who is Past President of the University of Michigan.

A few years ago, this postgraduate teaching program was formally designated as The Annual Coller-Penberthy Medical Conference, honoring two of its greatest sponsors. Dr. Thirlby, the major stimulant to the continuation of this annual meeting, has always tried to remain in the background, insisting that credit for accomplishments be given to others. But it was at his insistence that the sociability aspect of the meetings has been kept, as he felt it was important in developing at atmosphere of intimacy and friendship.

Drs. Coller and Penberthy, and particularly Dr. Thirlby, should feel proud of their work. Over the years they have observed a progressive increase in medical knowledge and techniques and the results of their daily use in the care of patients, until now the Traverse City region is becoming known as one of the great medical centers of the state. This reputation is not confined to the city itself, but extends to and includes all the rural practitioners of the region. Without question, the Annual Coller-Penberthy Medical Conference is a major contribution to the present high standard of medical care which the people of the Traverse City area receive.

E. F. SLADEK, M.D.
Traverse City, Michigan

AN OPPORTUNITY

SINCE the inception of Michigan Medical Service, we have heard complaints from some of our doctors that fees for services were minimal or too low. They forget that our prepayment plans guaranteed payments without collection costs or loss from a large percentage of people who had not been paying doctors' bills with any regularity. The $2,500 ceiling for family earnings included 85 per cent of Michigan's population at the time Blue Shield was originated. Payment rates and the subscription prices had to be held down to sell the service. The $5,000 ceiling policy was much more liberal, but again the costs were fixed at a minimum. The workers were paying the bills which necessarily held the compensation and the premiums low.

During over sixteen years of activity, there never has been a time when premiums or fees could be even slightly liberalized. Now, with the new guaranteed annual wage, with labor having secured a promise of full health insurance coverage to a $6,000 family income level, to be paid for by industry, a completely new concept is possible.

For the first time, we may and must write a contract which is adequate for the doctor, fair to the employing industry, satisfactory to the insured, and purchasable by those who are paying their own way. The Council of the Michigan State Medical Society has authorized our president

to appoint a representative committee to survey all our members and formulate the new contracts, hopeful for a report at the meeting of the House of Delegates in September, 1955.

The new contract must have several completely new features:

1. It must pay the doctor adequately.
2. It must meet the demands of the insured—complete service— "full payment" if not over $6,000 family income.
3. It must be fair to industry.
4. If possible, it must be limited to a special category with guaranteed annual wage.

It would be a shame if a few non-conforming members forced this service away from our voluntary non-profit medical and surgical plans.

SOMETHING NEW

WE HAVE expressed our belief that medicine and medical service are approaching a period of far greater significance than what we faced at the beginning of our prepayment voluntary plans. Demands are rapidly increasing, and groups are insisting on fuller coverage. The employe and the employer have a right to know exactly what to expect. The new guaranteed annual wage contracts are establishing challenging projects. Labor is promised health benefits equivalent to a $6,000 ceiling insurance policy—half of which is paid for by employment.

We might be able to write a type of policy which could be extremely satisfying all around. Let's consider a sufficient but rigid fee schedule which will be complete payment for the service rendered. There would be no extra charges to the patient. Let's also consider allowing Michigan Medical Service to pay the bills much as the present VA bills, and charge the contracting employers a determined percentage for administration and a profit percentage of one, or an agreed per cent to maintain the program.

We believe our doctors would be happy. The advisory committees would and should exercise a degree of control by supervising payment on any unusual bills. Employers would be as satisfied as the present labor relations allow, but being the ones who pay, could always cancel or change the contract if conditions or abuses warrant.

THE DOCTOR'S INCOME

IT IS a long time since we have discussed the doctor's income. It is time for careful study. Consumer market reports show that 24.7 per cent of Michigan's families have incomes under $2,500 a year. The $2,500 ceiling policy is still essential. In Michigan 48.9 per cent of families earn between $2,500 and $6,000; 26.4 per cent earn over $6,000. For Detroit only, this is 25.7 per cent with earnings over $6,000. The average worker in Detroit earns $4,300.

The new policies to be written for the guaranteed annual wage $6,000 ceiling will be paying higher rates than normally charged for about 25 per cent of our patients, if the doctor grades his charge to the patient's ability to pay. We all know this is true. That concept is the only excuse of ever making charges higher than the insurance pays.

Others than the guaranteed annual wage group who might wish to subscribe for this service must understand its special privilege and expect to pay a higher premium.

The doctor's total income is involved. It will probably be higher if strict conformity is given, and a completely contented clientele will be the result. No collection costs and 25 per cent of patients paying more than their natural share will easily overbalance the occasional one who could be asked to pay extra.

NATIONAL LEGISLATION

CONGRESS is now in recess, and there are bills pending in which the medical profession has a profound interest. Social security again is being amended. The bill, as it passed the House under cloture (no amendment—no public hearing —and only forty minutes of debate) does not include doctors of medicine in the new list.

We know a great many of our members hope for voluntary inclusion. They believe we should be given the choice. Many of our younger and also older members believe they would have much to gain by inclusion. We have heard the argument on both sides, and we favor the voluntary listing.

There is provided a changed retirement date for women workers at age sixty-two.

The expense of the whole program is enormous. It is proposed to make another 1 per cent in-

crease next January to carry the new benefits. We have always believed that the compulsory retirement at the age of sixty-five was too young, especially when the average life expectancy has now reached about seventy years. To begin paying women at sixty-two is a very unnecessary additional burden and differentiates between men and women. We still believe that when a person reaches his retirement age, he should draw his benefits without curtailment on account of a continuing earning ability. If the benefit is earned, it is rightfully his.

The provision of benefits for the disabled at age fifty is rather all-inclusive. The American Medical Association's only interest in disability insurance is because federal machinery to supervise the certification of disability would project the government into the field of medical practice. We suggest these three changes in the new bill before it is finally re-enacted. The AMA Board of Trustees said, "The distance between our present medical freedom and complete government regulation has narrowed considerably. The remaining gap will be closed completely unless physicians throughout the nation take constructive action to educate themselves, the public, and their congressmen and senators during the next few months."

RETIREMENT INCOME

SINCE September, 1945, we have published fifteen editorials on the subject of fair play for professional people in building retirement plans during their relatively few active and higher income years. After about two years, the AMA joined in this project. Many bills have been introduced of the Jenkins-Keogh type. Nothing has happened; but just recently the House Ways and Means Committee favorably reported with five amendments a bill which is quite inadequate but is a long step in the right direction: HR 10 (Keogh) tax postponement for self-employed. This bill is very restricted, not over $5,000 investment in any one year and a maximum of $100,000 at any one time.

Our members should familiarize themselves with these legislative matters. They should make opportunities to talk with our congressmen and senators who will be anxious for personal contacts during the interim sessions. These projects will be in the Senate but might be referred back to the House, if amended. Now is our golden time to work.

APPRECIATION

WE WOULD like to express our sincere thanks for the very fine manner in which Dr. Marion S. DeWeese procured in advance for publication the manuscripts presented at the Coller-Penberthy Clinic in August.

Several of the papers read at the Coller-Penberthy Clinic were not used in this issue of THE JOURNAL because of lack of space. They are in type, however, and will be used as soon as space permits.

CLINICAL SIGNIFICANCE OF HOARSENESS

(Continued from Page 1076)

most instances, a careful physical examination will reveal the identity of the lesion responsible for impaired function of one or both vocal cords. It is to be remembered, however, that some 16 per cent of unilateral laryngeal paralysis are so-called idiopathic. In many of these patients, the alteration in voice is so slight that it is barely perceptible.

3. A plea is made for an evaluation of the clinical behavior of lesions of the larynx and critical interpretation of pathological diagnoses which do not substantiate the clinical findings. Some concert of values must exist between the two before radical surgical interference is justified.

4. One must not despair of identifying the lesion pathologically when strong clinical evidence of carcinoma seems obvious. We have had many patients in whom the third or fourth biopsy has presented the true pathologic picture.

Although almost all tumors of the testes are malignant, such tumors are rare.

* * *

There is no evidence that trauma is an etiological factor in cancer of the testes.

* * *

It has been estimated that cancer occurs 20 to 40 times oftener in undescended testes than in normal organs.

* * *

Tumors of the testes metastasize first and most often by the lymphatics but may also metastasize by the blood stream.

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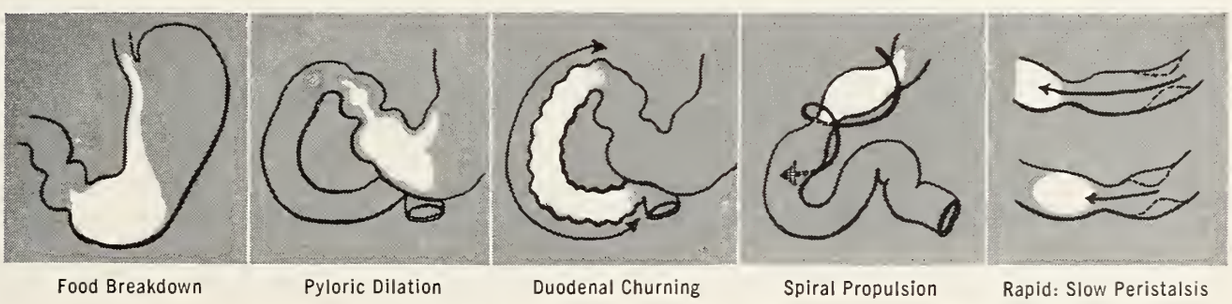
Metamucil is the highly refined mucilloid of the Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The usual adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice one to three times daily. An additional glass of liquid may be taken if indicated.

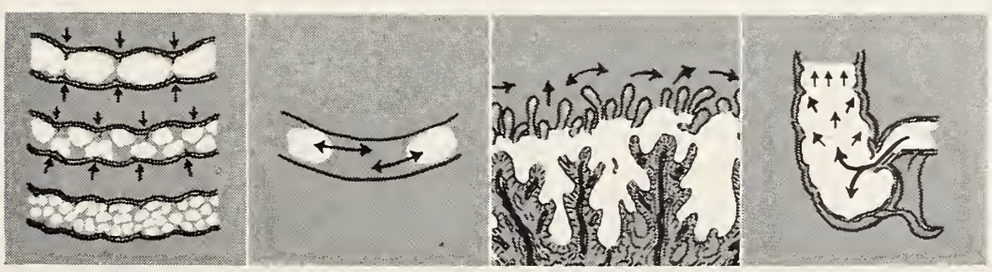
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SEARLE

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

TB CASEFINDING SET FOR DETROIT-SOUTHEASTERN MICHIGAN

An intensive TB casefinding program, utilizing all available state and local resources and facilities, will be launched September first in the high incidence areas within Detroit and southeastern Michigan. Counties to be incuded are Macomb, Monroe, Oakland, St. Clair, Washtenaw and Wayne, together with Detroit City. This area represents a combined population of approximately 3,625,000 with an estimated 3,000,000 x-rayable adults.

Organization work which is already under way will be stepped up in September. The first x-ray operations are scheduled to begin early in October. The mobile x-ray units of the Michigan Department of Health will be concentrated in the area, augmented with local facilities. The program will involve also tuberculin testing and contact tracing.

1955 BIRTHS STILL LEADING

Births for the first six months of 1955 were 1,494 ahead of those for the same interval in 1954. This is in marked contrast to the 6,012 births by which 1954 led 1953 at the half year mark. Moreover, the January, 1955 births exceeded by only one the births for January, 1954 and March, May and June of 1955 fell slightly behind the corresponding months of 1954.

HEALTH OFFICERS AND SANATORIUM DIRECTORS JOIN FORCES

The Michigan Health Officers Association and the Michigan Sanatorium Directors Association at the first joint meeting of the organization held at Houghton Lake recently discussed tuberculosis control in detail with special attention to casefinding methods, recalcitrant patients and newer therapy in tuberculosis care.

Plans were made for following up this joint meeting with continuing committee work dealing with all phases of the tuberculosis control program.

HDA SIGNS INCREASING

Of the estimated 5,000 vacation spots and motels in Michigan inspected each spring by local health department sanitarians, some 2,000 have now qualified to display the state's trim green and gold HDA, Health Department Approved, sign on their premises. By meeting the requirements of the annual re-inspection, they keep the signs from year to year.

This is the third summer of the state and locally sponsored HDA program, with a growing number of resort owners and operators coming in each year. Participation is entirely voluntary. It is also, of course, good business for the operator and if he is the kind who runs a reputable establishment he is quick to recognize the advantages of the official seal of approval.

To the highway traveler the HDA sign means that the local health department has worked with the resort operator on water supply and waste disposal, on construction, ventilation, lighting and heating of buildings, plumbing, elimination of fire and accident hazards, safety of bathing beaches and control of noxious weeds. If there is food service in connection, source and handling of foods is carefully checked.

The meaning of the sign is explained to out-of-state motorists by posters and by flyers made available at the highway department information lodges at main points of entrance to Michigan.

MCH CONSULTANT RESIGNS

Margaret S. Hersey, M.D., for the past four years a consultant in the Section of Maternal and Child Health of the Michigan Department of Health, resigned June 30 to join the staff of the Kalamazoo State Hospital as physician.

FILM LOAN SERVICE POPULAR

The department's film loan library showed record totals for the fiscal year just closed. From its establishment in 1940, the collection has grown to a total of approximately 800 films in 1955.

Films are on all phases of the public health program including mental health and alcoholism. The mental heath films are provided by the State Department of Mental Health which because of space limitations does not maintain its own film loan service. The same situation is true with the State Board of Alcoholism.

Most of the films are for general lay use, with many intended specifically for schools. In almost every subject area, however, there are films for in-service education of the professions concerned with the state's public health program, including practicing physicians.

During the past year, 5,881 film loans were handled. This added up to 12,742 showings, 4,681 to adult groups and 8,061 in schools. The audience totaled 517,592 persons. Of these persons, 146,501 were adults and 371,091 were school pupils.

Irradiation therapy is effective in ameliorating the symptoms produced by vascular tumors.

* * *

Pain in the occipital region associated with rigidity of the neck is an accompanying symptom of infratentorial tumors.

* * *

Diagnosis of cancer of the pancreas is suggested by jaundice in patients over forty, rapid loss of weight, occult bleeding and poor general condition without anemia.

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Each tablet contains:
Methscopolamine bromide ..... 2.5 mg.

Average dosage (ulcer):
One tablet one-half hour before meals, and 1 to 2 tablets at bedtime.

Supplied:
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Each 5 cc. (approx. 1 tsp.) contains:
Methscopolamine bromide ..... 1.25 mg.

Dosage:
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In Memoriam



STUART A. CAMPBELL

Doctors of medicine in cities and villages throughout Michigan lost a personal friend on July 16, 1955, with the death of Stuart A. ("Scotty") Campbell, of Grand Rapids, Public Relations Field Secretary for MSMS.

The loss goes far beyond his circle of friends, however, for Stuart Campbell was a conscientious worker who successfully devoted the most productive years of his life to some of the highest purposes of the medical profession, notably sound health legislation, better medical public relations, and the extension of voluntary health plans. His work with him was of utmost importance, and he undertook it with intense interest wherever he was, day and night. It is very possible that this ceaseless expenditure of energy was a factor in bringing death to Stuart when he was only fifty-three years old.

He was taken ill in Lansing, near the end of a very trying session of the Legislature. Stuart returned home to Grand Rapids for diagnosis and a rest, and his death followed complications which developed.

Born in Randolph, Iowa, Stuart spent most of his early years in several pleasant little Kansas communities. Following his graduation from the University of Kansas at Lawrence, he engaged in various sales and business ventures in the Central States and Southwest. The son of an independent businessman and landowner, Stuart was schooled in the principles of freedom. His wholehearted belief in these principles was the foundation upon which he built his career of service to the causes of Medicine.

To those not personally acquainted with Stuart Campbell, this review of his character may place in mind a picture of the dour, tight-lipped Scotsman in the popular legends. Such a picture would be far from the truth, for his buoyancy, good fellowship, conversational ability, and genuine pleasure in meeting and being in the company of others are Stuart's most memorable traits. Probably best remembered by those close to him is the vision of Stuart reaching for a high note—hand cupped behind his ear—as he harmonized at an impromptu midnight songfest.

He was brought to Michigan from Omaha by Blue Shield after a number of years' experience pioneering similar medical service plans in Kansas and Nebraska, but he never actually became a member of the Michigan Medical Service family. Almost upon arrival some six

Say you saw it in the Journal of the Michigan State Medical Society

years ago—at the height of the postwar battle to save Medicine from government control—Stuart joined the MSMS staff "on loan."

The "loan" proved so satisfactory that he continued with MSMS, being assigned to a geographically wide area which included much of Michigan outside the southeastern quarter and the Thumb district. Through his legislative work and his presence at most MSMS statewide functions, Stuart became known to MSMS members in every area. The House and Senate chambers of the State Capitol were his "second home," and he spent four or five days in Lansing each week from January to June—during the annual session of the Legislature.

He counted among his personal friends many members of the Legislature with whom he worked, and even those legislators who consistently voted contrary to the principles which Stuart represented usually had a smile and a cheerful word for "Stu" Campbell, the man.

Memorial services were held July 18 at East Congregational Church, Grand Rapids, where Stuart was a member and had lent his usual enthusiasm to church projects. Burial was in Pacific Grove, California, where two of his brothers reside and his parents are buried.

Stuart is survived by his wife, Nell R. Campbell, who was his frequent companion at MSMS events; a son, Stuart Hoyt, and a daughter, Alice Jean, both of Kansas City, Missouri. He also leaves his two brothers in California and a third in Pampa, Texas, and two sisters, one in Dallas, Texas, and the other in Bartlesville, Oklahoma.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

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Legal Opinion

Wm. J. Burns, Executive Director
Michigan State Medical Society
606 Townsend Street
Lansing 15, Michigan

Dear Mr. Burns:

Reference is had to the inquiry of ..... M.D., of ....., Michigan. In substance, Dr. ..... asks whether a physician who attends a person during his last illness, but who has not actually seen the patient within thirty-six hours of his death, may properly sign the death certificate.

Section 14.228, Michigan Statutes Annotated, provides in part as follows:

"In case of any death occurring without medical attendance, it shall be the duty of the undertaker or person acting as such to notify one of the county coroners, or a Justice of the Peace acting as coroner, who shall investigate or hold an inquest as the circumstances require and shall certify as to the cause of such death on the death certificate and shall sign the same officially as coroner or acting coroner."

The foregoing is from the statute pertaining to vital statistics and records.

The *Code of Criminal Procedure in Section 28.1187* (M.S.A.) provides as follows:

"It shall be the duty of any physician and of any person in charge of any hospital or institution, or of any person who shall have first knowledge of the death of any person who shall have died suddenly, accidentally, violently or as the result of any suspicious circumstances or without medical attendance up to and including at least thirty-six hours prior to the hour of death, or in any case of death due to what is commonly known as an abortion, whether self-induced or otherwise, to immediately notify the coroner of the death. It shall be unlawful for any undertaker, embalmer or other person to remove any body from the place where such death occurred, or to prepare same for burial or shipment, without first notifying the coroner and receiving permission to remove the body. (C.L. '48, § 773.19; C.L. '29, § 17421)."

The Attorney General of this State was on January 20, 1933, asked to express an opinion on the identical question. In a well-considered opinion, he reached the following conclusion:

"The purpose of the statute seems apparent, namely, to prevent the disturbance of the body of a person dying under any of the circumstances named in the statute without first notifying the coroner and getting his consent. This will, in many instances, aid in the discovery of crime. Any other interpretation of the term would, in my opinion, thwart the very purpose of the statute. The evident intent of the Legislature was to require the action of a coroner in all cases of death where a physician has not seen the patient within thirty-six hours of death."

Biennial Report, 1932-34, Page 166.

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Bronchial asthma
Inflammatory skin conditions

I concur in the conclusion reached by the Attorney General. It is my opinion that the answer to question four in Dr. ..... letter of June 3, 1955, is that the coroner should have been called and that the death certificate should have been signed by the coroner rather than by the physician who had not seen the patient within thirty-six hours of the time of his death.

Very truly yours,
J. JOSEPH HERBERT
Legal Counsel

July 14, 1955

In 1954, there was one doctor for every 730 persons in the United States .

* * *

There are 28,227 medical students in the nation's eighty-one medical schools. On the lists are 28,438 faculty members, of whom 21,328 volunteered their services free.

* * *

A total of 59,430 persons received some form of medical instruction from the medical school faculties.

* * *

Over 76 million dollars were spent in 1953-54 for new facilities. The medical school budgets for the year 1954-55 are over 143 million dollars.

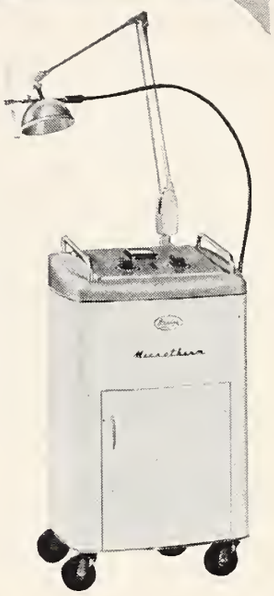
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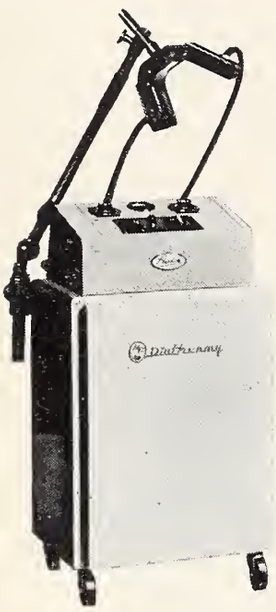
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Communications

A CONSTRUCTIVE SUGGESTION

In the secretary's letter of July 1, 1955, I read of your Foundation* for education of men for rural practice. I don't believe in scholarships, but I do believe in loan revolving funds. I am sending in a check for ten dollars, and if each M.D. in Michigan would just give ten dollars per year, it would not be long before you would be able to support or aid a goodly number of boys through school . . . although I had to stop work in 1954 I hope I shall be able to continue to give to worthwhile charities, educational funds, and universities 10 per cent of my income.

Yours very truly,
ROBERT B. KENNEDY, M.D.

Dear Dr. Haughey:

In recent months, the Treponema Pallidum Immobilization Test has been available to the practitioners of this state on a limited basis through the Maryland State Department of Health. We have searched for some publication which gave a good presentation of how best the practitioner in medicine could utilize the TPI test in his practice. The best summary which we have been able to locate appeared in THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY in the July, 1954 issue as an article by Dr. Harold J. Magnuson entitled "Interpretation of Positive Serologic Tests for Syphilis in Clinically Negative Patients."

This Department should like to request permission of THE JOURNAL to reproduce this article by mimeograph for distribution to the health officers of this state and, upon request, to the practitioners in the state. We should certainly appreciate your help in this matter. If there are any further steps which we should take in order to secure this permission, we hope you will give us the necessary information upon which to base such action.

Sincerely yours,
JOHN C. HUME, M.D., Chief
Division of VD Control

NOTE: The Editor is pleased to publish the following communications which came to Dr. Robert L. Novy. We have also received congratulatory letters from Louis M. Orr, M.D., Orlando, Florida (Councillor Medical Service); Leonard J. Raider, M.D., (Vice President of United Medical Service); George F. Lull, M.D. (Secretary and General Manager, American Medical Association); H. B. Mulholland, M.D., of Charlottesville, Virginia (AMA Board of Trustees); and Elmer Hess, M.D. of Erie, Pennsylvania, President of the AMA.

Dear Dr. Novy:

May I thank you for the June issue of THE JOURNAL OF THE MICIGAN STATE MEDICAL SOCIETY, which contained not only your message but what I would call a companion message from Lewis Hersey. Certainly, both of you have left much food for thought and echo each other's ideas in your articles.

I am, of course, one of those who can remember well the many years of battling we have had on so-called

---

*Michigan Foundation for Medical and Health Education.

(Continued on Page 1120)

Say you saw it in the Journal of the Michigan State Medical Society


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Neo-Synephrine promptly constricts engorged capillaries thus reducing swelling and "bogginess" of the allergic nasal mucosa.
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Neo-Synephrine (brand of phenylephrine) and Zephiran (brand of benzalkonium chloride — refined), trademarks reg. U. S. Pat. Off.

(Continued from Page 1118)

nationalization of Blue Shield programs and service contracts. I have in the past few years completely changed my concepts and believe that the early advocates had something but which at the time of their advocacy was not as clearly defined or crystalized as it is now. In that you and Hersey have made such profound statements as to the future of Blue Shield, it would seem to me that there should be an early meeting of the minds wherein some positive and definite decisions could be made on a national basis.

I was delighted to read the splendid tributes to John Castellucci and J. Earl McIntyre, both of whom I have known for many years and who are tops in their particular fields. Doctor Furstenberg is to be commended for the McIntyre tribute.

It is reassuring to know that some of our medical societies still maintain human interest to the degree that they recognize that if it were not for the loyalty and enthusiasm of people such as Earl McIntyre and John Castellucci progress in society affairs would have stagnated or at least been blunted.

With kindest regards and best wishes, I am

Sincerely yours,
J. D. McCarthy, M.D.
(Chairman, Council on Medical Service, AMA)

Omaha, Nebraska
July 9, 1955

Dear Dr. Novy:

I have just received the copy of The Journal of the Michigan State Medical Society for June, which as you know contains your very fine article "Medicine's Unsolved Problem."

Permit me to congratulate you upon the fine article and for so forcibly bringing the facts to the attention of all who might see your excellent article.

With warmest personal regards, and hoping to see you at the next Council Meeting, I am,

As ever,
David B. Allman,
(Chairman, Committee on Legislation, AMA)

Atlantic City, N. J.
July 11, 1955

Dear Mr. Goodrich:

Thank you very much for sending me the June number of The Journal of the Michigan State Medical Society. I have gone over the article by Dr. Novy with a great deal of interest.

Sincerely yours,
Walter B. Martin, M.D.
(Past President, AMA)

Norfolk, Virginia
July 11, 1955

Dear Dr. Novy:

Thank you for having Mr. Goodrich send me a copy of The Journal of the Michigan State Medical Society which contains your article.

I have read it with a great deal of interest, and I think I can sum up my opinion of it best by saying I wish there were some way in which *it could be made required reading for every doctor in the United States.*

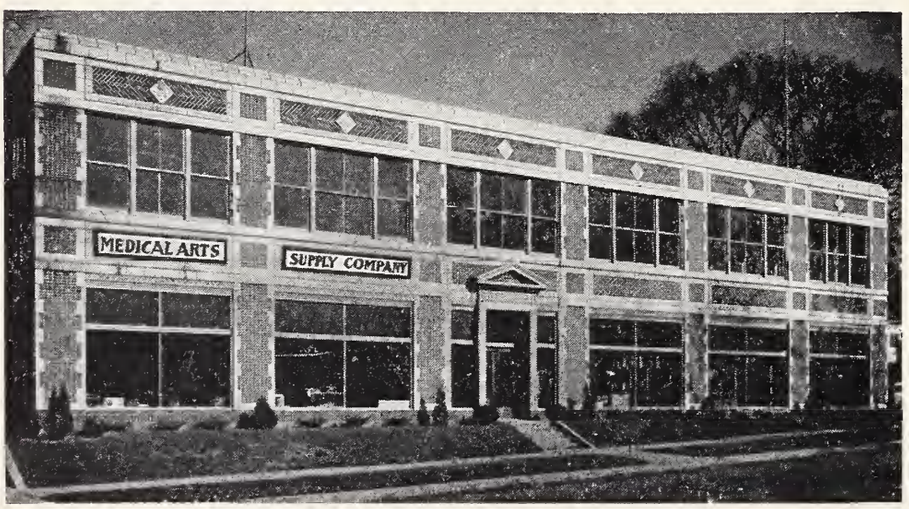
With best wishes,

Sincerely yours,
Louis H. Bauer, M.D.
(Chairman of the Board, United Medical Service; Past President AMA)

New York, N. Y.
July 18, 1955

(Continued on Page 1122)

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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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(Continued from Page 1120)

Dear Dr. Novy:

I received a copy of THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY for June, 1955, and have read with interest your article. Coming from an individual who has more basic knowledge of service plans than most, I was particularly taken with your background philosophy.

With best wishes,

Sincerely yours,
GUNNAR GUNDERSEN, M.D.

La Crosse, Wisconsin
July 20, 1955

Dear Mr. Goodrich:

I have read Dr. Novy's article with considerable interest. He is a scholar and a gentleman and certainly knows the ins and outs of pre-payment plans as well as anyone in the United States.

I am sorry that Dr. Novy did not mention the suggestion which I made as President of the American Medical Association regarding the standard of fees on a regional basis. I do not believe that either the nonprofit companies or the commercial carriers can ever satisfy the millions of people covered until such time as the medical profession itself in various localities decides what is and what is not a fair fee for a certain procedure.

Thank you so much for sending THE JOURNAL on to me. When you see Dr. Novy, please extend to him my sincere regards.

Very truly yours,
EDWARD J. MCCORMICK, M.D.
(Past President, AMA)

Toledo, Ohio
July 25, 1955

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. . . . . NEWS MEDICAL

MICHIGAN AUTHORS

Alexander Blain, III, M.D., Detroit, is the author of an article entitled "William Stewart Halstead," published in THE JOURNAL of the Michigan State Medical Society, February, 1954, and reprinted in the *Alexander Blain Hospital Bulletin,* November, 1954-February, 1955.

Thomas Francis, Jr., M.D., R. F. Korns, R. B. Voight, M. Boisen, F. M. Hemphill, J. A. Napier, and **E. Tolchinsky,** Ann Arbor, are the authors of an article entitled "An Evaluation of the 1954 Poliomyelitis Vaccine Trials. Summary Report," published in the *American Journal of Public Health,* May, 1955.

Donald S. Bolstad, M.D., Detroit, is the author of an article entitled "The Coexistence of Malignant Tumors in the Trachea and a Distal Secondary Bronchus" published in the second quarterly review issue, 1955, of the *Annals of Otology, Rhinology and Laryngology.*

Ellis J. Van Slyck, M.D., Detroit, is the author of an article entitled "Pancytopenia Associated with Rheumatoid Arthritis—Felty's Syndrome," published in THE JOURNAL of the Michigan State Medical Society, July, 1954, and reprinted in the *Alexander Blain Hospital Bulletin,* November, 1954-February, 1955.

Robert C. Moehlig, M.D. and **Richard C. Schultz, M.D.,** Detroit, are the authors of an article entitled "Familial Diabetes Insipidus" published in *The Journal of the American Medical Association,* July 2, 1955.

Alexander Blain, III, M.D., and **Stuart W. Hamburger, M.D.,** Detroit, are the authors of an article entitled "Refractory Symptomatic Prolapsed Gastric Mucosa Relieved by Gastrectomy," published in *Annals of Surgery,* January, 1955, and reprinted in the *Alexander Blain Hospital Bulletin,* November, 1954-February, 1955.

Francis S. Gerbasi, M.D., Long Beach, California, and **Alexander Blain, III, M.D.,** Detroit, are the authors of an article entitled "Surgical Aspects of Dissecting Aortic Aneurysms," presented at the Joint Symposium of the International Society of Surgery and the International Society of Angiology in Lisbon, Portugal, September, 1953, published in *Angiology,* June, 1954, and reprinted in the *Alexander Blain Hospital Bulletin,* November, 1954-February, 1955.

Richard L. Rapport, M.D., Robert B. Allen, M.D., and **George J. Curry, M.D.,** Flint, are the authors of an article entitled "The Fractured Rib—A Significant Inquiry," read at the Eleventh Annual Meeting of the Central Surgical Association, Detroit, February, 1954, and published in AMA *Archives of Surgery,* July, 1955.

Edward R. Munnell, M.D. and **Joseph L. Ponka, M.D.,** Detroit, are the authors of an article entitled "Situs Inversus and Acute Cholecystitis" published in AMA *Archives of Surgery,* July, 1955.

Joseph A. Johnston, M.D., Detroit, is the author of an article entitled "Nutrition and Infection," read before the AMA Section of Pediatrics, Miami, November 29, 1954, and published in the *Henry Ford Hospital Medical Bulletin,* June, 1955.

E. J. Alexander, M.D., Detroit, is the author of an article entitled "Presenting the Diagnosis of Functional Illness," published in the *Henry Ford Hospital Medical Bulletin,* June, 1955.

Thaddeus H. Joos, M.D. and **Robert S. Ellis, M.D.,** Detroit, are the authors of an article entitled "Asthma in Children," published in the *Henry Ford Hospital Medical Bulletin,* June, 1955.

Robert A. Schimek, M.D., Detroit, is the author of an article entitled "A New Ptosis Operation Utilizing Both Levator and Frontalis," published in AMA *Archives of Ophthalmology,* June, 1955.

William B. Hubbard, M.D., Flint, and **William C. Hubbard, A.B.,** Ann Arbor, are the authors of an article entitled "Chronic Tearing (Lacrimation and Epiphora)" published in THE JOURNAL of the Michigan State Medical Society, May, 1955, and abstracted in the *Digest of Ophthalmology and Otolaryngology,* June, 1955.

Frank R. Menagh, M.D., Detroit, is the author of an article entitled "Florence Nightingale and One Hundred Years of Modern Nursing," published in the *Henry Ford Hospital Medical Bulletin,* June, 1955.

D. Emerick Szilagyi, M.D., Claibourne P. Shonnard, M.D. and **Gerald A. Lo Grippo, M.D.,** Detroit, are the authors of an article entitled "The Artery Bank," published in the *Henry Ford Hospital Medical Bulletin,* June, 1955.

Hermann Pinkus, M.D., Ralph M. Johnston, M.D., and **Samuel Albert,** Detroit, are the authors of three articles: "The Effect of Transplanted and Spontaneous Mouse Mammary Gland Carcinomas on Lymph Nodes," published in *Cancer Research,* November, 1954; "Serum Proteins in Mice Bearing Induced and Spontaneous Mammary Gland Carcinomas," published in *Cancer Research,* December, 1954; and "The Uptake of Radioactive Phosphorus by Mouse Lymph Nodes during Sensitization to a Foreign Protein," published in *Journal of Immunology,* November, 1954.

Kenneth B. Babcock, M.D., formerly of Detroit, is the author of an article entitled "Accreditation Problems" published in *Hospitals,* July, 1955.

(Continued on Page 1126)

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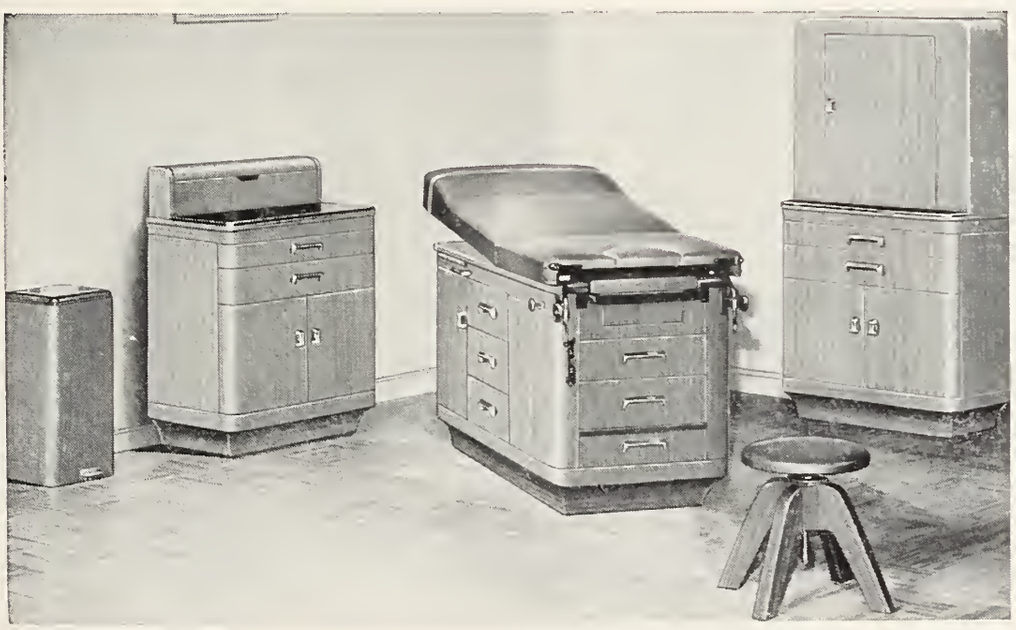
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(Continued from Page 1124)

Carey P. McCord, M.D., Ann Arbor, is the author of an article entitled "Occupational Health Publications in the United States Prior to 1900," published in *Industrial Medicine and Surgery,* August, 1955.

Kenneth W. Cochran, Ph.D., Ann Arbor, is the author of an article entitled "Experimental Chemoprophylaxis in Poliomyelitis," published in the *University of Michigan Medical Bulletin,* June, 1955.

David G. Dickinson, M.D., Ann Arbor, is the author of an article entitled "The Role of Respirator Centers in the Treatment of Poliomyelitis," published in the *University of Michigan Medical Bulletin,* June, 1955.

James W. Rae, Jr., M.D. and **George H. Koepke, M.D.,** Ann Arbor, are the authors of an article entitled "Rehabilitation of the Poliomyelitis Respirator Patient," published in the *University of Michigan Medical Bulletin,* June, 1955.

Gordon C. Brown, ScD., Ann Arbor, is the author of an article entitled "Laboratory Aspects of the Field Trial of the Poliomyelitis Vaccine," published in the *University of Michigan Medical Bulletin,* June, 1955.

Robert Cowen, M.D., Detroit, is the author of an original article "Primary Adenocarcinoma of the Epididymis: A Case of Embryonal Teratoma, with Autopsy Findings," which was published in *The Journal of Urology* in December, 1954.

James Clark Maloney, M.D., Birmingham, is the author of an original article "Psychic Self-Abandon and Extortion of Confessions" which was published in the *International Journal of Psycho-Analysis* (Great Britain) Volume XXXVI—1955.

* * *

Medical Relics Wanted.—During the annual meeting of the Michigan State Medical Society to be held Sept. 27-30, 1955, in Grand Rapids, the Kent County Medical Society is sponsoring an exhibit in the Grand Rapids Public Museum illustrating some interesting events in the history of medicine in Michigan.

The committee in charge is seeking medical relics for this exhibit and for a permanent collection to be exhibited in the Grand Rapids Public Museum. Anyone having any medical relic of historical interest is requested to write to this committee: The Museum and Library Committee of the Kent County Medical Society, Grand Rapids.—Ruth Herrick, M.D., *Chairman,* Luebert L. Doctor, M.D., Henry P. Kooistra, M.D., John E. Summers, M.D., H. C. Swenson, M.D., and William Vis, M.D.

* * *

A. D. Ruedemann, M.D., Detroit, was the guest speaker at the twenty-eighth annual Spring Congress of Gill Memorial Eye, Ear and Throat Hospital in Roanoke, Virginia. His subjects were "Enucleation versus Evisceration with Associated Implants," "Foveal Co-ordination

(Continued on Page 1128)



Meat...

and Biologic Facts of Protein Metabolism

The classical work of Cannon and his associates* in the field of protein metabolism has contributed significantly to our knowledge of the biologic utilization of protein. It has established that the dietary absence of a single amino acid quickly changes the direction of metabolic activity from anabolism to catabolism. Apparently all the nonessential amino acids play some part in sparing the essential amino acids, and all may be regarded as indispensable for optimal nutrition. It has been suggested "that for maximal tissue-utilization of amino acids at least twenty per cent of the total dietary nitrogen should come from other sources than essential amino acids."

In undernourished subjects the maintenance requirement for each essential amino acid is much greater—two to almost five times greater—than in healthy subjects.

Although an optimal caloric intake facilitates optimal utilization of amino acids, a reducing regimen need not curtail full utilization of these nutrients. It has been shown that a useful degree of amino acid utilization can be attained with caloric intake considerably below the optimal.

Minerals appear to be important in the process of amino acid metabolism. Evidence indicates that either phosphate or potassium deficiency might adversely influence amino acid utilization. Absence of either ion from experimental depletion rations leads to depression of appetite and slowing of the processes of protein repletion.

B complex vitamins also affect the metabolism of proteins and amino acids. For example, rats fed a high protein diet require a high intake of B complex vitamins in order to maintain normal growth rates. Omission from the ration of any one of these vitamins (riboflavin, thiamine, pyridoxine, or pantothenate) is accompanied, in varying degrees, by lower food consumption and slower weight gain.

Meat of all cuts and kinds is high in its content of protein, and provides well proportioned amounts of essential and nonessential amino acids. Meat also supplies valuable amounts of essential minerals, especially iron, phosphorus, potassium and magnesium, as well as important quantities of all components of the vitamin B complex, thus assuring maximal utilization of the amino acid components.

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*Cannon, P. R.; Frazier, L. E., and Hughes, R. H.: Factors Influencing Amino Acid Utilization in Tissue Protein Synthesis, in Symposium on Protein Metabolism, New York, The National Vitamin Foundation, Inc., 1954, pp. 55-90.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

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(Continued from Page 1126)

in the Learning Process; Its Relation to the Ocular Muscles with Indications for Muscle Surgery," "Indications and Type of Glaucoma Surgery."

* * *

Charles G. Johnston, M.D. and **Grover C. Penberthy, M.D.**, Detroit, attended the meeting of the Société Internationale de Chirurgie in Copenhagen, July 24-31, 1955. Dr. Penberthy is Recorder of the American Chapter of this Society.

* * *

Salk Vaccine.—The first release of the Salk Vaccine to private physicians was announced the last of July. The American Medical Association has asked physicians to vaccinate only children within the five- to nine-age group until further notice and to keep records of each vaccination, including name of manufacturer and lot number of the vaccine.

* * *

Income Tax.—The Commissioner of Internal Revenue has decided that representatives of the Department of Health, Education, and Welfare have the authority to examine the income tax returns of any self-employed person covered by OASI. This will have a particular significance to physicians if they should be included in social security.

* * *

Wolf W. Zuelzer, M.D., has been elected president of the Society for Pediatric Research, the country's largest pediatric association. Dr. Zuelzer is Director of Laboratories at Children's Hospital, Director of the Child Research Center of Michigan and Professor of Pediatric Research at Wayne University College of Medicine.

* * *

A. D. Ruedemann, M.D., Detroit, was elected Chairman of the Section on Ophthalmology of the American Medical Association at its annual meeting in Atlantic City, June 8.

* * *

O. A. Brines, M.D., Detroit, attended the meeting of the Bureau of the International Society of Clinical Pathology, of which he is vice president, and a meeting of the Société Belge de Biologie Clinique in Brussels on April 23 and 24, 1955. One purpose of the meeting was to make preliminary plans for the next International Congress of Clinical Pathology to be held in Brussels in 1957.

* * *

J. S. De Tar, M.D., Milan, President Elect, American Academy of General Practice, and **H. M. Pollard, M.D.**, Ann Arbor, were speakers at the Second Symposium on Office Procedures and Clinical Medicine, given by the King County Chapter of the Washington Academy of General Practice at Seattle, Washington, August 6, 1955.

* * *

At the 20th Annual Congress of the International College of Surgeons held in September in Philadelphia, four Michigan men presented papers: (1) Hardee Bethea, M.D., of Detroit on "Early Operative

(Continued on Page 1130)

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The Michigan Alcoholic Rehabilitation Foundation is a non-profit organization devoted to the proper hospitalization of alcoholics seeking to stop drinking.

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Do you sometimes feel that a patient would benefit from drinking less coffee, because he is "caffein sensitive"? Why not tell him he can drink all the coffee he wants, as long as it is Sanka Coffee—97% caffein-free?

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(Continued from Page 1128)

Reduction of Facial Fractures"; (2) Robert J. Meade, M.D., Lansing, on "Dermal Fat Grafts for Reinforcement of Aneurisms"; (3) Harry C. Saltzstein, M.D., Detroit. on "Follow-up Survey of 573 Cancer Patients"; and (4) Clair L. Straith, M.D., Detroit, on "Plastic Surgery in Industrial Trauma."

Michigan Regent J. Duane Miller, M.D., Grand Rapids, served as Secretary of the September 14 assembly and A. H. Whittaker, M.D., Detroit, was Chairman of the well-attended Occupational Surgical Section meeting.

* * *

The Atomic Energy Commission has just released Standards for Protection Against Radiation. This is a 20-page typewritten paper and is available upon request at Atomic Energy Commission, Washington 5, D. C.

* * *

The Atomic Energy Commission has announced the award of sixty-four Life Science Research Contracts Announced by AEC two of whom are from Michigan: (1) Kresge Eye Institute, "Effects of Neutrons and Other Radiations on the Ocular Lens," V. E. Kinsey and (2) University of Michigan "Immunological Study of Tumors," W. J. Nungester.

* * *

E. C. Swanson, M.D., Vassar, was chosen on September 2, 1955, by unanimous ballot of his nine confrères, as Secretary of the Michigan State Board of Registration in Medicine to succeed J. Earl McIntyre, M.D., retired.

Congratulations, Dr. Swanson!

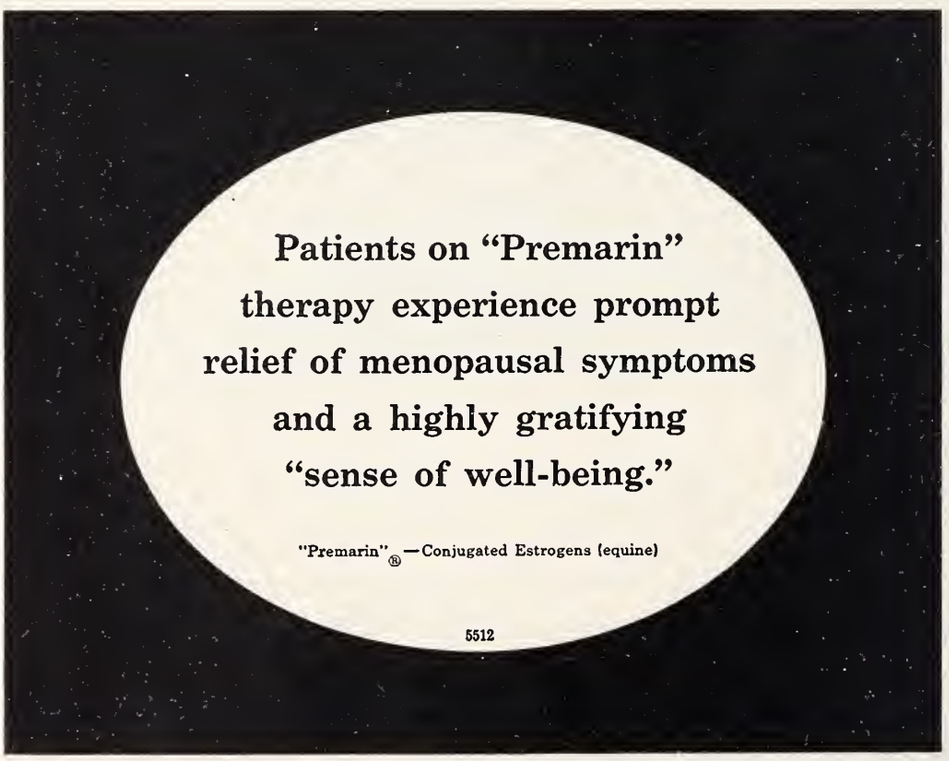
Racial Differences detected chemically.—Two research workers at the University of Michigan, H. Eldon Sutton, and Philip J. Clark, have been studying chemical reactions and claim there is a racial type between Mongolians and Caucasions, and through a study of the amino acids, they claim to be able to differentiate between the two. The Chinese excrete greater quantities of amino acid under the same conditions of environment and diet. "It was found that the amino acids most influenced by the change to a uniform diet were the ones which show considerable individuality in excretion patterns, and the individuality did not decrease significantly when the subjects consumed identical foods."

* * *

The Texas State Journal of Medicine, with the July, 1955 issue, is enjoying its fiftieth anniversary number. A completely new cover carries the word TEXAS and a symbol of the fiftieth anniversary in gold letters, with a splash of gold across the bottom of the cover listing the contents.

On inserted yellow pages is an article by the President of the State Society commemorating the anniversary, also editorial comments, selections from the first number of The Journal, articles about hospital expansion, medical education, changing concepts, et cetera.

The Texas State Journal of Medicine was founded by I. C. Chase who was succeeded as editor in 1910 by Dr. Holman Taylor, who served thirty-seven years. Dr. Harold Williams and Mr. Ted Bates each served as editor for two years, and Miss Harriet Cunningham, who has been on the staff since 1945, has been managing editor since 1951.



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Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

This number of *The Journal* contains a vast amount of information and four pages of line sketches showing how the material of *The Journal* comes from the members, the processes it goes through, and finally back to the members. In the fifty years, there have been 34,570 pages of reading matter and 27,590 pages of advertising. Texas may well be proud of its medical journal.

* * *



A. E. Heustis, M.D., was reappointed as Michigan Health Commissioner by Governor G. Mennen Williams for a four-year term beginning July 1, 1955. In addition, the Michigan Legislature recognized the efficient work of Dr. Heustis by giving him a long-overdue increase in salary.

* * *

The Michigan Society for Crippled and Adults, Inc., will hold its 1955 Convention at the Hayes Hotel, Jackson, on October 27-29. For program and details, write the Society at 10601 Puritan, Detroit 38.

* * *

"Cancer Services and Facilities in the United States, 1954," is a directory of services and facilities available to cancer patients throughout the United States, compiled by the National Cancer Institute. This booklet is purchasable from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. (25c per copy).

DOCTOR LOCATIONS—THROUGH JULY 31, 1955

Name *Placed by Michigan Health Council*	*Opens Practice in*	*Approximate Date*
Walter C. Peltason, M.D.	Sunfield	July 15
Joseph Riley, M.D.	Charlotte	August 1
W. W. Williamson, M.D.	Detroit-V.A. Reg. Off.	July 19
W. W. Wersich, M.D.	Alpena	July 1
Assisted by Michigan Health Council		
Lloyd France, M.D.	Middleville	July 1
W. E. Gezynski, M.D.	Livonia	June 17
Harold C. A. Johnson, M.D.	Paw Paw	July
Robert Paxton, M.D.	Fremont	July 1
Charles G. Gunn, M.D.	Dearborn	July 1
Donald DeWitt, M.D.	Saugatuck	July 1
David Heath, M.D.	Bridgman	July 1
Lyle M. Allis, M.D.	Buchanan	July 1
David Ausum, M.D.	Imlay City	July 17
F. James Stubbart, M.D.	Muskegon	July

* * *

The Institute of Industrial Health of the University of Cincinnati announces a course of instructions in occupational skin problems, October 10-14. For information and program, write the Secretary of the Institute, Kettering Laboratory, Eden and Bethesda Avenues, Cincinnati 19, Ohio.

* * *

The Council on Postgraduate Medical Education of the American College of Chest Physicians announces postgraduate courses on diseases of the chest in Chicago, October 3-7, at Hotel Knickerbocker, and in New York

City, November 14-18, at the Park-Sheraton Hotel. For information and program, write the Executive Director of the College at 112 East Chestnut Street, Chicago 11, Illinois.

* * *

The Third National Cancer Conference will be held at the Sheraton-Cadillac Hotel, Detroit, June 4-5-6, 1956, under the sponsorship of the American Cancer Society and the National Cancer Institute of the United States Public Health Service. For information and program, write the American Cancer Society, 521 W. 57th Street, New York 19, N. Y.

* * *

Puerto Rico Medical Association invites all members of the Michigan State Medical Society to visit Puerto Rico in December following the AMA Clinical Session in Boston (November 29-December 2). The Puerto Rico Medical Association will hold its annual meeting beginning Tuesday, December 6-7 at the Caribe Hilton Hotel. The Presidential Reception will be an outstanding social event of December 6.

Ricardo F. Fernandez, M.D., President of the Puerto Rico Medical Association, advises that International Travel Service has arranged a post-convention tour for members of the AMA "which will permit you to accept our cordial invitation and to enjoy the many wonderful attractions of Puerto Rico." For information and program, write International Travel Bureau, Palmer House, Chicago.

* * *

Elwood A. Sharp, M.D., widely known blood authority and director of clinical investigation for Parke, Davis & Company, Detroit, since 1929, recently was promoted to medical assistant to Harry J. Lloynd, President.

Elmore C. Vonder Heide, M.D., was chosen as Dr. Sharp's successor.

* * *

The American Goiter Association offers the Van Meter Prize Award of $300 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the Association's annual meeting, Drake Hotel, Chicago, May 3-4-5, 1956. Essays must be submitted to the Secretary by January 1, 1956. For information, write John C. McClintock, M.D., Secretary, 149½ Washington Avenue, Albany, New York.

* * *

Harry M. Nelson, M.D., Detroit, spoke on "Cancer of the Breast in Pregnancy" at the Ninth Annual Rocky Mountain Cancer Conference, Denver, July 13-14. Dr. Nelson also participated in a symposium on "Cancer of the Pelvis."

* * *

British Empire Cancer Campaign. Excerpts have been received from the thirty-second annual report covering the year 1954, presented at a meeting on July 12, 1955, where the various hospital and medical societies in Great Britain have been studying cigarette smoking and its relation to cancer. The general opinion was that they

(Continued on Page 1134)

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(Continued from Page 1132)

are unable to prove any connection. The report contains 531 pages and covers research from thirty institutions.

* * *

Detroit's new Convention Hall is scheduled for completion in 1958. It will have 400,000 square feet of exhibit space, 30 meeting rooms, accommodating from 100 to 3500, and an auditorium which can seat 14,000.

* * *

H. Waldo Bird, Jr., M.D., has left private practice in Detroit and resigned as Chairman of the MSMS Committee on Mental Health to reside in Chicago, where he has been honored by an appointment as Associate Professor of Psychiatry in the newly organized Department of Psychiatry at University of Chicago Medical School. Dr. Bird, whose private practice in Detroit was limited to convulsive disorders and psychosomatic medicine, served as a member of the medical staff of Michigan Epilepsy Center. He is a Fellow of the American Psychiatric Association, and active in the Michigan Society for Mental Health and the Michigan Society of Neurology and Psychiatry. Under Dr. Bird's guidance of the Mental Health Committee, MSMS took renewed interest in current approaches to, and medical problems in, that field. He is a 1943 graduate of Harvard Medical School.

Fritz Bramigk, M.D., Detroit, was awarded the Distinguished Service Cross of the West German Republi for efforts in sending medicine, food and clothing t Europe. Dr. Bramigk, a Detroit practitioner, is a native of Germany who came to the United States in 1923 a assistant pathologist at the University of Tennessee.

* * *

The American Academy of Pediatrics, Michigan Branch will hold an all-day meeting on Tuesday, September 27, in Grand Rapids. A clinical conference at 10:00 a.m. will be held at Butterworth Hospital with active cases being presented by the Western Michigan Pediatric Society. Discussants will be: Ralph V. Platou, M.D., New Orleans, La.; J. A. Johnston, M.D. Detroit; J. L. Wilson, M.D., Ann Arbor; Paul V. Woolley, M.D., Detroit, and Wolf W. Zuelzer, M.D., Detroit.

The afternoon program to be held in the Schubert Room of the Pantlind Hotel will feature a series of short papers.

A reception will be held in the Sadler Lounge, Pantlind Hotel, at 6:30 p.m. with Mead Johnson and Company of Evansville, Indiana, as host.

Dinner will be followed by a talk on "Pediatric Pedagogy" by Ralph V. Platou, M.D.

Harry A. Towsley, M.D., State Chairman, Michigan Branch, has invited all members of the American Academy of Pediatrics in Michigan to attend the September 27 Conference, which will precede the MSMS Annual Session by one day.

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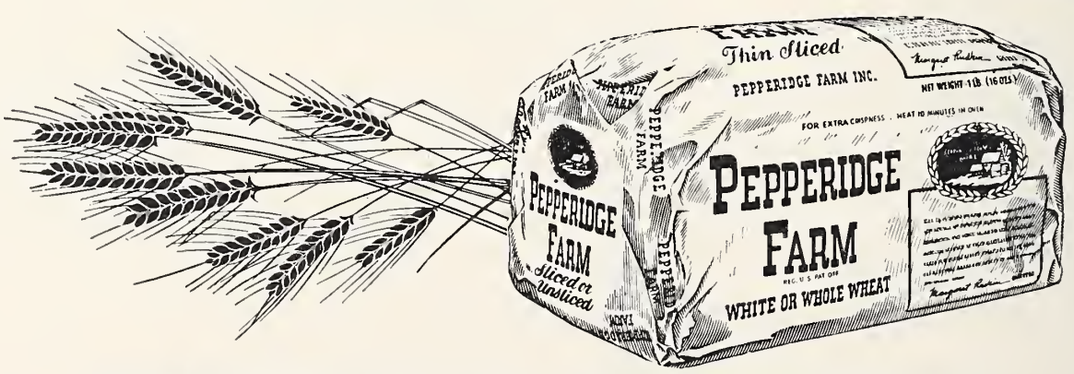
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A Fellowship in Pediatric Neurology is available at the Children's Neurology Clinic of the Cook County Hospital in Chicago. The Fellowship will provide clinical training in the diagnosis and rehabilitation of children with neuromuscular handicaps. In addition, the trainee will be expected to participate in a clinical laboratory problem. The annual stipend will vary from $3,000 to $5,000, depending upon the qualifications of the applicant.

For further information, write M. A. Perlstein, M.D., 4743 N. Drake Avenue, Chicago 25, Illinois.

* * *

The next examinations of the Michigan State Board of Registration in Medicine will be held on Wednesday, Thursday and Friday, October 12, 13 and 14, 1955, in Lansing. The application form and fee is to be filed with J. Earl McIntyre, M.D., Secretary, Michigan State Board of Registration in Medicine, 118 Stevens T. Mason Building, Lansing, Michigan.

* * *

Michigan Blue Cross-Blue Shield will hold its fifth annual Statewide non-group enrollment campaign this year during the two-week period running from October 9 through October 22, 1955. Benefits have been increased substantially this year.

Through this special non-group program, Blue Cross-Blue Shield is able to extend broad hospital and surgical coverage on a direct enrollment basis to the thousands of Michigan people who are not able to enroll through regular employe, farm or professional groups.

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July 3	A Career With Epilepsy	A Film
July 10	Vacation Health Hazards	F. P. Rhoades, M.D., Detroit
July 17	Summer Accidents	Clarence L. Candler, M.D., Detroit
July 24	Farm Safety Week	Wm. G. Buchinger, Detroit Richard Pfister, East Lansing
July 31	Medical Associates	A Film

Enrollment for this non-group coverage will be open to any Michigan resident under sixty-five. The only condition is that married persons must enroll the spouse and unmarried children under nineteen. The spouse, however, can be over sixty-five.

The non-group benefits have been further broadened this year. Inquiries may be made at any local office, or by writing Blue Cross-Blue Shield, 441 E. Jefferson, Detroit 26, Michigan.

No physical examination or health statement is required. Even chronic and pre-existing conditions are covered after the contract has been in effect six months.

Say you saw it in the Journal of the Michigan State Medical Society

The only other waiting periods are nine months for maternity benefits and six months in the case of removal of children's tonsils and adenoids. All other conditions are covered from the date the contract becomes effective.

* * *

The Wayne County Medical Society—Detroit Free Press Medical Forum began September 12 in the Rackham Memorial Building, Detroit. The public was invited free of charge to hear a new type of medical program designed to give Detroiters the latest information on how to live with serious diseases.

Living successfully with heart disease, rheumatism, arthritis and cancer were highlighted at the three medical forum sessions held on September 12, 19, and 26.

William Bromme, M.D., Detroit, is Chairman for the Medical Forum; Milton A. Darling, M.D., is President of the Wayne County Medical Society.

The second series of medical forums will carry on where the other left off. Subjects selected will be illnesses of greatest concern to those who attended the first forums.

The doctors of medicine speak informally and plainly, at these forums, in language the laymen understand.

* * *

Presiding officers at the Ninth Annual Fall Postgraduate Clinic of the Michigan Academy of General Practice, Sheraton-Cadillac Hotel, Detroit, November 9-10, 1955, will be W. S. Jones, M.D., Menominee, MSMS President; Milton A. Darling, M.D., Detroit, President of the Wayne County Medical Society; James H. Fyvie, M.D., Manistique; John W. Rice, M.D., Jackson.

All AAGP members will receive twelve hours of formal study course credit for attendance. John F Fowler, M.D., of Barre, Massachusetts, AAGP President will be the banquet speaker of November 9.

* * *

Seventh Michigan Cancer Conference.—The Michigan and Southeastern Michigan Divisions of the American Cancer Society, in co-operation with the Michigan Cancer Co-ordinating Committee, will sponsor the Michigan Cancer Conference on Thursday and Friday, October 13 and 14, 1955, at the Kellogg Center, Michigan State University Campus, East Lansing.

H. M. Nelson, M.D., of Detroit, will act as chairman. The program on Friday, October 14, is as follows: E. T. Thieme, M.D., Ann Arbor, will speak on "Intestinal Cancer." Gerald S. Wilson, M.D., Medical Director of the Yates Memorial Clinic, will give a paper on the detection of cancer through periodic health examinations. J. E. Lofstrom, M.D., Detroit, will speak on advances in radio therapy and will include some of the experience he has gained with use of the cobalt bomb at Detroit Memorial Hospital. Olen H. McConnell, D.D.S., Grand Rapids, will cover the subject of oral cancer.

The Friday, October 14, luncheon speaker will be William Baum, M.D., National Institute of Health, Bethesda, Maryland, who will speak on the general subject of the rôle of government in the cancer control program. The luncheon speakers will be followed by a question-and-answer period.

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The Detroit Institute of Cancer Research will hold its eighth annual meeting October 17 through 19, 1955. The sessions on Wednesday, October 19, are particularly directed toward practicing physicians. A new feature is introduced in the morning program on that day with the presentation of a symposium on pulmonary cancer. This program has been arranged and will be moderated by Dr. Arthur Vorwald, Chairman of the new Department of Industrial Medicine and Hygiene at Wayne University College of Medicine. The Detroit Institute of Cancer Research is joined by Wayne University and the American Cancer Society, Southeastern Division, as co-sponsors.

Monday, October 17, 1955

Morning Session—9:45 a.m.

Introduction to the Scientific Program
MILTON A. DARLING

Effects of Partial-cell Irradiation on Chromosome Structure and Movements
RAYMOND E. ZIRKLE
The University of Chicago

Gene Action, Enzyme Synthesis, and Growth
DAVID M. BONNER
Yale University

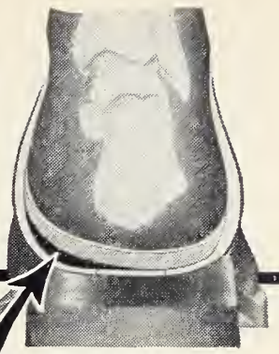
Afternoon Session—2:00 p.m.

Symposium on Host Factors in Resistance
WALTER J. NUNGESTER—Moderator

General Factors in Host Resistance to Disease
PAUL R. CANNON
The University of Chicago

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Immunological Aspects of Resistance to Tumors
JEROME T. SYVERTON
University of Minnesota

Tuesday, October 18, 1955

Morning Session—10:00 a.m.

Electronic Structure and Carcinogenic Activity of Aromatic Molecules
BERNARD PULLMAN
Institut du Radium, Paris

Correlation of Physical Dose and Biological Effects of Ionizing Radiation
G. FAILLA
Columbia University

Afternoon Session—2:00 p.m.

The Enhancing Effect and Possibly Related Phenomena
GEORGE D. SNELL
Roscoe B. Jackson Memorial Laboratory

Ascites Tumors as Biological Tools
HILARY KOPROWSKI
Lederle Laboratories Division
American Cyanamid Company

Wednesday, October 19, 1955

Morning Session—9:00 a.m.

Symposium on Cancer of the Lung
ARTHUR J. VORWALD—Moderator

Etiological Implications of the Geographical Distribution of Pulmonic Cancer
PAUL E. STEINER
The University of Chicago

Pulmonary Carcinogenesis in Relation to Vehicular Exhausts and Liquid Fuels
PAUL KOTIN
University of Southern California

The Cytology of Sputum and Bronchial Washings in the Diagnosis of Pulmonary Cancer
L. B. WOOLNER
Mayo Foundation Graduate School

Afternoon Session—1:45 p.m.

Cancer in Childhood, with Special Reference to the Management of Abdominal Tumors
C. EVERETT KOOP
The Children's Hospital of Philadelphia

Radioactivity—Its Contribution to the Cancer Problem
JOE W. HOWLAND
The University of Rochester

A Rational Approach to Treatment of Carcinoma of the Cervix
LANGDON PARSONS
Boston University

Clinical Recognition of Oral Cancer
DANELY P. SLAUGHTER
University of Illinois

* * *

A scholarship for undergraduates preparing for medical careers has been established at Hamilton College in Clinton, New York, by the Lillia Babbitt Hyde Foundation of New York City. Hamilton College, a liberal arts college which limits its enrollment to 600 men, was established in 1793. For details, write Hamilton College Public Relations Bureau, Clinton, New York.

* * *

The New York Academy of Medicine will hold its twenty-eighth annual Postgraduate Fortnight, October 10-21, on the subject of "Problems of Aging." The program will consist of twenty evening lectures and four evening panel meetings; six morning panel meetings; nineteen afternoon hospital clinics; and inspection of five community educational and recreational day centers for the aged. For program and detailed information, write Robert L. Craig, M.D., 2 East 103rd Street, New York 29, N. Y.

* * *

Dr. Irving S. Wright, Professor of Clinical Medicine, Cornell University, will deliver the Annual Max Ballin Memorial Lecture at a dinner sponsored by Sinai Hospital on Thursday evening, December 1, at the Sheraton Cadillac Hotel in Detroit. Dr. Wright will speak on Peripheral Vascular Disease.

Advance reservations may be made by writing to Sinai Hospital, 6767 Outer Drive, Detroit, or calling BRoadway 3-3000.

THE CONSTIPATED INFANT

(Continued from Page 1066)

ing out the colon of the infant with megacolon is not always easy, and the feces may require manual removal. The use of cleansing enemas is sometimes effective. More recently, the use of Aerosol wetting agent as a retention enema, along with mineral oil, has been of great value.

References

1. Bargen, J. Arnold: A method of improving function of the bowel: the use of methylcellulose. Gastroenterology, 13:275-278 (Oct.) 1949.
2. Brown, Samuel S., and Schoen, Austin H.: Congenital anorectal stricture. J. Pediatrics, 36:746-751 (June) 1950.
3. Musick, Vern H.: Effectiveness of methylcellulose in gastrointestinal disturbances. J. Oklahoma M. A., (Aug.) 1950.
4. Swenson, Orvar: Rheinlander, Harold F., and Diamond, Israel.: Hirschsprung's disease: a new concept of etiology. New England J. Med., 241:-551-556 (Oct. 13) 1949.
5. Wilson, James L., and Dickinson, David G.: Use of dioctyl sodium sulfosuccinate (Aerosol O. T.) for severe constipation. J.A.M.A., 158:261-263 (May 28) 1955.
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THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

BREAST CANCER and Its Diagnosis and Treatment. Edward F. Lewison, B.S., M.D., F.A.C.S., Assistant Professor of Surgery, Johns Hopkins University School of Medicine; Surgeon, Johns Hopkins Hospital; Surgeon, Out-Patient Department, Breast Clinic, Division of Tumor Clinic, Johns Hopkins Hospital. Baltimore: The Williams & Wilkins Company, 1955. Price, $15.00.

A very complete text on breast cancer, giving the history, diagnosis and treatment, with prognosis and results. Eight authors have collaborated and offered chapters. The diagnosis is elaborately detailed. The choice of surgery is argued in light of modern usages as compared to Halstead's radical surgery. Many illustrations are given with detailed outlines of the surgical procedure.

What constitutes complete recovery is left to the reader's interpretation. One table is given, showing long-term survival with an ultimate recurrence, starting with ten years and ending with one of fifty years, then recurrence locally.

Another table shows experience at Johns Hopkins Hospital following radical mastectomy in 204 cases. Seventy-nine patients were living and well, and eleven living with recurrence, a total of 44 per cent survival, but 5.4 having recurrence.

The book is very readable, interesting, and liberally illustrated.

MANAGEMENT OF ADDICTIONS. Edited by Edward Podolsky, M.D., Department of Psychiatry, Kings County Hospital, Brooklyn, New York. Editor of "Music Therapy" and "War Medicine." New York: Philosophical Library, 1955. Price $7.50.

For this volume, the editor has brought together a series of interesting papers on an old but ever-challenging subject. These papers are arranged in two sections, the first, consisting of twenty-six articles on addictions to alcohol, and the second, consisting of nine papers on narcotic addiction. Except for the foreword, there is no further comment by the editor. However, the selection of papers, as well as the arrangement, does reveal his views on this complex problem.

From the reports, it would appear that chronic alcoholism is increasing in frequency, if not in complexity. A brief review of the Table of Contents of this volume would indicate there is little unamimity of opinion concerning management of the disorder, and even less general agreement concerning the exact nature of the disorder. Though this is debated with some vigor, most workers would agree that excessive drinking is symptomatic "of a psychopathological development" and that chronic alcoholism affects, the physi-



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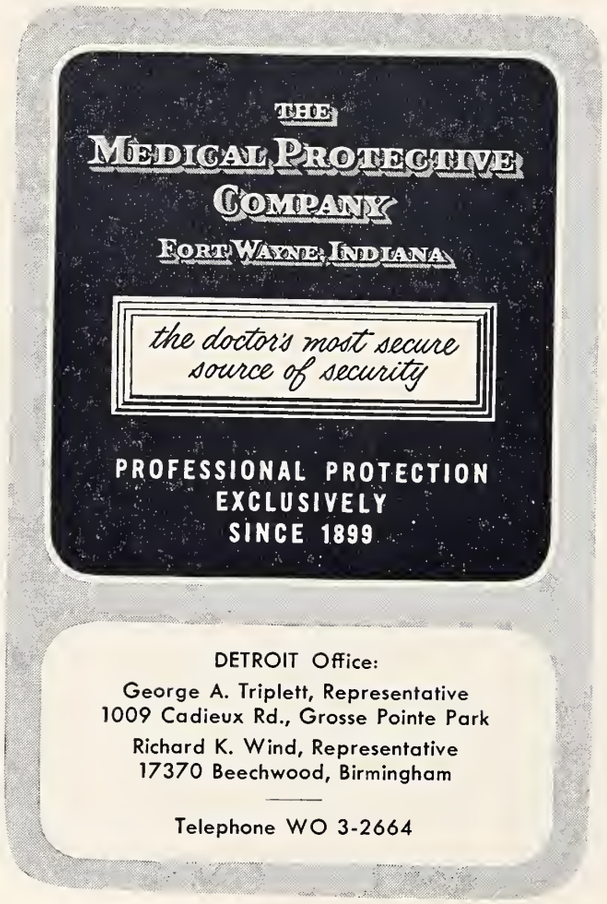
A COMPLETE BUSINESS SERVICE FOR THE MEDICAL PROFESSION

cal, emotional, biochemical, cultural and economic facets of the life of a person so afflicted."

Though definitions sometimes add confusion to an already beclouded problem, those quoted in this volume are sufficiently clear to be presented here. "A patient suffers from chronic alcoholism if he uses alcohol to such an extent that it interferes with a successful life (including physical, personality and social aspect), and he is either not able to recognize this effect or is not able to control his alcohol consumption, although he knows its disastrous results. An excessive drinker is an individual who uses alcohol frequently and in large quantities and may even behave pathologically when under the influence of alcohol. He is capable, however, of overcoming the habit when he becomes aware of the necessity for it. A heavy drinker drinks heavily during social occasions, with frequent or even regular intoxication, but the drinking does not present serious handicaps."

Though, for some time, the excessive use of alcohol has been accepted as symptomatic of psychopathology, treatment along psychiatric lines has not proved a startling success. This is now used to discredit the psychiatric approach in spite of the fact that no other type of treatment or management has had any greater success. A brief review of the methods advised by the authors of these papers would serve to emphasize this point. In addition to psychotherapy, hypnotherapy and conditioned reflex therapy, the use of calcium, carbon dioxide, barbiturates, adrenal steroids, tolseral and antibuse is discussed and debated. That there is some value in each of these methods cannot be questioned. On the other hand, with so many methods that promise success there can be no real enthusiasm for any single approach to the exclusion of any other forms of treatment. Until further investigation and research can establish a better understanding of the etiology and nature of addiction, such a large number of methods will exist. While our understanding of this complex problem remains at the present level a volume such as this will prove to be a useful aid to the student and practitioner.

F. O. Meister, M.D.



MODERN DRUG ENCYCLOPEDIA AND THERAPEUTIC INDEX. Edited by Marion E. Howard, M.D., F.A.C.P., Associate Clinical Professor, Department of Internal Medicine, Yale University School of Medicine; Associate Physician, Grace-New Haven Community Hospital and the Department of University Health, Yale University, New Haven, Conn. Sixth Edition. New York: Drug Publications, Inc., 1955.

This book is primarily an alphabetical listing of pharmaceuticals. 1,174 pages giving name of drug and manufacturer, an analysis of contents and a paragraph on action and uses, dosage and how supplied.

Then following a list of biologicals and allergens, there is a therapeutic index, a generic name index, a manufacturers and distributors index, and a general index.

As a reference, it is a very valuable book.



COMMON LESIONS OF THE UPPER EXTREMITIES

(Continued from Page 1090)

treatment of these allied lesions. The importance of its use is dependent upon the proper timing in the course of the lesion. Also, it must be injected directly into the involved area.

We feel that the value of local use of compound F in this allied group of lesions is most optimistic.

References

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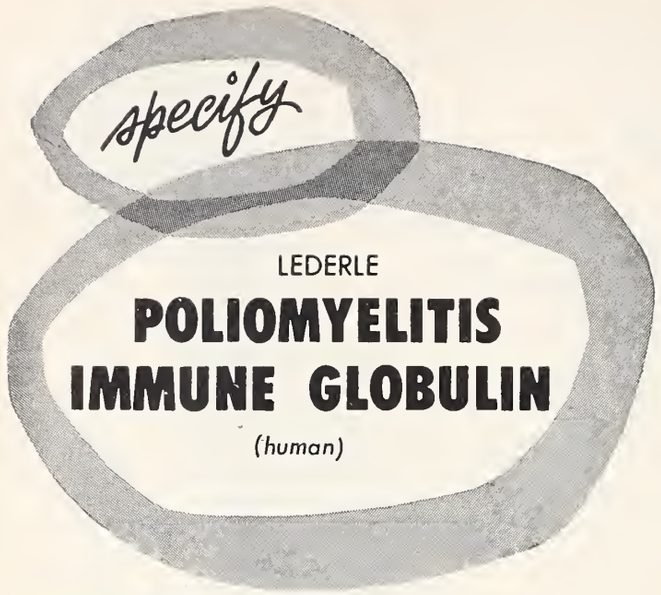
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Surgical Technic, Surgical Anatomy and Clinical Surgery, four weeks, October 10
Surgical Anatomy and Clinical Surgery, two weeks, October 24
Surgery of Colon and Rectum, one week, October 17
General Surgery, two weeks, October 3; one week, October 17
Gallbladder Surgery, ten hours, October 24
Thoracic Surgery, one week, October 3
Esophageal Surgery, one week, October 10
Basic Principles in General Surgery, two weeks, September 26
Fractures and Traumatic Surgery, two weeks, October 17
GYNECOLOGY—Office and Operative Gynecology, two weeks, November 28
Vaginal Approach to Pelvic Surgery, one week, November 7
OBSTETRICS—General and Surgical Obstetrics, two weeks, November 7
MEDICINE—Two-week Course, September 26
Electrocardiography, one week advanced course, September 19
Electrocardiography and Heart Disease, two-week basic course, October 10
Gastroscopy, forty-hour basic course, November 7
Dermatology, two weeks, October 17
RADIOLOGY—Clinical and Didactic Course, two weeks, October 3
Clinical Uses of Radioisotopes, two weeks, October 10
PEDIATRICS—Clinical Course, two weeks, by Appointment
Pediatric Cardiology, one week, October 10 and 17
UROLOGY—Two-week course, October 10

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RHEUMATIC FEVER

(Continued from Page 1099)

Summary and Conclusion

The changing character of a common disease, rheumatic fever, is emphasized with particular reference to the necessity of depending upon clinical observation rather than laboratory data for both diagnosis and prognosis.

The recognition of rheumatic carditis in 80 per cent of the cases of rheumatic fever constitutes the basis for diagnosis in the changed character of this disease.

The principle of the treatment of the disease may be described in one word, *rest,* not for days, weeks, or months, but often for decades: the usual ancillary measures are always of value.

Reasons are given to sustain the present opinion of this author that surgical approach to the treatment of mitral stenosis often should be designated as meddlesome in nature, because of a smouldering pancarditis.

The most hopeful aspect in the broad picture of this world-wide disease is that repeated exacerbations can be prevented by the continuous administration of antibiotics, notably penicillin.

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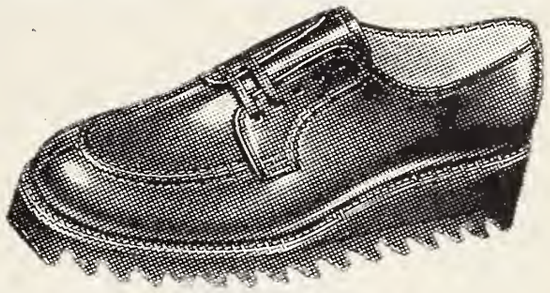
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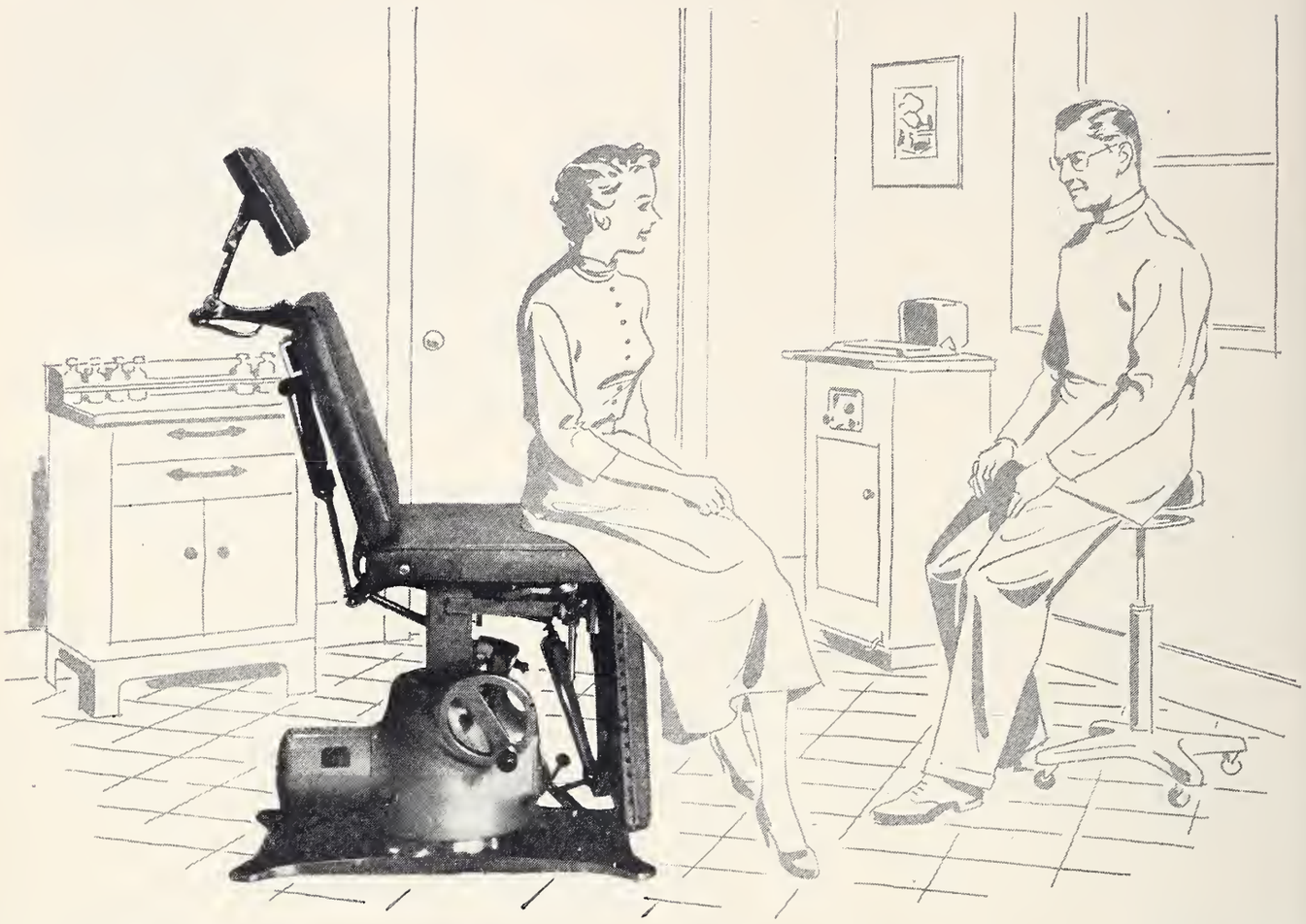
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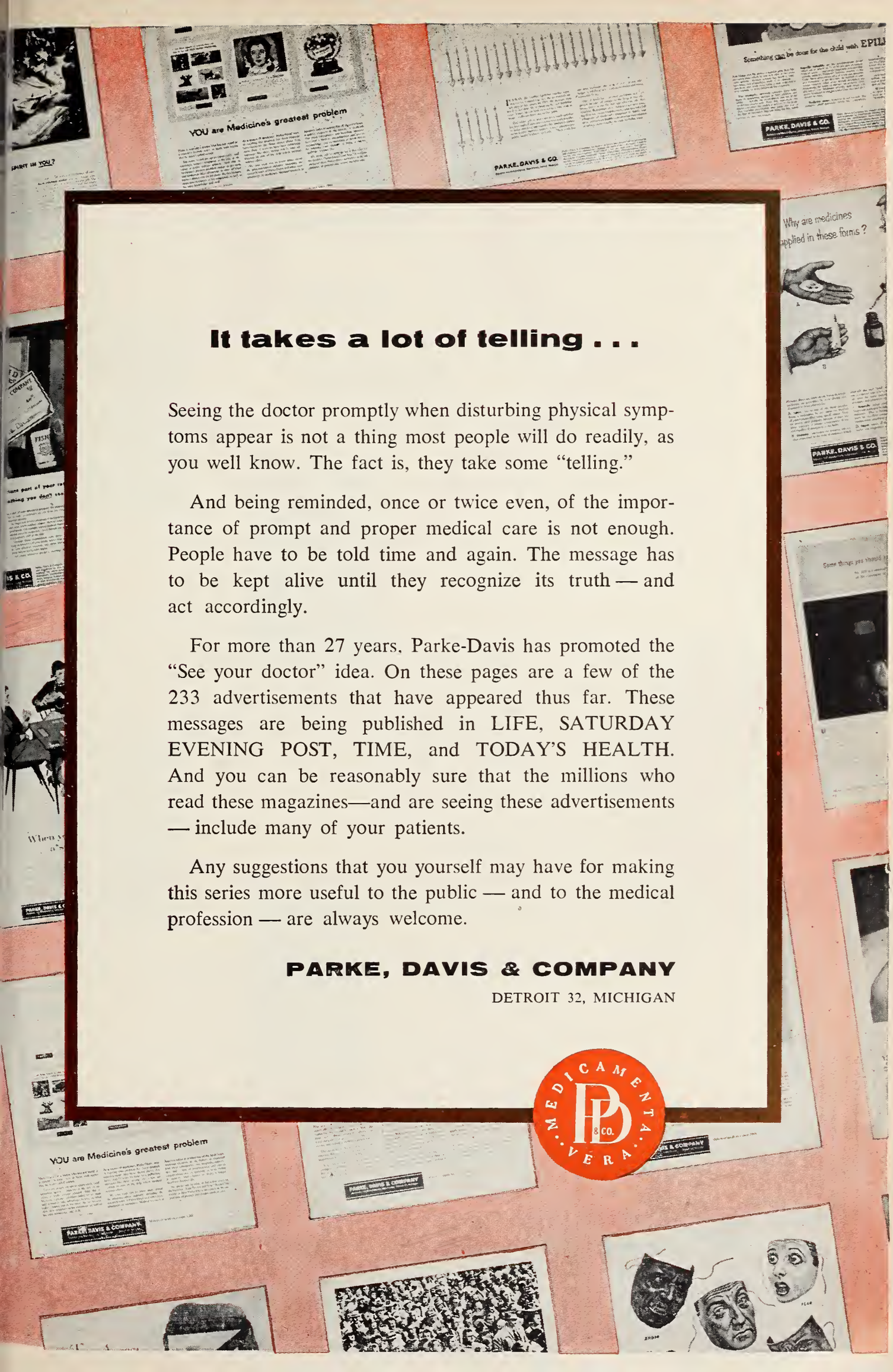
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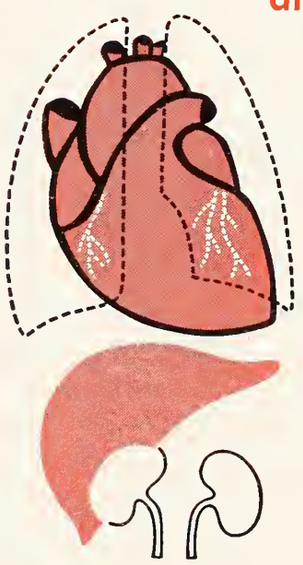
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THE JOURNAL
of the Michigan State Medical Society

VOLUME 54 OCTOBER, 1955 NUMBER 10

Contributors to This Issue



P. S. Barker, M.D.



J. R. Fowler, M.D.



F. L. Lederer, M.D.



L. Reynolds, M.D.

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THE JOURNAL
of the Michigan State Medical Society

VOLUME 54 OCTOBER, 1955 NUMBER 10

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BROAD ATTENDANCE AT 1955 MICHIGAN CLINICAL INSTITUTE

A total of 176 separate Michigan communities were represented at the 1955 Michigan Clinical Institute, held in Detroit, March 9-11, 1955. The largest registration came from Detroit which chalked up 881 physicians. Flint came second with sixty-four; Ann Arbor had an attendance of sixty-two M.D.'s and Lansing came into fourth place with fifty-four.

Grand Rapids had a registration of forty-five; Dearborn and Pontiac tied with forty-two each; Saginaw had thirty-six; Kalamazoo registered twenty-nine; Jackson sent twenty-one, and Midland came through with fifteen.

The registration by specialties put general practice in the lead, with 271 from Wayne County and 210 from out-state, a total of 481.

Other leaders were surgeons, with 340; internists, with 241. Residents and interns totaled 260.

In addition, ninety-four M.D.'s came from other states, including forty-six from Canada, nineteen from Ohio, seven from Indiana, and six from New York.

Foreign countries were represented by Belgium. Puerto Rico and Sweden.

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This encouraging story is the August 25 report of the Bureau of Accident and Health Underwriters, 60 John Street, New York 38, N. Y.

HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of August 18, 1955

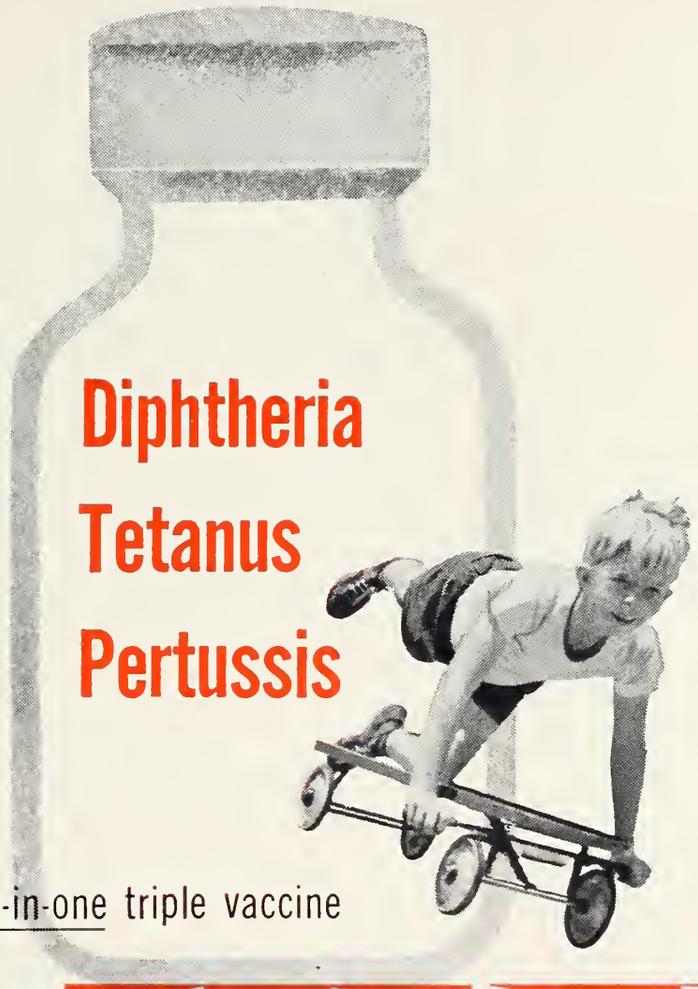
Eighty-seven items were presented to the Executive Committee of The Council at its August 18 meeting in Menominee. Items of chief importance were:

- **Annual Session.**—(a) Dean's Panel on Undergraduate Medical Education was scheduled at 4:00 p.m. on Monday, September 26 (instead of at noon). (b) Student AMA representatives from Wayne University College of Medicine and from the University of Michigan Medical School were invited to attend the 1955 Annual Session, following precedent. (c) Plaque for presentation to Medical Exhibitors Association on the 25th anniversary of its founding, in Michigan, was ordered purchased.
- **C. Allen Payne, M.D.,** Grand Rapids, was nominated as MSMS representative to Executive Committee of the newly formed Michigan Association of Blood Banks.
- **Grand Award.**—Chairman Bromme announced that the Michigan State Medical Society had won the Grand Award (for all state associations in the United States) for its "Medical Associates Program" from the American Trade Association Executives.
- **Financial Reports to September 30.**—The Executive Committee noted with satisfaction the increase in MSMS membership from 5,308 in 1954 to 5,635 this year (as of July 30). The financial reports were approved, as were the bills payable.
- **Committee Reports.**—The following committee reports were presented: (a) Liaison Committee with Michigan Medical Service, meeting of July 16; (b) Venereal Disease Control Committee, July 30; (c) Michigan Clinical Institute Committee on Arrangements, August 10; (d) Rheumatic Fever Control Committee—letter from Chairman giving additional information concerning item four in June 22 minutes; (e) Letter from Chairman of Tuberculosis Control Committee outlining two problems; (f) Committee to Study Fee Schedule of Michigan Medical Service proposed $6,000 family contract: W. J. Herrington, M.D., Bad Axe, was appointed as a member of this Committee, for the Seventh Councilor District, in lieu of H. B. Zemmer, M.D., Lapeer, Michigan, resigned.
- **Appointments.**—(a) President R. H. Baker, M.D., was appointed as MSMS representative to the Governor's Committee on Citizenship Week. (b) R. C. Hildreth, M.D., Kalamazoo; Wm. A. Hyland, M.D., Grand Rapids; E. T. Thieme, M.D., Ann Arbor; and J. M. Wellman, M.D., Lansing, were appointed as MSMS representatives to the Michigan Cancer Co-ordinating Committee, for the fiscal year beginning September 1, 1955. (c) Robert M. Heavenrich, M.D., Saginaw, was appointed as MSMS representative to the Michigan School Health Association Planning Committee for Leadership Project in Health Education. (d) Max L. Lichter, M.D., Detroit, was appointed as MSMS representative to attend the Conference on Atom Bomb, Washington, D. C., November 7-9. (e) Ralph W. Shook, M.D., Kalamazoo, was ap-

(Continued on Page 1152)

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HIGHLIGHTS OF THE COUNCIL

(Continued from Page 1150)

pointed Vice Chairman of the Advisory Committee to Michigan State Medical Assistants Society and also was authorized to attend, as official MSMS representative, the MSMAS convention in Grand Rapids. (f) MSMS representative to attend the dedication of the new building of the Medical Society of the State of Wisconsin on October 15 was authorized. (g) J. Joseph Herbert, LL.D., Manistique, MSMS Legal Counsel, was authorized to attend the Medico Legal Conference of American Medical Association, Chicago, October 9.

- **A Medical Civil Defense meeting,** scheduled for Detroit, November 16, under the sponsorship of Lederle Laboratories, was approved.
- **County Society Secretaries-Public Relations Seminar (three-day session) of January, 1956.** —Outline of this meeting, beamed to the theme "*You* Are Organized Medicine's Basic Unit" was presented, thoroughly discussed, amended and approved with final program to be presented to The Council on September 30.
- **Report** of Alpena County Medical Society on Multiphasic Screening Program was presented and ordered placed on file.
- **MSMS Headquarters.**—Black topped, additional parking area; aluminum wire fence for western boundary of property and purchase of necessary attic fan were authorized.
- **Subjects and names of participants** in the Scientific Radio Program for the ensuing year, as presented by Chairman Harry A. Towsley, M.D., Ann Arbor, were approved, with thanks.

(Continued on Page 1165)

MEETINGS OUTSIDE MICHIGAN

November 7-9—62nd Annual Convention—Association of Military Surgeons of the U.S., Statler Hotel, Washington, D. C.

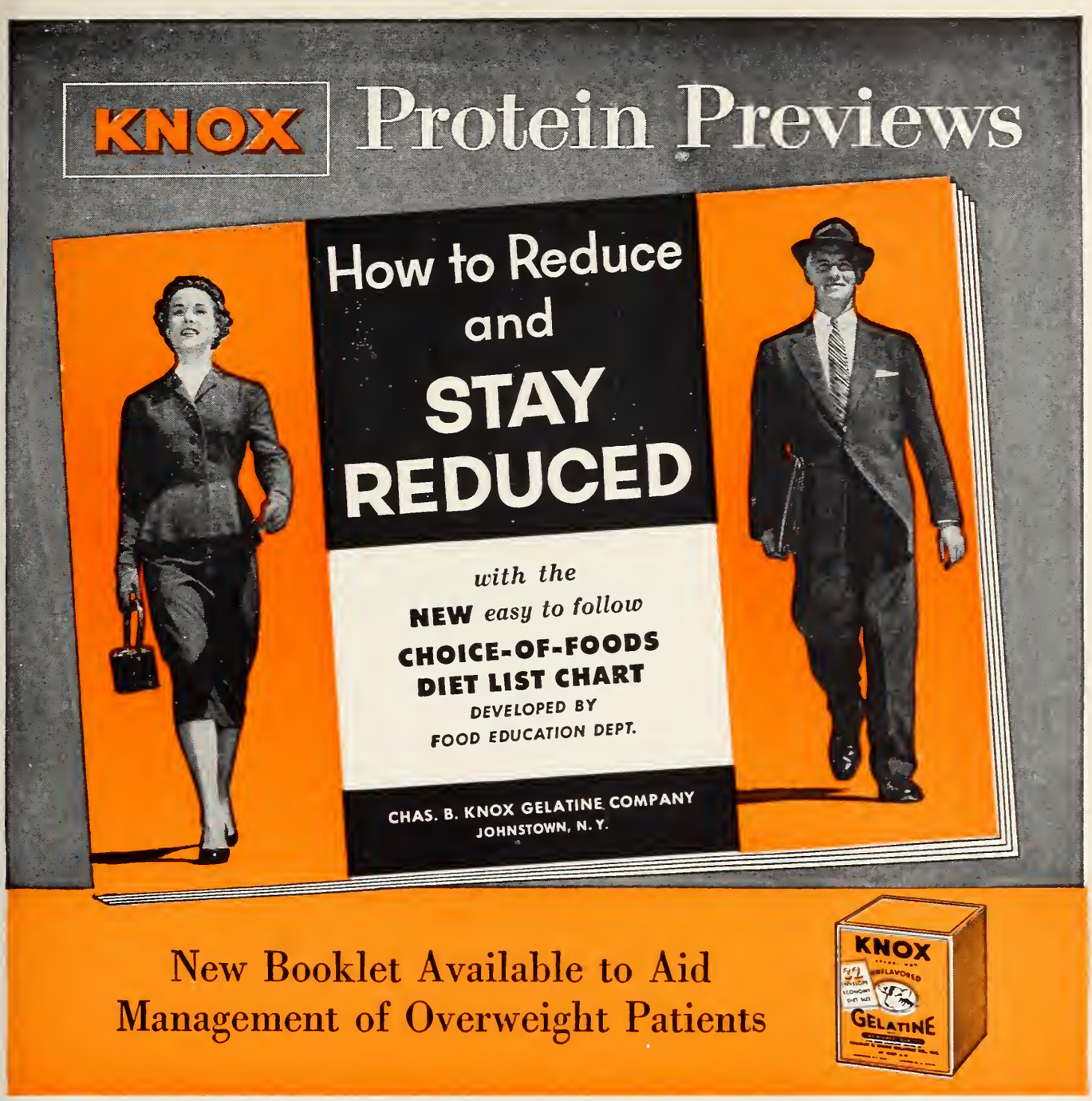
November 14-17—40th Annual International Scientific Assembly—Interstate Postgraduate Medical Association.—Milwaukee, Wisconsin.

MEDICAL MEETINGS AND CLINIC DAYS

A list of known medical meetings and clinic days, sponsored by county medical societies and other physician groups in Michigan, follows:

1955		
October 14	Michigan Cancer Conference	East Lansing
October 19	MSMS Executive Committee of The Council	Lansing
October 17-19	Eighth Annual Scientific Meeting—Detroit Institute of Cancer Research	Detroit
October through May	Detroit Dermatological Society (second Wednesday of each month)	Detroit
Autumn	MSMS Postgraduate Extramural Courses	Statewide
November 1-3	International Symposium: Units of Biological Structure and Function. Henry Ford Hospital.	Detroit
November 9-10	Michigan Academy of General Practice Ninth Annual Fall Postgraduate Clinic, Sheraton-Cadillac Hotel	Detroit
November 16	MSMS Executive Committee of The Council	Detroit
November 29	AMA Clinical Session	Boston
December 14	MSMS Executive Committee of The Council	Lansing
1956		
January 18-21	Michigan Rural Health Conference	Kalamazoo
January 25-27	Annual Meeting of the MSMS Council, Sheraton-Cadillac Hotel	Detroit
January 27-29	MSMS County Secretaries-Public Relations Seminar, Sheraton-Cadillac Hotel	Detroit
February 16	MSMS Executive Committee of The Council	Detroit
March 6	Michigan Chapter, American College of Surgeons	Detroit
March 7-9	Michigan Clinical Institute, Sheraton-Cadillac Hotel	Detroit
March 9	MSMS Executive Committee of The Council	Detroit
Spring	MSMS Postgraduate Extramural Courses	Statewide
April 11	Genesee County Medical Society's Eleventh Annual Cancer Day	Flint
April 18	MSMS Executive Committee of The Council	Lansing
May 8-9	Annual Clinic Day and Alumni Reunion, Wayne University College of Medicine	Detroit
May 16	MSMS Executive Committee of The Council	Detroit
May 3	Twenty-Eighth Annual May Clinic, Ingham County Medical Society	Lansing
June	Upper Peninsula Medical Society	———
June 11-15	Annual Session, American Medical Association	Chicago
June 4-7	American Cancer Society, Sheraton-Cadillac Hotel	Detroit
June 20	MSMS Executive Committee of The Council	Muskegon
July 19-21	Mid-summer Session of the MSMS Council	Mackinac Island

KNOX Protein Previews



New Booklet Available to Aid Management of Overweight Patients

The 1955 edition of the well-known Knox "Eat-and-Reduce" booklet eliminates calorie counting for your obese patients. This year's edition is based on the use of Food Exchange Lists[1] which have proved so accurate in the dietary management of diabetics. These lists have been adapted to the dietary needs of patients who must lose weight.

The first 18 pages of the new booklet present in simple terms key information on the use of Food Exchanges (referred to in the book as Choices). In the center, double gatefold pages outline color-coded diets of 1200, 1600, and 1800 calories based on the Food Exchanges. Physicians will find these diets easy to revise to meet the special needs of individual patients.

To help patients persevere in their reducing plans, the last 14 pages of the new Knox booklet are devoted to more than six dozen *tested*, low-calorie recipes. Please use the coupon below to obtain copies of the new "Eat-and-Reduce" booklet for your practice.

1. Developed by the U. S. Public Health Service assisted by committees of The American Diabetes Assn., Inc. and The American Dietetic Assn.

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Johnstown, N. Y.

Please send me____copies of the new illustrated Knox "Eat-and-Reduce" booklet based on Food Exchanges.

MSMS Program Captures National Award

A handsome new plaque adorns the wall at MSMS headquarters in Lansing, symbolic of the 1955 Grand Award for State Associations in the annual contest for outstanding public service activities sponsored by the American Trade Association Executives, national professional society composed of more than 1,600 executives from leading business, professional, scientific, and trade associations.

The Grand Award was presented to MSMS in recognition of its successful, long-range program for recruiting and training medical associates in the interest of extending the best medical care to the greatest number of Michigan citizens. The seven-year-old program is still in operation on a wide scale.

The plaque—reproduced in the center of this page—was accepted by William Bromme, M.D., Detroit, Chairman of The Council, in behalf of MSMS, at the 35th Anniversary Meeting of ATAE at Grand Hotel, Mackinac Island, on August 2, 1955. Russell A. Stevenson, Dean of the School of Business Administration at the University of Michigan and one of the five members of the ATAE Jury of Awards, made the presentation. Other jury members included Sinclair Weeks, U. S. Secretary of Commerce, who served as Chairman and whose signature appears on the plaque, the Presidents of the U.S. Chamber of Commerce and the National Association of Manufacturers, and the Dean of the School of Business Administration at the University of Minnesota.


1955

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for

State and Local Associations

to

Michigan State Medical Society

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Jury of Awards

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President, Chamber of Commerce of the U S
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Russell A. Stevenson
Dean, School of Business Administration, University of Michigan, Ann Arbor, Michigan

Attest
Chairman, Jury of Awards

The official ATAE report on the award stated, in part:

"One of its (MSMS) responsibilities is to insure the best medical care to the people of Michigan. In carrying out this objective, the Society was faced with the problem of insufficient personnel to staff the large number of medical institutions constructed in recent years. Technical advances in medicine had brought new and important vocations. This work called for a generous supply of well-trained laboratory technicians, medical technologists, and other technical personnel. Shortages were critical. . . .

"MSMS was not faced with a simple task of recruitment. . . . A whole new philosophy had to be 'sold' to medical educators, doctors of medicine, and to vocational counselors before it was worthwhile to start mass recruitment. . . .

"The impact of the campaign has highlighted this contemporary career opportunity throughout the nation."

More than 500 members and guests attended the 1955 ATAE meeting, the largest in the organization's history. William J. Burns, of Lansing, Executive Director of MSMS and a Vice President of ATAE, served as general chairman of the convention.

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AMA Washington Letter

THE MONTH IN WASHINGTON

Although Salk vaccine now is coming from the laboratories in encouraging volume, in Washington there still are unresolved questions that may well go beyond the problem of controlling poliomyelitis.

After months of wrangling, Congress this year enacted only one law dealing with the new vaccine. This was an authorization for the allocation of money to states to help finance inoculation campaigns. On this there was a sharp difference of opinion. Some lawmakers wanted to give federal money, but to earmark it for the exclusive use of children who had passed the "means test," that is, whose parents had been officially determined to be unable to pay for the shots. Others would have nothing to do with a bill carrying the "means test."

As finally enacted, the law provides enough money to buy vaccine for only approximately one-third of all children under 20 and pregnant women. That is a concession to those who want a "means test." But the "no means test" faction was appeased by another provision of the law, a stipulation that in inoculation programs arranged by the state and communities no financial questions could be asked.

It may be that this decision will be final, that Congress will have nothing more to do with this complicated problem, except possibly to add to the 30 million dollars already appropriated to pay for vaccine. But that isn't the way some members of Congress feel. They want to reopen the entire question before the present law expires next February 15. At the very least, these Senators and Representatives want Congress to vote enough money to buy shots for all children in the eligible ages. In fact, those who want the federal government to play a larger role in inoculation programs regard the law now on the books as merely a temporary measure. They are looking forward to reopening the issue.

If this is done, the many questions that the last session couldn't decide again will be before Congress. Here are some of them:

1. Is it the responsibility of the federal government to make free shots available to all, regardless of ability to pay?

2. If there is to be a "means test," should the states or the federal government set the dividing line between the families that can pay and those that can't?

3. Should the federal government move into the picture and allocate the available vaccine, or should distribution continue along the present voluntary lines?

4. Should the states and communities arrange for all inoculations themselves?

Underlying these questions are some issues that go beyond Salk vaccine. Some persons in Congress believe there should be no limit to the participation of the federal government in public health programs. They would like to see free inoculations not only for poliomyelitis but also for all other communicable diseases for which there is a specific vaccine.

Also, the rambling system of federal control over drugs, with enforcement spread among half a dozen departments and agencies, is under criticism. Some leaders in Congress believe the whole area of federal drug control should be surveyed, and possibly more clear-cut lines of enforcement laid down. One bill on this subject—which was not pressed last session—would give the Secretary of the Department of Health, Education, and Welfare authority to move in and assume control over the distribution and even the use of any drug when the Secretary decided that the public welfare warranted such drastic action.

NOTES:

During the current fiscal year the U. S. will be spending a total of over 32 million dollars to help in vocational rehabilitation work, most of it in the form of grants to states.

In exchange for patent rights, colleges and laboratories will receive some financial concessions from the Atomic Energy Commission in purchase of nuclear materials and equipment.

From now on Air Force physicians, when addressed verbally, will be called "doctor." The military rank and title will continue to be used, however, in written communications.

The Department of HEW's many medical research programs are being scrutinized by a special committee set up by the National Science Foundation. In originally suggesting the study, former HEW Secretary Hobby said the time had come to re-evaluate the extent of federal medical research. Final findings will be turned over to HEW Secretary Marion B. Folsom.

Seminomas are more radiosensitive than other types of testicular tumors, but radiation therapy alone cannot be depended on to control the tumor spread.

* * *

Preoperative radiation has no place in the treatment of tumors of the testis.

E

Equanil*

a new anti-anxiety factor

Meprobamate

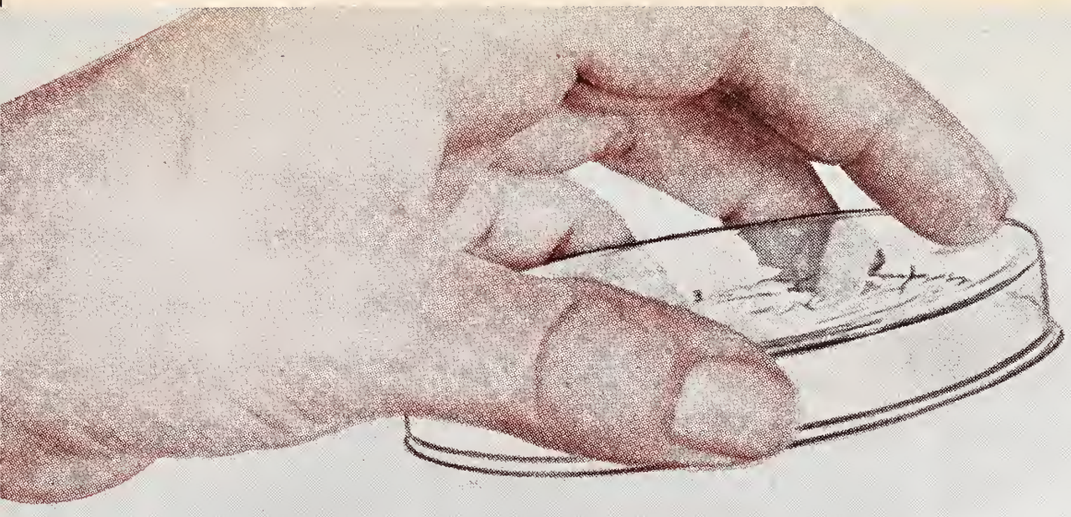
(2-methyl-2-*n*-propyl-1 3-propanediol dicarbamate)

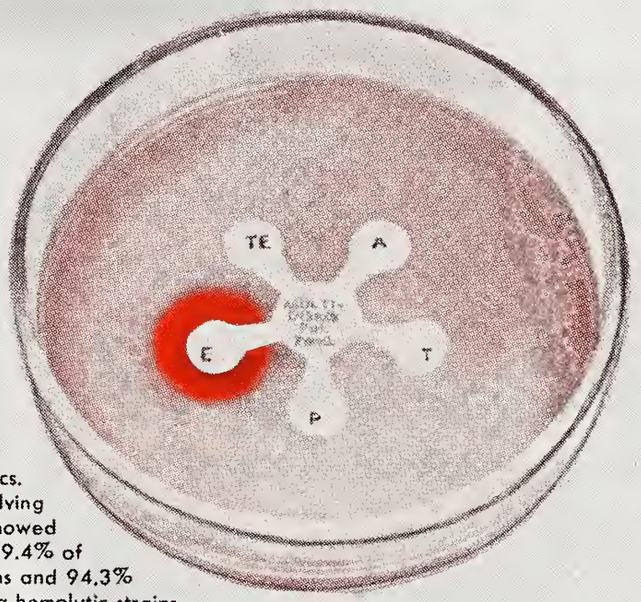
Appropriate to an age of mental and emotional stress,
EQUANIL has demonstrated remarkable properties for promoting equanimity and release from tension,
without mental clouding.
EQUANIL is a pharmacologically unique anti-anxiety agent with muscle-relaxing features.
Acting specifically on the central nervous system,
it has a primary place in the
management of patients with anxiety neuroses,
tension states, and associated conditions.[1,2]
In clinical trials, patients respond with ". . . lessening of tension, reduced irritability and restlessness, more restful sleep, and generalized muscle relaxation."[2]
It is a valuable adjunct to psychotherapy.
Clinical use is not limited by significant side-effects, toxic manifestations, or withdrawal phenomena.[1,2]
Supplied: Tablets, 400 mg., bottles of 48.

Wyeth®
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*Trademark

1. Selling, L.S.: J.A.M.A. 157: 1594 (April 30) 1955. 2. Borrus, J.C.: J.A.M.A. 157: 1596 (April 30) 1955.





DESTROYS ENTEROCOCCI

This blood agar plate shows a strain of *beta* hemolytic enterococcus. Note extreme sensitivity of this organism to ERYTHROCIN—yet it easily resists the other antibiotics. Additional data: A study[1] involving 202 enterococcic strains showed sensitivity to erythromycin in 99.4% of *alpha* hemolytic strains and 94.3% of *beta* hemolytic strains.

specific against coccic infections

Now, you can prescribe *specific therapy* against staph-, strep- or pneumococci by simply writing *Filmtab* ERYTHROCIN Stearate. Since this coccic group causes most bacterial respiratory infections (and since these organisms are the very ones most sensitive to ERYTHROCIN) doesn't it make good sense to prescribe *Filmtab* ERYTHROCIN when the infection is coccic?

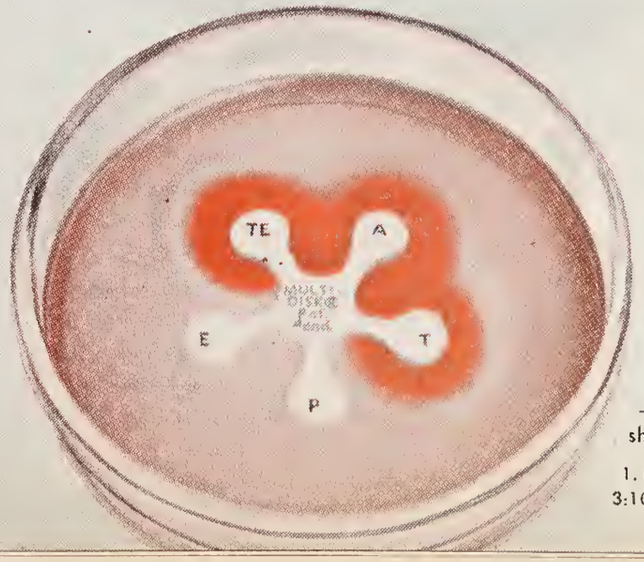
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Erythrocin®

Erythromycin Stearate, Abbott)

STEARATE





SPARES

INTESTINAL FLORA

This sensitivity test shows ERYTHROCIN and the same antibiotics against a typical intestinal strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect this gram-negative organism —although the other antibiotics show marked inhibitory action.

1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

with little risk of serious side effects

Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to alter intestinal flora—with an accompanying low incidence of side effects. Also, your patients seldom get the allergic reactions sometimes seen with penicillin. Or loss of accessory vitamins during ERYTHROCIN therapy. *Filmtab* ERYTHROCIN Stearate (100 and 250 mg.) is supplied in bottles of 25 and 100 at pharmacies everywhere. Abbott

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a potent
peripheral vasodilator

Orally and parenterally
effective, intra-arterially
as well as intramuscularly
and intravenously.
Of proved value in peripheral
ischemia and its sequelae:
pain, loss of function,
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trophic manifestations.

Comprehensive information on
intra-arterial as well as
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CIBA Pharmaceutical Products, Inc.,
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Tablets, 25 mg. (Scored)
Elixir, 25 mg. per 4-ml. teaspoonful
Multiple-dose Vials, 10 ml., 25 mg. per ml.

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the delta$_1$ analogue of hydrocortisone

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(Prednisolone, Merck)

2.5 mg.-5 mg.

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Indications: RHEUMATOID ARTHRITIS
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'Hydeltra' offers increased clinical effectiveness . . . lowers the incidence of untoward hormonal effects.

'Hydeltra' is supplied as 2.5 mg. and 5 mg. scored tablets in bottles of 30 and 100.

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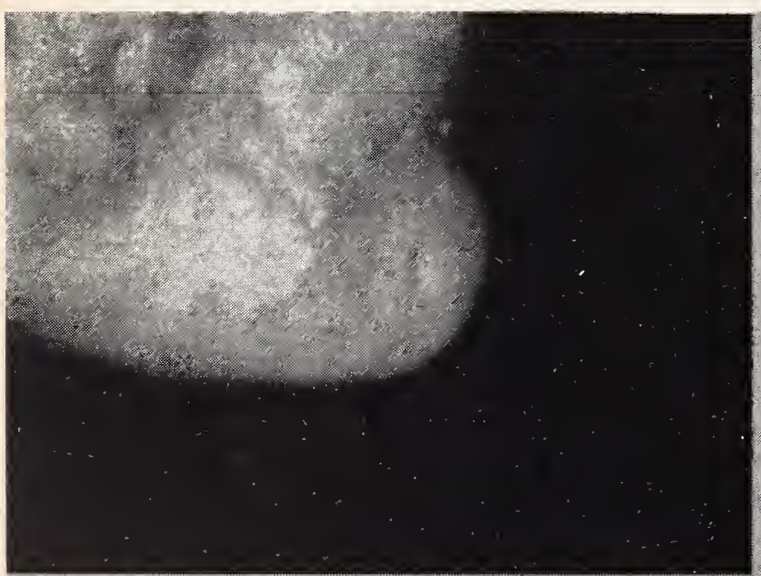
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dry skin

why not use the most effective vitamin A?



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vitamin A is
a superior form
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vitamin A
in high dosage
is effective
in many
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better and more rapidly
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clinical evidence establishes
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up to 300% greater absorption
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only 1/2 to 1/10 as much aqueous vitamin A is needed

	aqueous vitamin A**	ordinary oily vitamin A
acne	25,000 to 50,000 units daily	up to 500,000 units daily
eczema chronic	25,000 to 50,000 units daily	50,000 to 500,000 units daily
excessively dry skin	60,000 to 100,000 units daily	100,000 to 300,000 units daily

**Aquasol A Capsules (aqueous natural vitamin A) was one of the products used in these studies.

only 1/2 to 1/3 the treatment time is required for aqueous vitamin A

aquasol A capsules

three separate high potencies of natural vitamin A per capsule ...
in water-soluble form:

25,000 U.S.P. units **50,000 U.S.P. units** **100,000 U.S.P. units**



bottles of 100, 500 and 1000 capsules

PR REPORT

STEPPED-UP PUBLIC RELATIONS INTEREST on the part of the Michigan medical profession was evident in widely separated areas of the state as county societies and their members came out of the summer doldrums and jumped into a busy fall and winter schedule. Even in the dying days of summer, during August and early September, society officers and PR leaders in several counties showed foresight by meeting with MSMS representatives to evaluate current PR activities and make plans for intensified programs in the future. With the active help of MSMS Councilors in each district, late summer conferences were successfully planned with key members of the Mecosta-Osceola-Lake County Medical Society at Big Rapids, the Mason, Newaygo, and Oceana county societies at Ludington, the four-county Northern Michigan society at Petoskey, and the Hillsdale and Lenawee county societies at Adrian.

Councilors instrumental in setting up these meetings were William M. LeFevre, M.D., of Muskegon; G. B. Saltonstall, M.D., of Charlevoix, and B. M. Harris, M.D., of Ypsilanti. At all but one session, both C. Allen Payne, M.D., of Grand Rapids, MSMS PR Committee Chairman, and L. Fernald Foster, M.D., of Bay City, MSMS Secretary, were present to guide the discussion. PR staff members also took part.

BIGGEST BOOST TO PR IN 1956 is expected to be the annual County Secretaries-Public Relations Conference in January, which The Council has expanded to a three-day seminar instead of the usual jam-packed one-day session. The dates: January 27-28-29. The site: Sheraton-Cadillac Hotel, Detroit. The theme: "*You* Are Organized Medicine's Basic Unit." County societies are being urged to make plans *now* for strong representation at this vital conference.

The seminar is designed to be fully as valuable to Michigan M.D.'s and county society executives as was the fourth annual AMA Public Relations Institute on a national level. The Institute was held in Chicago in early September. MSMS was represented by a delegation headed by PR Chairman Payne, and including Public Relations Counsel Hugh W. Brenneman, Associate PR Counsel A. DeWitt Brewer, and Warren F. Tryloff, PR Field Secretary in the MSMS Detroit office. Each of the staff members also was a formal participant in the two-day program.

WAYNE COUNTY MEDICAL SOCIETY'S excellent three-week medical forum series, in co-operation with the *Detroit Free Press,* is described elsewhere in this issue, but this October PR Report is a good spot to extend congratulations to William Bromme, M.D., Forum Chairman, and Milton A. Darling, M.D., WCMS President, for spark-plugging this excellent PR venture. Incidentally, Kalamazoo Academy of Medicine is reported to be the latest society planning a renewal of its community medical forum series. Several new ideas are being considered by the Kalamazoo group.

THE 26-POINT PR PROGRAM for county societies outlined in the MSMS "Winning Friends for Medicine" PR guidebook is being revised to embrace two additional projects. "How to do it" material is being prepared for local medical society participation in health projects sponsored by service and fraternal organizations, and in school health programs. The PR Committee has directed the new project outlines to be developed in time for presentation at its annual meeting in Detroit, January 27.

NINE NEW TELEVISION PROGRAMS will be produced in coming months by MSMS over WKAR-TV, East Lansing, the educational station at Michigan State University. The series will be made available, however, to a much wider viewing audience than that offered by the limited range of the East Lansing UHF facilities. Kinescope recordings are planned for each of the nine shows, and MSMS will offer these to other Michigan TV stations for public service use. County societies interested in sponsoring local showings may get the details from the MSMS Public Relations Department.

The TV-Radio PR Sub-committee, under the chairmanship of A. E. Schiller, M.D., of Detroit, is responsible for developing the MSMS programs.

In all, WKAR-TV is planning a series of thirty-six medical programs during 1955-56. MSMS will be responsible for producing nine (as noted above). In addition, Michigan State University itself, Ingham County Medical Society, and the State Health Department will each produce nine programs for the series. Whether kinescope films will be made by the other sponsors had not been decided in the early planning.

PR POT-POURRI: Farm-City Week, October 23-29, is a "natural" for co-operation between county medical societies and local Kiwanis Club sponsors. Such co-operation is fully endorsed and urged by MSMS. . . . A. C. Pfeifer, M.D., veteran editor of the Genesee CMS publication who recently retired from that post, is back in harness again! Under MSMS auspices, Dr. Pfeifer is editing a new health column for *Michigan Farmer,* most influential and widely-circulated farm journal in the state. . . . A timely tip: Prepare now for local participation in Medical Education Week, April 23-30, 1956, a new national PR project co-



*Trademark for the Upjohn brand of prednisolone (delta-1-hydrocortisone)

sponsored by AMA and three allied medical education groups. There will be many opportunities for hometown tie-ins emphasizing the theme "Medical Education Keeps America Healthy." . . . Are you receiving Ciba's new eight-page tabloid *Medical News?* It's billed as "the first newspaper exclusively for the medical profession," and comes free of charge to M.D.'s every other week. . . . Parke, Davis & Co., Detroit pharmaceutical firm, has jumped into the medical associates recruitment campaign with an excellent new movie pinpointing the fact that there are many service opportunities offered by careers in medicine, pharmacy, research, and nursing. Just released, the 29-minute color film is entitled "Going Our Way." Prints are being offered for showing to civic and service clubs.

The routine or survey x-ray examination is the best and, in fact, the only applicable method for the early detection of pulmonary tumors.

* * *

The appearance of the lung lesion on the x-ray film does not bring automatic recognition; it must be interpreted as an abnormal shadow and some one must prod the asymptomatic patient into submitting to further, more definitive measures.

* * *

If a woman herself has sense enough to seek the periodic examinations we preach about, the least we can do is to take her seriously, to examine her conscientiously, and thus to live up to the ideal of making every doctor's office a cancer detection center.

HIGHLIGHTS OF THE COUNCIL

(Continued from Page 1152)

- **Co-sponsorship** was authorized for the Civil Defense meeting of the Michigan State Nurses Association, Grand Rapids, October 25.
- **The monthly report of Legal Counsel Herbert** included progress report on the Kopprasch legal case; definition of a "hospital"; question of the Washtenaw County Medical Society re advantages of incorporation by a county medical society; and Kalamazoo Academy of Medicine questions re mediation.
- **Public Relation Counsel's report** included progress of the eighty-one transcribed radio programs supplied by AMA and placed on Michigan's stations, September 1, 1954, to August 31, 1955; exhibit plans for Michigan State Fair; county medical society PR meetings arranged by MSMS; publicity during MSMS Annual Session; TV program "Conquest of Disease" prepared by Lederle Laboratories, to be presented in Michigan through MSMS cooperation.
- **A motion of thanks** was extended Dr. and Mrs. W. S. Jones for their hospitality to members of the Executive Committee of The Council on this occasion.

itching,

scaling,

burning

keep returning?



your patient needs

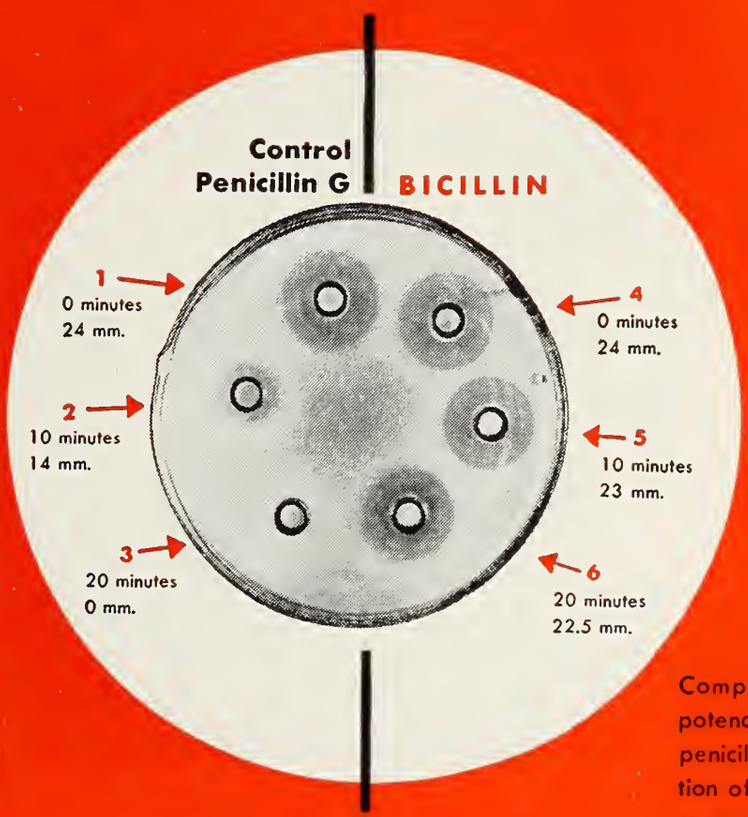
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SELSUN acts quickly to relieve seborrheic dermatitis of the scalp. Itching and burning symptoms disappear with just two or three applications – scaling is controlled with just six or eight applications. And SELSUN is effective in 81 to 87 per cent of all seborrheic dermatitis cases, 92 to 95 per cent of dandruff cases. Easy to use, SELSUN is applied and rinsed out while washing the hair. Takes little time, no messy ointments or involved procedures. Prescribe the 4-fluidounce bottle for all your seborrheic dermatitis patients. Complete directions are on label. Abbott



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Protected Penicillin means **Systemic** Penicillin

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1. American Medical Association: New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

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TABLETS SUSPENSION

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Benzathine Penicillin G (Dibenzylethylenediamine Dipenicillin G)

Penicillin with a Surety Factor



Background

is part of every picture

IN weighing the merits of an important piece of equipment, such as an electrocardiograph, it is often helpful to know something about the maker — his qualifications, his experience, and the other acceptable instruments he makes. In short, you might like to know what sort of *background* the considered electrocardiograph has.

In the case of the Viso-Cardiette, such a background can be represented by the instruments chosen to accompany it in the Sanborn "family portrait" above. Although not possible to show them all here, Sanborn instruments of precision cover the complete range of cardiac recording for diagnosis and research, and also provide the basis for the measurement and recording of most of the other types of physiological phenomena.

Collectively, they represent the tangible application of the Sanborn experiences and skills that were gained over the past third of a century Unquestionably, such a background *does* make the Viso picture complete.

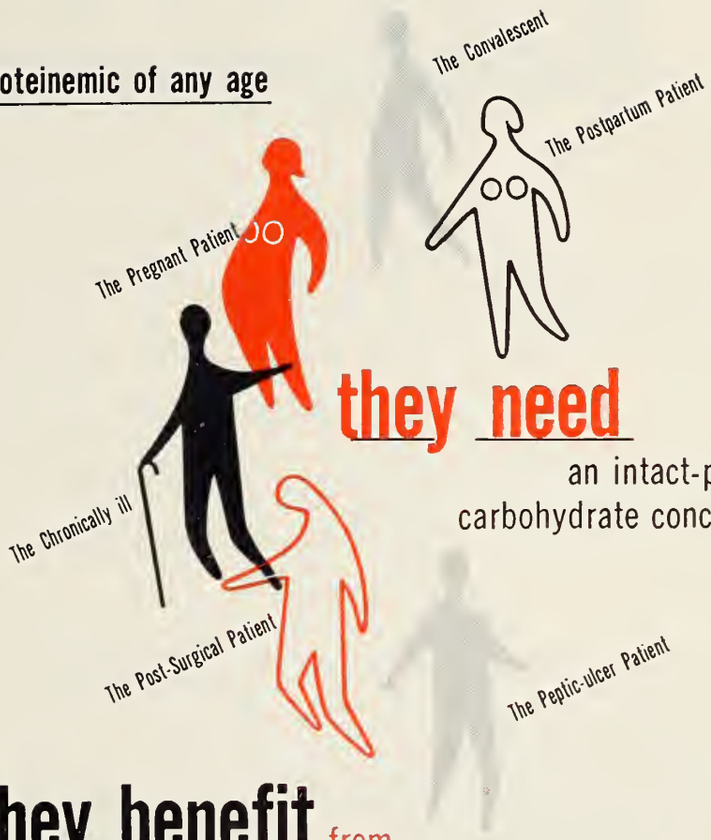
Write for completely descriptive literature, or contact your local Sanborn Office for information or a demonstration.



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to maintain protein/carbohydrate equilibrium essential for tissue regeneration.

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for the hyperexcitability so often found in

hypertension
hyperthyroidism
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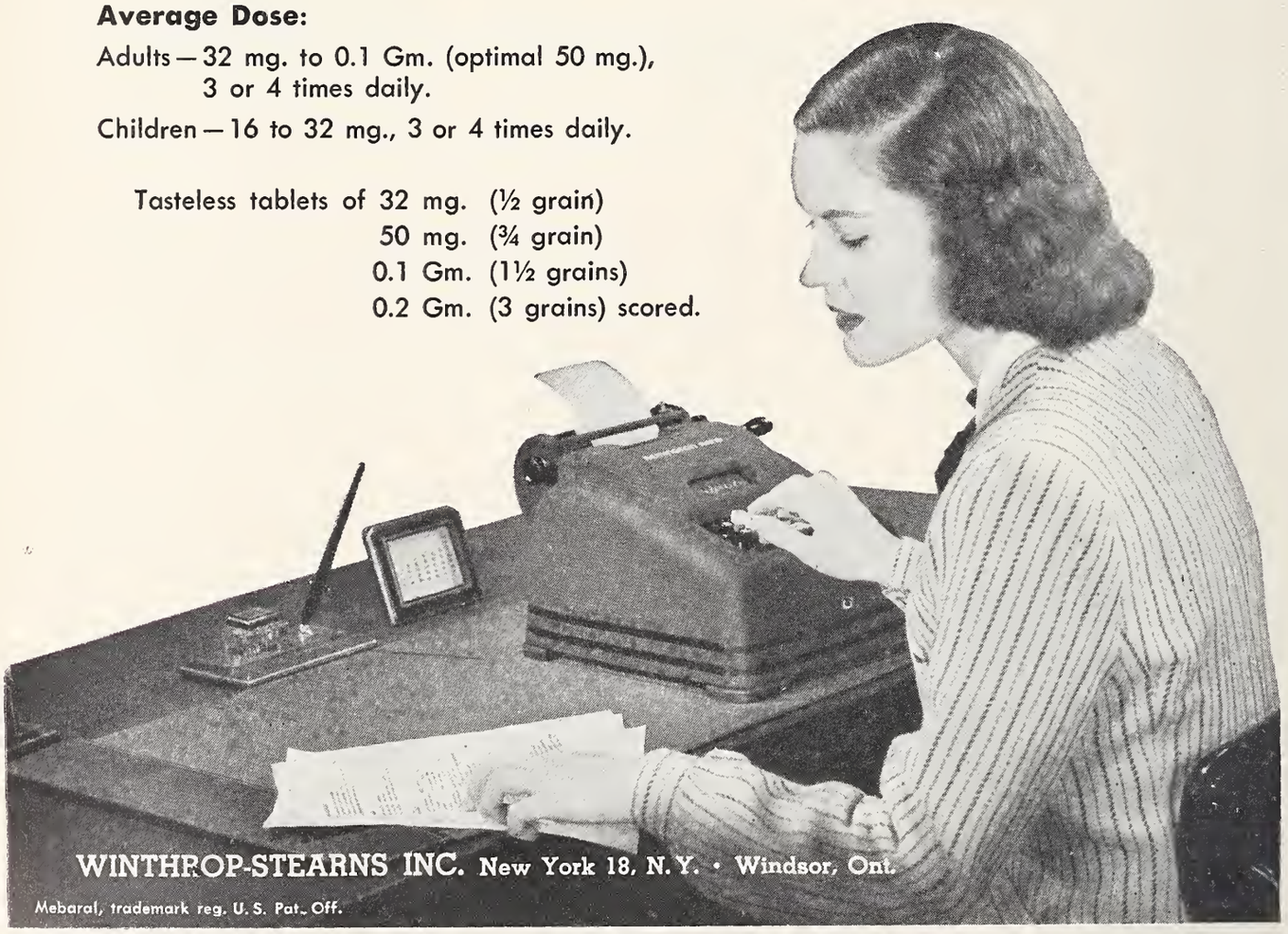
Mebaral's soothing sedative effect is obtained without significantly clouding the patient's mental faculties.

Average Dose:

Adults—32 mg. to 0.1 Gm. (optimal 50 mg.), 3 or 4 times daily.

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Tasteless tablets of 32 mg. (½ grain)
50 mg. (¾ grain)
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0.2 Gm. (3 grains) scored.



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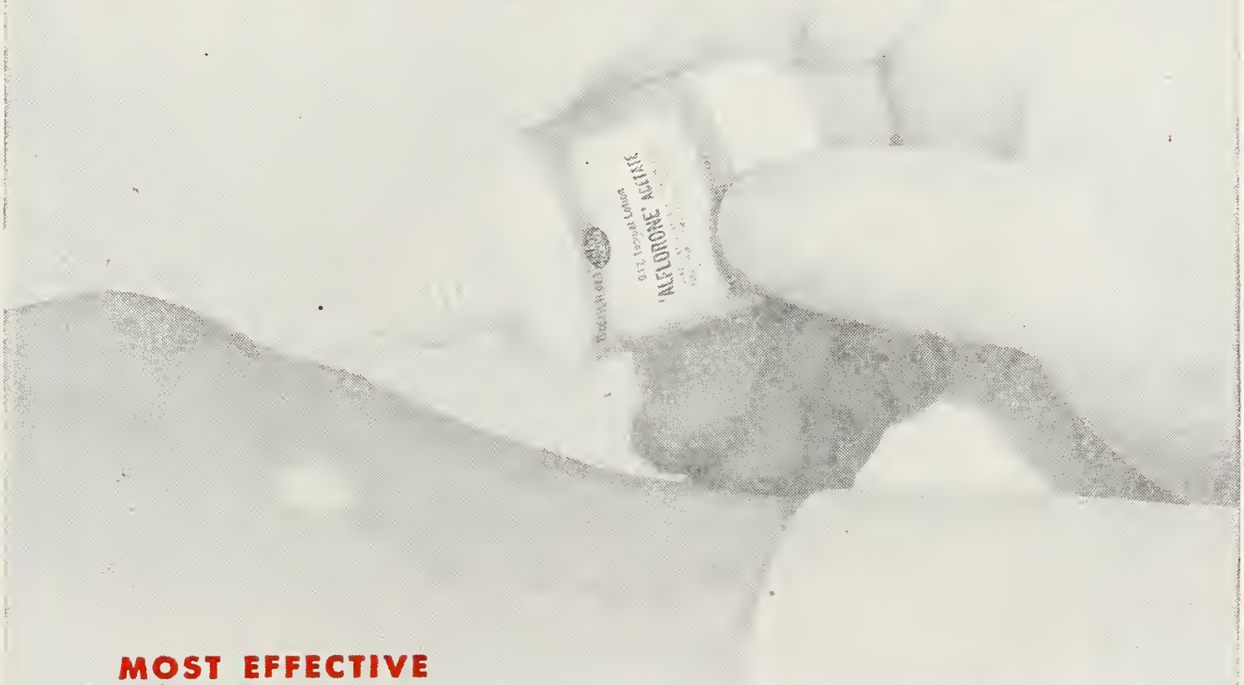
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MOST EFFECTIVE
Therapeutically active in 1/10th the concentration of hydrocortisone (Compound F).

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Superior spreading qualities—a small quantity covers a wide area.

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Most patients prefer the cosmetic advantages of this easy-to-apply, smooth spreading lotion.

Supplied: Topical Lotion Alflorone Acetate: 0.1% and 0.25%, in 15-cc. plastic squeeze bottles. Topical Ointment Alflorone Acetate: 0.1% and 0.25%, 5-Gm., 15-Gm., and 30-Gm. tubes.

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for the majority of diabetics



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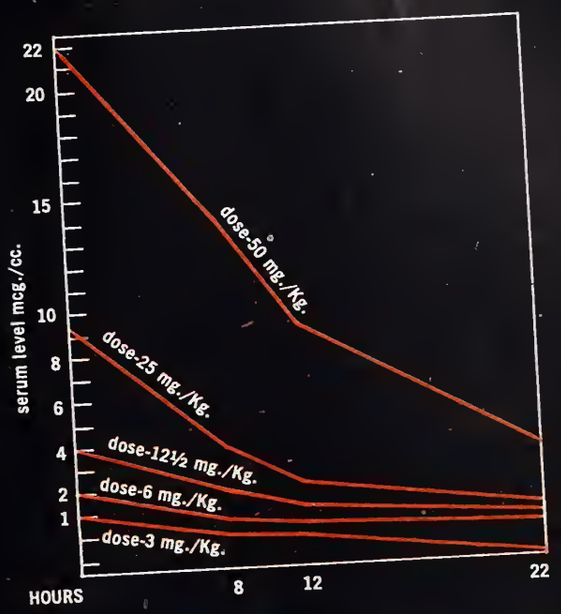
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Mean Serum Levels After Intramuscular Injection of Terramycin.



"The absorption into the blood stream after injections of various dosages was very rapid, and in fifteen minutes a high therapeutic level was obtained. . . ."

O'Regan, C., and Schwarzer, S.: J. Pediat. 44:172 (Feb.) 1954.

Whenever oral administration is impracticable or contraindicated—

Whenever speedy broad-spectrum antibiotic effects are needed—

Intramuscular Terramycin has proved itself an agent of choice, efficacious and well tolerated.

High therapeutic levels... rapidly attained

TERRAMYCIN® INTRAMUSCULAR

BRAND OF OXYTETRACYCLINE

the first broad-spectrum antibiotic available in this form

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now available
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METICORT

"possesses an augmented therapeutic ratio"[1]
in cortical hormone thera

Scherin

METICORTELONE possesses antirheumatic and anti-inflammatory effectiveness and hormonal properties similar to those of METICORTEN,[1-5] the first of the new Schering corticosteroids. Both are three to five times as potent, milligram for milligram, as oral cortisone or hydrocortisone. METICORTELONE and METICORTEN therapy is seldom associated with significant water or electrolyte disturbances.

METICORTELONE is an analogue of hydrocortisone, as METICORTEN is of cortisone. The availability of these new steroids, both discovered and introduced by Schering, provides the physician with two therapeutic agents of approximately equal effectiveness.

METICORTELONE is now available as 5 mg. buff-colored tablets, scored, bottles of 30 and 100. In the treatment of rheumatoid arthritis, dosage begins with an average of 20 to 30 mg. (4 to 6 tablets) a day. This is gradually reduced by 2.5 to 5 mg. until daily maintenance dosage, which may be between 5 to 20 mg., is reached. The total 24-hour dose should be divided into four parts and administered *after meals and at bedtime*. Patients may be transferred directly from hydrocortisone or cortisone to METICORTELONE without difficulty.



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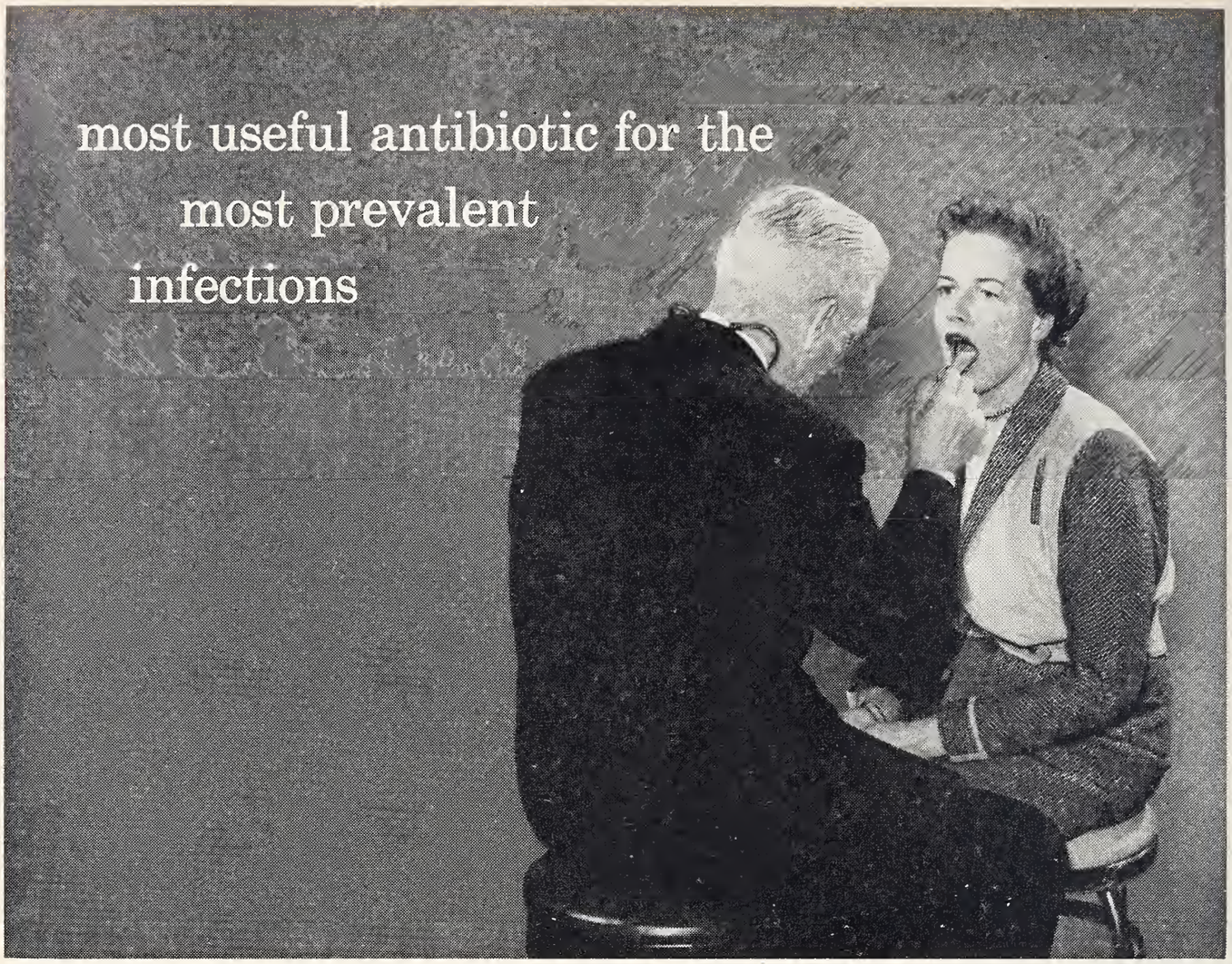
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Looking Back Fifty-five Years

From "Laudable Pus" to Salk Polio Vaccine

By William J. Stapleton, Jr., M.D.

Detroit, Michigan

Life is short and the art long; the occasion fleeting; experience fallacious, and judgment difficult. The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and externals coöperate."

Hippocrates, "Aphorisms"

IT WAS fifty-five years ago that I walked up to the stage of the old Detroit Opera House and received from Dr. Hal C. Wyman, Dean of the Michigan College of Medicine and Surgery, my diploma as a doctor of medicine. This was on April 24, 1900. From the State Board of Registration in Medicine, I received a certificate which said the owner thereof was entitled to practice medicine, surgery, and midwifery in all their branches.

I got interested in medicine from contact with our old family doctor, Dayton Parker, a Civil War veteran. He lived across the street on the corner and, like all the other doctors at that time, had his office in his home. He had two sons and two attractive daughters. I spent a great deal of time in that old house. Curiosity had me looking in the books, especially those on anatomy and obstetrics, where there were many pictures of the human body.

The two sons were going to be doctors, and we talked as boys will about the work. We knew how the doctor went out at night, had to wake up his horse and harness it himself. How he was kept busy—being the police surgeon was one of his jobs. (Later I was to make night calls for him when some policeman was ill and I found more than one cop who was just too tired to go out on a cold winter's night.) Both of Doctor Parker's sons became doctors, Burton has retired to Hickory Island, but Morgan is still in active practice in Utica, Michigan.

Our class was the first four-year class. We were the first to have a so-called course in bacteriology which consisted of lectures and slide demonstrations given by a young doctor who had just taken the course at the University of Michigan. We also had a lecture course on a new-fangled thing called psychology.

I remember when there were three medical schools in Detroit: the Detroit College of Medicine, the Michigan College of Medicine, and the Detroit Homeopathic College. In all, there were seven medical schools in Michigan. In addition to the three Detroit schools, there were two at Ann Arbor—the Allopath and Homeopath—the Grand Rapids Medical College, and the Saginaw Valley College of Medicine.

Along about the early 1900's, the American Medical Association started an investigation of the medical schools in the United States. There were 141 schools. The work of the AMA, plus the report of Abraham Flexner, "Medical Education in the United States and Canada" (Carnegie Foundation of Teaching Bulletin 4, 1910), showed the glaring deficiencies of medical education and resulted in the closing of over half of the proprietary schools. The result in Michigan was to reduce the medical schools to two—the University of Michigan, and the Detroit College of Medicine (now the Wayne University College of Medicine). The AMA was roundly excoriated for attempting

this survey in the beginning, but now it is praised for having done so.

The high standards of our hospitals, too, were achieved in large part by the activities of the AMA—especially the hospital inspection and approval program of the Council on Medical Education and Hospitals.

Fifty-five years ago, medical education was at a low ebb. With the exception of anatomy and chemistry, the teaching was entirely didactic and clinical. The lesson was assigned from the textbook, and the students were quizzed. The amphitheatre was the main classroom. Seniors on the front row, juniors next, sophomores above them, and at the top, the lowly freshman. Woe betide the student who tried to get a better seat in order to view the operation. At 11:00 A.M. the big clinic hour was scheduled, and everybody was required to be present. The professor examined patients and called the seniors down to see what they could find out about the case. They were quizzed about their findings. Operations were performed before the students. When one thinks of modern surgical technique and then of the procedures of those days, it is to wonder how many of the patients survived. But they did. $CHCL_3$ was the usual anesthetic. Ether and all the other refinements were to come later. Some operators used cotton gloves—rubber gloves were just starting to be used. Later a special room was set aside for operating, as more advanced knowledge came to the fore.

A little later, we find in the College of Medicine catalog the following:

"It is important that the student, on entering upon the study of Medicine, should have some adequate conception of the task which is before him. In no profession have the conditions of success changed so radically in the last thirty years as in that of Medicine.

"A physician of the last generation, who began his career with a thorough knowledge of descriptive and surgical anatomy and of pathology, as it was then understood, could hope as he acquired experience, to become equal to any in the profession.

"The schools admitted students without inquiry into the qualifications which they possessed by reason of previous study, and graduated them after attendance on two courses of lectures, which were mere repetitions, and which were supplemented by no practical courses whatever, except the one in practical anatomy. Subsequent success in practice was determined much more by the shrewdness and personal attributes of the practitioner than by his professional knowledge. This is all changed.

"Under the influence of some collateral sciences, medicine and surgery have made immense progress, and have tended to develop more and more into an exact science.

"The comparatively recent investigations of Pasteur, Lister, Koch and others in Bacteriology have wrought changes in our conception of the cause and nature of disease which have revolutionized our system of practice, and enabled us to establish methods of treatment founded, in part at least, upon a rational basis. There is every reason to believe that the impulse thus given to the development of the Medical Art and Science will continue to operate through many years to come, and that the changes in our doctrine which have taken place during the last two decades will seem insignificant, compared with those which will yet occur under the influence of a constantly expanding knowledge. It is becoming more and more evident that no man can hope to succeed in the struggle for life in the medical profession who begins its study without sufficient preparation or enters upon its practice poorly equipped in the necessary knowledge. This conviction would make every man about to study medicine anxious to thoroughly fit himself in education before entering a medical school, and willing to devote the years to technical study, which alone can establish the foundations of success."

Medical Practice

Within a week after graduation, I was in my first office. It was situated in a basement on the corner of Third and Lafayette Streets in Detroit. My shingle was black with gold letters. On the door was painted my name and office hours, 9-11, 2-4 and 7-9. At night, there was a light over the door which showed that the doctor was there. In fact, for several years I slept in my office so as not to miss any night calls. After a few years, a medical student stayed in the office at night and I went home to sleep.

I made my calls on foot, on a bicycle and on street cars. Later, I was able, after considerable scrimping, to buy a horse and buggy. I really thought that I was arriving when the day came that I could buy a "Stanhope," which was the doctor's car. Mr. Ford came along later and I had a Model T.

It was not common in those days for the young graduate to take an internship. They usually had a place picked out for practice, most often in the country. The day after graduation, they were on their way. I obtained a sort of internship by working in the Detroit Emergency Hospital during my senior year and summer vacations. Interns did everything from riding the ambulance, acting as nurses and orderlies to subduing violent mental cases and caring for all the riff-raff of the city.

In those days there was no Receiving Hospital, so all the poor, sick, drunks, dopes, and prostitutes, came to our little place. We patched them up and did the best we could with the facilities we possessed. It was a rough, tough job, but it certainly taught a young man how to handle people.

As a general practitioner of the common or garden variety, I was now ready and waiting for patients. In those days, it was a slow job. Detroit was well supplied with well-known and established physicians. Specialists were not so plentiful; still there were a few fine surgeons who practiced general medicine, a few eye men, obstetricians, gynecologists and several dermatologists. Most of the doctors, however, took care of anything that came into their offices.

To occupy my time, I would go each day to the clinic at 11:00 A.M., and work in the various cubicles where the poor were treated. It kept me busy; also it was a small postgraduate course.

The first case I had of my own was a young woman who sustained a Colle's fracture from falling down the cellar stairs. Without benefit of x-rays or anesthetics, we reduced the fracture, made a splint out of cardboard well padded with cotton secured in place with a roller bandage and placed the arm in a sling.

And so it started. My first month brought in $19.00; my rent was $10.00; telephone was $2.50 and electricity $2.00. I was lucky that my home was only two blocks away and there I went for meals.

What was Detroit like in those years? Let me quote from the College of Medicine catalog:

"Detroit, which for many years has been a well-recognized medical center, is a city now embracing, with its immediate suburbs, a population of over 250,000. It is a great railroad and commercial center, lying on the highway between the East and the West, and easily accessible from all parts of the Union and the Dominion of Canada. Situated on the beautiful river of Detroit, it is on the line of the great American lakes, whose shipping, it is said, surpasses in tonnage that of the Atlantic. It is a great manufacturing center, its manufacturies in iron, wood, copper, et cetera, giving employment to thousands of men. It is the commercial metropolis of Michigan, and is the distributing center of the extensive territory. It is one of the best paved and best sewered cities on this continent. Its streets are broad and well shaded, and its water supply is equalled by that of but few cities, and surpassed by none. These make Detroit the most beautiful of American cities, and its claim to this distinction is undisputed by those qualified to express an opinion. This is recognized by the holding of the U. S. Presbyterian Assembly, and the annual encampment of the G.A.R. here in 1891, and the meeting of the American Medical Association in 1892.

"Beside these advantages, Detroit has some of the largest manufacturing drug and chemical houses in the world. In the matter of medical journalism, no city of thrice her size can boast of as flourishing and worthy medical journals and, as regards hospitals, Detroit is far in advance of her sister cities in the number and magnitude of these useful adjuncts to the thorough teaching of surgery and medicine in all their departments."

There is nothing said here about the district known as "The Potomac" down on Franklin and Woodbridge, where the sailors lived. Here was a district where the policemen went on duty by twos. The old Woodbridge Street Police Station was the place where the drunks and beat-up sailors were taken. More than once an ambulance took to old Emergency Hospital men who were DOA or who had fractured skulls or other injuries. Skid Row was also there fifty-five years ago, with the same problems as today.

Another section was the red light district on lower Champlain Street. This street is now called East Lafayette, the name being changed as a result of protests of people who lived farther up the street. Otherwise, there were wide shaded streets, no movies, no radios, no television, few telephones. Detroit was a sort of overgrown country town where you knew people. No Receiving Hospital. No Herman Kiefer Hospital. Contagious diseases were taken care of in a building at Harper Hospital. A Pest House for smallpox was located out in the woods near the present site of Herman Kiefer with a Negro attendant.

Belle Isle was the favorite recreation spot; 10 cents to ride all day in the boat. Baseball was played on a lot just across from Harper Hospital. Briggs Stadium was then a hay market.

Women didn't smoke cigarettes—at least there was only one class that did—neither did we have cocktail bars for women. Saloons had a women's entrance, but ladies did not enter therein.

Beer was 5 cents plus a big free lunch. Meals were 15 cents and up. For $1.00, the Wayne Hotel served what would be a banquet today.

So in this setting, I began my practice. Most of the babies were born at home. It was almost unheard of to go to the hospital. You responded to the OB call with your little black bag which

contained both short and long forceps, a bottle of chloroform, a bottle of Lysol, antiseptic Germinal P.D. & Co. soap, a set of needles and a small scale, a little bottle of Agno 3 for eyes, and a bottle of umbilical tape in alcohol. Of course, you had your pocket case of instruments. When you got in trouble you sent for a friend to help you out.

There were no sulpha, penicillin, streptomycin or the many other wonder drugs at our disposal today. Pneumonia was treated with digitalis, the open air treatment, whiskey and quinine.

There was plenty of typhoid—it was one of the first things we studied. In about 1915, a number of employes of a circus that came to Detroit brought typhoid into the community, resulting in from fifty to sixty cases. Typhoid was treated by the Brand method—a series of cold baths.

In syphilis, the rule was—"if at first you can't decide, give KI." Other remedies were protoiodide of mercury, blue ointment, and before the use of Salvarsan, shots of bichloride of mercury.

For gonorrhea, Lafayette mixture, and various injections were given.

There was no insulin for diabetes: diet was the only means of treatment.

Diphtheria meant a blue card on the house. Dr. Louis Hirschman was employed by the Board of Health to do intubations. There were no preventive shots.

Scarlet fever was frequent, too. People would see the red card on the house and cross the street to avoid infection.

Rheumatism was treated mostly by sodium salicylate. A popular remedy against the "rheumatiz" was carrying a horse chestnut in the pocket or wearing a ring made out of a horseshoe nail.

Tuberculosis was treated mainly with eggs, milk, rest. It was hard to get people into a sanitarium. People were afraid of the "night air." Patients were closely confined to their beds. Trudeau changed all this.

Surgery often was done on the kitchen table, and many a time I drove out into the country to assist the surgeon. My job was to sterilize instruments, put them in a towel, boil them in a dishpan, and then give the anesthetic, or sometimes I helped and the country doctor gave the anesthetic.

There were no x-rays to help in the reduction of fractures.

As County Physician

For four years, I was county physician—that is, we did postmortems for the coroners, made examinations, and treated prisoners in the county jail, examined girls at the House of the Good Shepherd, and gave testimony in Court. Those four years would make a story in themselves. It was a very interesting experience.

The Harley and Wimpole Streets of Detroit

Lafayette Boulevard was facetiously called "pill alley." In those days, it was an avenue of houses with lovely shade trees. The doctors had their offices in their homes. No automobiles cluttered the streets (the doctors drove horses and buggies). The telephone was coming into use, but it was not uncommon for a messenger to go to the doctor's office. At night there was a glass globe with the doctor's name on it so that he could be more easily found, and a night bell awakened him. Many calls were made on foot by street car and bicycle.

First on Lafayette, at the corner where Michigan and Lafayette come together, was the office of the Doctors Kennedy (no relation to Dr. Charles!) and Kergan, the advertising quacks whose little books told the reader that they treated the secret diseases of men, especially "lost manmood." Many young men were fleeced by this pair.

Next came Doctor Hamilton, an old family doctor. On the corner of Wayne was the home and offices of Doctors Brodie, father and son. The son, Ben, was the doctor for the fire department—a tall handsome man who drove a spanking team of fine horses. It was a sight to see him on the way to a fire.

On the corner of Cass was another doctor and his son—the Doctors Jenks. The senior doctor was one of the early "Gyn" men in Detroit. The son, Nate, was a well-trained likeable chap who died before entering his prime.

Back of the Jenks's was Doctor Thuner, an eye specialist. Across on the corner were the three Connors, the father an eye specialist and his sons, Guy and Ray, graduates of Williams and Hopkins in the days of the "big four." The three of them were members of the Wayne County Medical Society.

Next to them in an old frame house was Harrison Jenk, a Harvard man who was the only doc-

tor in those days who rode a motorcycle to make calls. He had a pair of rubber overalls which he put on over his trousers to keep the grease and rain off. In his office, I was fortunate enough to be part of many "bull sessions" in which the two Connors and Nate Jenks made merry. Across the street was Jimmie Winter, a general practitioner.

On Fort Street, at the corner of Wayne, was a drugstore known as Morris' Drugstore. Here a young druggist by the name of George M. Schettler worked. Later he became owner of the business.

The Three Musketeers of Medicine—Andrew McLean, Andrew P. Biddle, and Angus Campbell —had their offices in that building. I used to hear Angus tell about those early days. "One for all and all for one."

Just below the corner of Cass was a red brick building which housed the great surgeon Dr. Theodore McGraw. With him was Dr. Frederick Robbins. Bill Keane moved in with him when he graduated from the Detroit College of Medicine in 1902.

Nearby was the office of Robert W. Gilman and Charles Anderson.

In the middle of the block, between Third and Fourth streets on the North side, was the Detroit Sanitarium, the railroad hospital. Each man employed on the railroad had a ticket entitling him to medical and surgical treatment. The hospital was headed by Dr. Donald McLean, a surgeon, and a good one until he retired. One day I heard from one of the railroad men about a young surgeon who was a "whiz" and was working for Dr. McLean. I went over one morning and saw him operate. He was certainly a clever surgeon. I couldn't understand him, for his language was broken German-English. His name was Max Ballin, and that was the way he started in Detroit. The rest of the story is well known.

Of course, there were many other fine doctors in Detroit who had their offices on Jefferson Avenue, Miami Avenue, Woodward Avenue, Chene, and Gratiot Avenue. They were fine industrious types of men. Among them was "Dad" Carstens, the friend of the medical students.

Over on the corner of Howard and First lived Doctor LeFerte, father of Al, with a red boutoniere of the French Legion of Honor on the lapel of his coat. Promptly at 3:00 his carriage awaited him.

These are just a few of the outstanding doctors in practice at that time.

The Michigan State Medical Society and the Wayne County Medical Society were in existence at that time, of course, but the early meetings were not attended as they are now, and the papers were mostly given by local men. Now one sees and listens to the leaders in the various specialties from all over the world.

During all my life as a doctor, I have profited from the meetings of these two societies. Attending meetings keeps one up to date on medical matters. Those meetings in the early years were practically all the postgraduate work available to the general practitioner. Postgraduate work has come into being during my lifetime. It has advanced greatly. Still there is a gap in the whole program. As yet, there is still the difficulty of a general practitioner's having to leave his work in order to get up-to-date information. A scheme whereby the information desired by the general practitioner would be brought to the doctor is, to my mind, needed. Some progress has been made, but more is needed.

My life as a doctor has been lived in a most amazing fifty-five years. Looking backward toward the year 1900 in which I graduated, it seems to me that more has happened in medicine during the past fifty-five years than in any other period. Truly, it has been the Golden Age of Medicine. What a wonderful period to have lived in! It seems to me that today medical science makes greater progress in a single year than it used to make in a lifetime. In summary, note some of the high spots of fifty-five years of medical practice:

1. Diagnosis of appendicitis as a definite disease.
2. Discovery of the germs of typhoid fever, pneumonia, tuberculosis, diphtheria, dysentery, scarlet fever, cholera, tetanus, bubonic plague, tularemia, syphilis, and many others.
3. Antiseptic surgery, after Lister's work in 1895, followed by aseptic surgery.
4. Discovery of the way in which yellow fever and malaria were transmitted and the methods of eradicating and controlling them.
5. The x-ray, discovered by Roentgen in 1895, and radium discovered by Marie Curie.

(Continued on Page 1225)

Hypothyroidism

By Charles Sellers, M.D.
Detroit, Michigan

THIRTY-FIVE years ago, the region about the Great Lakes including Michigan was recognized as a goiter area. Varying degrees of hyperthyroidism occurred quite frequently. The principal cause of this condition was traced eventually to the low iodine content of the drinking water in this district.

A very large number of thyroidectomies were done during the early 1920's. Shortly thereafter iodine salt was introduced throughout the State of Michigan upon the recommendation of the Michigan State Medical Society. Although no appreciable change occurred immediately in the number of operations for goiter, a gradual decrease in their occurrence took place, because by 1940 the number of operations for this condition in several institutions was reduced about 50 per cent. Since that time, the number has been reduced once more by more than 50 per cent.

Several factors have entered into the reduction in the incidence of hypothyroidism. Better medical knowledge has resulted in better medical care. Iodine, Lugol's solution, methylthiouracil, propylthiouracil and radio-active iodine have been used extensively for the active treatment of already existing hyperthyroidism.

Iodine salt was intended as a prophylactic measure, and the product has been used by nearly everyone in this area during the past thirty years. There is considerable evidence to show that it has been a contributing factor in lowering the incidence of hyperthyroidism, particularly adolescent goiter.

Iodine salt must have lowered the basic metabolic rate of all of its users, since apparently it is not selective in inhibiting hyperthyroidism alone nor in reducing the metabolic rate to normal and not below that point.

Persons whose thyroid function was normal while drinking Great Lakes water and before the introduction of iodine salt must have had their metabolic rates reduced below normal when they became users of iodine salt for many years. Persons born since the advent of iodine salt have been using it all their lives.

For those who would have developed hyperthyroidism, it has been a valuable asset; for normal cases and a smaller number of persons who, without iodine salt, would have developed some degree of hypothyroidism, it has been detrimental, since it has reduced a metabolic rate already normal or subnormal. Non-iodine salt is available for hypothyroid cases, but it is not used as widely as it should be in specific cases.

The widespread and increased use of fresh and frozen vegetables by a greater number of persons and in greater quantities than ever before is probably another factor that has lowered slightly the metabolic rate of some persons and thereby increased the frequency of mild or borderline hypothyroidism.

Even canned vegetables retain more of their natural iodine content because modern canning procedures have been improved by such processes as pressure cooking.

Fresh, frozen and canned vegetables have been transported over wider areas in recent years so that no longer does a person eat only the vegetables grown in his own community. This helps to equalize things so that some vegetables rich in iodine content may be consumed in a community in which the soil produces vegetables low in iodine content, and vice versa.

During the past several years, there has seemed to be an increasing number of persons who were complaining of a symptom complex that indicated hypothyroidism and a low metabolic rate.

Recently, we undertook a study of consecutive cases of apparent hypothyroidism. Two hundred such persons were encountered in a short time. We considered this a fair sampling. Basic metabolic rates were taken on those borderline cases that were not at once obvious and all were on the negative side ranging from —10 to —30. Almost all patients were obese in some degree, but obesity is not always associated with hypothyroidism. All persons overweight from overeating and those whose symptoms resembled those of hypothyroidism in some manner but, on test, had normal basal metabolism rates or, on trial, failed to improve on thyroid therapy were excluded from this study.

The principal clinical manifestations have been, in order of frequency: obesity, tiredness, sleepiness, sluggishness or ungainly gait and physical movements. Some few cases showed myxodema.

Other symptoms of lesser frequency and im-

portance have been dryness of skin, decreased perspiration, coarse hair, brittle nails with tendency toward splitting in both horizontal and vertical planes, chronic fatigue, failing memory, numbness and tingling in extremities, menstrual irregularities, particularly the two-week cycle, although some complained of amenorrhea of one to six months' duration. Blood pressure was usually low, pulse was often slow, and sometimes the heart was enlarged. Fat pads over hips, over shoulders, on inner aspects of knees and across the epigastrium were not infrequent.

Among the current but indirectly associated symptoms, the most frequent were: mental depression, secondary anemia, isolated or multiple neuritis, trichomonas vaginalis, pains in abdomen from distended colon, bachache, varicose veins and menopause.

There seems to be a psychogenic factor in hypothyroidism involving certain feelings of insecurity and inferiority because of the obesity, the lack of a personable appearance and general sluggishness resulting in a compensatory urge toward excessive eating and nibbling between meals. They are less active physically; hence, the caloric intake must be lessened.

Treatment

Obvious cases of hypothyroidism and those who, on test, showed lowered basic metabolic rates were given various doses of thyroid extract, adjusted by trial to correct amount. Depressed and obese patients having a psychological urge or compulsion toward overeating were given desoxyphedrine 5 mg. before morning and noon meals. Non-iodine salt was prescribed. Caloric intake was reduced in most instances to 1,200 calories in a well-balanced diet.

Other contemporary complaints were treated according to indications. This included a great many symptoms, most of which have been mentioned previously, plus various surgical conditions, but no surgery, except emergency work, was undertaken until metabolic rate was adjusted to a higher level, because it was found that many indefinite symptoms disappeared under treatment and that when surgery was really necessary, recovery was greatly facilitated when they were taking adequate doses of thyroid extract.

Case Histories

Case 1.—A single woman, aged thirty-four, complained that her weight had gradually increased to 186 pounds during the past fifteen years. She said that she was nearly always tired, took an hour's time and two cups of coffee to get "started" in the morning, slept twelve hours and often was sleepy during the day. She was very sad about life in general and her weight in particular. She was a chronic complainer, depressed, introverted and somewhat unsocial. She had few friends. Her school work had been below average, so she quit school at sixteen and went to work in a store, but the confusion of so many people about her and the calculations in making change were not to her liking. She later went to work in a factory, assembling small machine parts, and was more contented. She had a strong aversion to cold weather. She was slow and ungainly in her gait and had fat pads over both hips, over shoulders and on inner aspects of both knees. Blood pressure was 100/70, pulse 68, BMR—18. Menstruation was irregular, usually fifty to sixty days between periods.

Desoxyphedrine 5 mg. and thyroid extract 2 grains were given before breakfast and lunch, and her food intake was cut down to 1,200 calories a day. The amount of thyroid was varied to establish need, but she does best on 4 grains daily. Non-iodine salt was used. More than one year's constant supervision was necessary. A little psychotherapy gradually lessened her other complaints. Constant encouragement and appeals to her ego were very valuable.

She now weighs 126 pounds and by comparison with her previous personality, she is more cheerful, active, a good worker in her job and has few complaints. She can carry on a conversation much better than she could before.

Case 2.—A married woman, aged forty-three, who complained of tiredness, sleepiness, general lack of strength and a weight increase during the past five years to 170 pounds. She had two children, aged seventeen and ten respectively. She was depressed, had aversion to cold weather, was mentally sluggish and had some menopause symptoms. She was shy, reticent, giggled without provocation, had some feelings of inferiority and nibbled between meals.

She was given desoxyphedrine 5 mg. and thyroid extract 1 grain before breakfast and lunch. Calorie intake was reduced to 1,200 calories daily and non-iodine salt was used. Aqueous estrogenic hormone was given when really necessary.

She was very co-operative and stuck to the regime faithfully. Her weight is 125 pounds, her personality is improved greatly, she is more alert, requires much less sleep and does her work without much complaining. Whereas she seldom left her home previously, she now goes out and meets other persons freely, for she is much more attractive.

Conclusions

1. Two hundred cases of hypothyroidism were observed.
2. Hypothyroidism seems to be increasing.

(Continued on Page 1216)

Continuing Education for General Physicians

By F. P. Rhoades, M.D.

Detroit, Michigan

THE GENERAL PHYSICIAN, due to the greater breadth and complexity of his practice, even more than the specialist, must continue his medical education throughout his active lifetime if he is to fulfill the obligations placed upon him by his license to practice. Organized medicine has so far been permitted by the public to control its own destiny; hence, it must assume the responsibility of insuring the constant continuing education of its members. The ever-expanding knowledge of human biology, new diagnostic procedures, and new therapeutic agents, plus the ever-increasing number of stress-producing situations to which man is subjected, make it absolutely imperative for the physician to seize every opportunity possible to aid in his quest of continuing education.

This quest is usually pursued in one or more of the following ways: (1) reading medical books, monographs, medical journals, and the voluminous literature received through the mail daily from pharmaceutical houses; (2) individual contacts with colleagues, consultants, pharmacists and detail men; (3) hospital meetings, such as general staff, sectional and clinical pathological conferences; (4) society meetings, both general and special on county, state or national levels. (5) formal postgraduate courses.

Medical reading occupies a third of the time devoted to continuing education and in spite of its shortcomings, due to the difficulties in selecting what to read, physicians believe it to be the most desirable and effective method. Individual contacts constitute another third of the time devoted to education. The bedside consultation with a specialist on one of the physician's own patients can be most valuable. Informal discussions at lunch with one's colleagues, telephone conversations with druggists, and perhaps a detail man, if he is well trained as are the majority of the representatives of the research houses.

Since hospital accreditation demands his attendance, one-fourth of a physician's available time is taken up with hospital staff meetings. Due to the natural emphasis on administrative matters, such meetings add little of value commensurate with the time spent.

The remaining 10 per cent of time at the disposal of the practicing physician is divided between medical society meetings and postgraduate courses. Medical society meetings, especially when they are hand-tailored to the needs of the general physician, can be extremely valuable. Not only must the subject areas covered be timely, but each guest speaker must be selected with care from among those who have demonstrated their ability to neither speak down to, nor over the head of, the general physician.

Most physicians believe that postgraduate courses are second only to reading as the most effective method of continuing education. Advances in medicine have been so rapid that the general physician cannot allow more than five years to elapse between determined efforts to bring himself abreast of progress, if he is to continue to give a satisfactory quality of service to his patients. This effort should take the form of at least one week (fifty hours) of postgraduate study per year, for each physician. A start in this direction has been taken by the American Academy of General Practice which requires, as a condition of continued membership, 150 hours of postgraduate work every three years. At the present time, only fifty of these hours must be of a formal nature. This is the equivalent of approximately six eight-hour days in three years, or two eight-hour days per year.

If we were to attain the ideal of fifty hours per year per physician for the 3,000 physicians engaged in general practice in Michigan, we would require 150,000 physician-hours of instruction per year. Since an average of ten usually attend each course offered, it would require 15,000 instructional hours to meet this need; but since only about 25 per cent take courses in any one year, this cuts the hours needed to around 4,000. As in the rest of the nation, the hours designed for the general physician offered in Michigan fall far short of this ideal.

Motivation

It must be borne in mind that in postgraduate medical education the end result is not an advanced degree or other evidence of advanced standing in one's profession, but an inner satis-

faction. Some physicians are motivated by a sincere desire to render better service to their patients; others by a fear, both medical and legal, of the results of not practicing the best possible medicine. Thus we do not have a "captive audience" seeking a degree, but instead an experienced one that is intensely interested in acquiring knowledge that will improve the handling of the difficult cases met in daily practice. The physician realizes that every moment spent is time and income lost from his practice. Consequently, he acutely feels the need to make every moment count. More than 60 per cent of our practicing physicians are general practitioners, but hospital and medical society meetings are oriented more to the needs of the specialists. The lower level of postgraduate attendance by general physicians is due to the dearth of postgraduate courses designed specifically for them. Medical teaching is almost entirely in the hands of specialists, and medical faculties frequently fail to appreciate the demands of general practice. They often do not realize the degree of competence required of an isolated physician as compared to the urban specialist who has his colleagues to lean upon.

Obstacles

The chief deterrents to postgraduate work are: (1) courses offered at unsuitable times; (2) cost, if travel, living expenses, and loss of income from practice are factors; (3) limited time available due to multiplicity of other meetings (staff and society); (4) absence from practice, leading to neglect of patients.

The continued emphasis on specialization has progressively widened the gap between the general physician and the specialist, leading to an undesirable double standard of practice. The only acceptable manner by which this gap may be bridged is through making available more suitable and convenient postgraduate courses for the general physician. The medical profession must re-evaluate the position of the general physician. If he is to continue to care adequately for 85 per cent of the illnesses of mankind, his training must qualify him to determine when and what special tests or services, if any, are needed. His role of medical co-ordinator must be recognized by the specialists, if the public is to receive both economical and complete medical care.

The surest device for attracting physicians to postgraduate courses is high educational quality with definite objectives and careful selection of content, pedagogical methods, and instructors. If a certificate, such as that issued by the American Academy of General Practice with regular periodic endorsements, were to become known among the public as evidence of the physician's having kept up to date, it would have considerable value in providing additional stimulation for the physician to attend postgraduate courses.

Types of Courses

The basic purpose of postgraduate medical education is twofold: (1) to keep fresh the basic training acquired from the school and hospital in human biology, as well as disease and the ways in which it can be altered or prevented; (2) to add new developments in medical science. Two general types of courses are offered. First is the true refresher course designed to review basic medical knowledge and acquaint the physician with recent developments. Second is the special course designed to expand the physician's understanding of one narrow field or area of practice. Less than 5 per cent of the courses offered are of the refresher type, yet this is the very type most needed and demanded by the general physician. The refresher type has two components: review and additive elements. The review element is concerned with recalling basic knowledge of facts and principles, especially concerning conditions not encountered frequently, but important that they be recognized and the correct treatment known. The additive element contains new advances in medical knowledge and technique, thus narrowing the gap between medical research and practice.

A complete refresher program should cover the preventive, diagnostic, and therapeutic aspects of medical practice, either in a single program or at periodic intervals. New diagnostic methods and laboratory procedures must be accompanied by both the indications and contra-indications for their use. Similar safeguards must be applied to new therapeutic products or methods to avoid their injudicious or premature use. Refresher courses should contain not only knowledge that is of practical everyday value, but information on experimental clinical applications not yet in common use, as well as theoretical advances in basic medical science that may have no practical

employment at the present time. The chief virtue of this last type is the intellectual stimulation it affords.

Methods

The method by which postgraduate education is imparted to the physician may be divided into didactic and participative. The didactic method is exemplified by lectures and demonstrations by the teacher. This method is economical, as large numbers can receive the message to be imparted. Its great weakness lies in its limitations in developing judgment and in perfecting technical skill. More than 75 per cent of all postgraduate courses offered are didactic. The greatest need of the general physician is for more participative courses, wherein he can learn from the physical and mental handling of things, people, or ideas. Much of the postgraduate teaching has been on the audio level, which only requires that the physician sit in a lecture hall and listen to a clinical instructor. At times the lectures are amplified by the use of slides, chalk talks, or demonstrations. This employs the added sense of vision and thus becomes audio-visual. What is needed are more courses employing participative or manual skills. It is axiomatic that a subject is never mastered until you, yourself, have taught it. It is even more true that you cannot correctly apply a procedure until you have performed it a number of times under expert guidance. Diagnostic procedures, operative techniques, and other therapeutic measures are best learned by a combination of all three or the audio-visual-manual method. Such courses, by their very nature, must be limited to individual or small groups, but the audio-visual-manual method remains the ideal one.

The greatest value of the audio form is probably its inspirational appeal, because it can bring the leaders of medicine directly into contact with large numbers of practicing physicians. The audio-visual method, not only brings patients before the physician-students, thereby providing the highly desirable clinical atmosphere, but all the diagnostic material pertinent to the case is brought to life. Its only limitation is paucity of material in some localities, and the limited number of physician-students who may be accommodated.

Other methods of making postgraduate instruction available include television, radio, telephone and recordings. Radio is important for its ability to present new material and urgent medical news. Telephone programs also possess this timeliness, plus the sense of contact between the physician-students and instructor. Recordings have also found a place in postgraduate education. While cut records are expensive, they have the advantage that most physicians possess record players, whereas tape recordings demand expensive equipment. Motion pictures and television have the advantage of employing both auditory and visual stimuli. Their disadvantage lies in their high cost which limits them to subjects of basic or permanent significance. Television may prove to be of tremendous importance in bringing instruction from medical centers directly into the home or office of the physician, especially if one of the methods that scramble the program is made available, so as to exclude public reception which would otherwise severely limit the material that could be presented. Today many of the teachers of postgraduate programs are drawn from the faculty of the medical schools, but it should be borne in mind that actual experience in the practice of medicine is important for effective postgraduate teaching. The teacher must possess the ability to translate his deep knowledge of an involved subject into terms understandable and usable by the practicing physician. Although most of the teachers are specialists, it is important to have some general physicians take part in postgraduate education because of their inherent ability to interpret to other general physicians.

Time and Location

One of the most important aspects concerns the time the courses are offered and the places where they are given. If these are not selected with care, they will fail to attract a desirable number. Most physicians engaged in active practice find it difficult to attend courses of greater than one week's duration. Most prefer two-day or three-day courses, one of which days should be either Wednesday or Thursday, the doctor's traditional day off. In considering the time element, we have first the concentrated course in which the individual sessions are continuous daily until completed. The second type is the intermittent course in which the sessions are separated by periods of days, weeks, or months. The majority of courses now being offered are of the concentrated type. Perhaps the intermittent type would be most suitable for the 1,200 general physicians in Detroit, if such courses were offered either in

the morning or on the doctor's day off. By contrast, the 1,800 men engaged in general practice outside Wayne County would perhaps prefer the concentrated type. Since they are so inextricably bound up with their practice, it is necessary for them to leave their community if they are to be free to study. One advantage of the intermittent course is that it generally leads to greater retention of the material presented, since it is spread over a greater period of time. The medical schools are ideal centers for the concentrated type, as they have a ready-made faculty which could provide such service with as little as a 10 per cent addition to their teaching schedule. It is to be hoped that in the plans for expansion of the Wayne University Medical Center, living, dining, and recreational areas will be provided for the physician-students attending postgraduate courses.

Extramural courses usually given in large cities, of which the annual Fall Postgraduate Clinic of the Michigan Academy of General Practice is a good example, accounts for almost half of the physician-hour attendance at postgraduate courses. It has the inestimable advantage of bringing a number of eminent medical teachers before a large number of physicians at one time, with living, dining, and recreational facilities in close proximity. There remains the problem of presenting such extramural courses to the practicing physician in his own community, but there are two great disadvantages to such a plan. First, the physician will register and then miss part or all of the course because of the demands of his practice. Second, cost of sending the teaching team to the smaller communities is excessive. Part of these objections may be overcome by the use of two slightly different approaches: (1) the circuit, in which the instructors cover a number of teaching centers, spending a day at each; (2) the regional program, in which the teacher-team visits certain specified centers in each area every month for a day or two.

Another possible method that could be exploited is the correspondence course. These courses could be supplemented by slides and recordings, and could be evaluated by examinations.

Sponsorship

While it may seem logical that medical schools should sponsor postgraduate medical education, there are many other institutions and organizations participating. Foremost among these others are our own State Society, teaching hospitals, special medical societies, such as the Michigan Academy of General Practice, and pharmaceutical firms. Whereas the medical schools offer the majority of postgraduate opportunities, the greatest attendance is attained by the general and special medical societies. The Michigan State Medical Society for many years has drawn large numbers to both its annual session and its clinical institute. Recently, the Michigan Academy of General Practice, with its annual Fall Postgraduate Clinic and its Symposium on Office Procedures in February, has drawn increasing numbers of physicians engaged in general practice, since meetings are carefully orientated to the needs of the general physician. The presence this year of twenty-two original scientific exhibits further enhances the value of the Fall Postgraduate Clinic in November.

Costs

In considering the cost of financing postgraduate education, whether it be intramural or extramural, the honorariums and salaries paid to the teaching faculty account for over half of the total cost. The administration and overhead necessary to set up a course account for approximately another third. Money to support postgraduate education usually comes from the treasury of the institution or organization presenting the program, various contributing agencies, technical exhibitors, or fees paid by the attending physicians. Physicians attending postgraduate courses conducted by medical schools expect to pay a registration fee for the course. This is not true when they attend courses conducted by state or specialty groups. Such programs are generally financed by the sale of space to technical exhibitors. Regardless of whether or not a physician pays a fee, the greatest cost is represented by the loss of income due to his absence from his practice. When and if the Internal Revenue Service rules the cost of postgraduate medical education a deductible item, it will appreciably reduce the overall cost to the physician.

Objectives

More clearly defined objectives are needed in postgraduate medical education. Its primary purpose of keeping physicians abreast of modern medical practice, or increasing their know-how of some aspect of it, must be kept in mind. It

must be constantly emphasized that its primary purpose is bridging the gap between research and practice. Of the two basic types, the special and the refresher, the greatest need is for the refresher type which represents a radical change from what is being offered at the present time. The refresher course should contain not only new developments of immediate practical use, but clinical developments still in the experimental stage, and new aspects of the basic sciences that may eventually prove to be of practical value.

It cannot be too strongly stated that at the present time the vast majority of courses offered are aimed at the specialists, in spite of the fact that three out of five physicians in Michigan are general physicians. Courses for these men should be planned in coöperation with local general practice groups. The Michigan Academy of General Practice, with its state-wide organization, is the logical one to assume this responsibility. To implement this program, it will be necessary for the medical schools to recognize postgraduate teaching of the general physician as a separate and distinct problem, with courses oriented to his needs and with medical school faculty members especially designated for this duty.

The general physician has few hospitals and medical society affiliations and thus, being deprived of these sources of continuing education, must turn either to formal postgraduate education or programs designed by his own organization. It has been suggested that either required periodic attendance at postgraduate courses or periodic examination for continuation of the license to practice be required of all physicians. The American Academy of General Practice, through its requirements of 150 hours, every three years, of postgraduate work for continued membership, has provided at least a partial answer.

To secure the fifty hours that are designated as formal course credit, a member must attend (1) a postgraduate course given by an accredited medical school, or recognized postgraduate medical school; (2) a course sponsored by the American Academy of General Practice or any of its constituent chapters, or by a medical school administrator, approved by the regional advisor of the commission on education, and processed and disseminated by the American Academy of General Practice or its constituent chapter; (3) the annual Scientific Assembly of the American Academy of General Practice; (4) the annual Scientific Assembly of each state chapter, providing it be approved in advance by the Regional Advisor for the commission on Education (our own Michigan Academy's Annual Fall Postgraduate Clinic has already been approved); (5) the publication of scientific papers which shall receive five hours' credit, if published in a state journal, and fifteen hours' credit, if published in a national journal; (6) other courses of postgraduate training approved by the commission on education of the American Academy of General Practice.

The remaining 100 hours designated as informal, or medical meeting and assembly credit, shall include (1) the scientific meetings of the American Medical Association; (2) local and state medical society scientific meetings; (3) hospital staff, scientific conferences, and clinical pathologic conferences; (4) postgraduate seminars and assemblies not otherwise covered in the definition of formal credits.

Conclusions

In any planning for postgraduate medical education for the general physician, whether intramural or extramural, it should be recognized that almost half who are licensed to practice medicine in Michigan reside in Wayne County. More than 60 per cent practice within 50 miles of Wayne University College of Medicine, and more than 70 per cent within 50 miles of the University of Michigan Medical School. This leaves somewhere between 30 and 40 per cent of our Michigan general physicians without easy access to medical teaching centers. It is this group that must be served by expansion of the opportunities for postgraduate education. All physicians in Michigan engaged in general practice should be offered the convenient means of acquiring the necessary knowledge to enable them to render the public the highest type of medical service.

Early Treatment of Thrombophlebitis

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IT WOULD be possible to save numerous lives and to prevent the great majority of swollen legs with the postphlebitic syndrome, if acute and insidious thrombophlebitis could be diagnosed and treated early.

Process Description

Thrombophlebitis is a partial to a complete occlusion of a vein, caused primarily by an inflammation of the vein wall. It may occur secondarily as a result of a thrombus formation in a normal blood-clotting mechanism as a result of trauma and injury. The abnormal clotting of circulating blood may be caused by chemicals introduced in the blood stream or inherent from diseases which cause alterations in the physical or chemical properties or constituents of the blood itself. It may be a spontaneous process of unknown cause. Thrombophlebitis is the result of a two-way reaction. The thrombus attaching itself to the intima of a vein starts an inflammatory reaction in the vein wall. An inflammation of the wall, when of sufficient intensity, will cause a thrombus formation which spreads and organizes. It is the extension and unattached process that floats and flags freely in the blood stream, that fractures free. It then may be carried to any area of the body but usually to the most prevalent and dangerous spot, the pulmonary vein. The seriousness of the thrombosis is proportioned to its size and rapidity of growth in its new location.

The great preponderance of involvement being in the lower extremities prompts one never to miss the examination of these appendages in every patient, if he is a bed or ambulatory case. The area is accessible to inspection, palpation and any examination required to make the positive case known in ample time for successful treatment. A complete history and physical examination, with alertness at all times, is just as important in finding this disease as any other.

Direct Causes

Injury is a common cause of thrombophlebitis. It may follow contusions, lacerations, internal injuries and fractures. Under this heading, postoperative and post-delivery cases may be grouped. The greater incidence comes from prolonged and difficult labors and operations on the pelvic organs where stagnation or laking of blood is more apt to occur.

Predisposing Causes

Age influences the incidence of thrombophlebitis, the disease being highest in the fifth and sixth decade of life. It may occur at any age from injury or disease, but its incidence is very low in youth. Secondary thrombophlebitis is higher in the older age group where heart disease and malignancy are most common. Recurrent attacks are frequent and, as such, are more likely to be abrupt than insidious.

Varicosities, when large and tortuous, are predisposing to thrombophlebitis. They should be treated before other major surgery is contemplated, not only to prevent embolism but also to keep the work of the heart normal. The heart action is easier when blood is flowing through straight channels rather than through tortuous and sacculated channels.

Obesity[10] seems to be a predominant factor in precipitating attacks, perhaps from lowered activity.

Blood diseases cover a multitude of offenders such as myelogenous and lymphatic leukemia, polycythemia vera, masked anemia and pernicious anemia especially after treatment has started new normablast formation.[1]

Vomiting and dysentery, causing dehydration, are predisposing to thrombophlebitis.

Long bedfast patients, especially in the older group of patients, are predisposed to thrombophlebitis.

Systemic diseases, other than those found in the blood, may increase the incidence of thrombophlebitis such as diabetes mellitus, gout or gouty tendencies without clinical gout. Congestive cardiac failure is a great causative factor.

All infectious diseases may cause a septic type, where bacteria play a demonstrable rôle in thrombophlebitis.

Diagnosis

When thrombophlebitis is superficial, it can be seen in the linear course of the vein. When palpated, the vein will be tender, indurated and the patient may have an elevated temperature.

The long saphenous and short saphenous veins, the basilic, median basilic and median cephalic veins are those most commonly the site of superficial thrombophlebitis.

A biopsy may be done, if in doubt, when nodular formations such as erythema nodosum, erythema induratum, tuberculids and syphilids are present. Panniculitis and fibromyocitis may also require a biopsy to make a diagnosis.

In general, the deeper veins such as the ilio femoral, when involved, will show a mild to moderately elevated and spiked temperature. Tenderness on deep palpation is present and movement of the limb on the same side will cause discomfort. The limb will usually be enlarged and at times will be slightly cyanotic with a normal skin temperature. The connecting superficial veins may be distended. Arterial pulsations will be near normal, although arterial spasm may affect the flow markedly in the anterior and posterior tibial arteries from an iliofemoral thormbophlebitis. This deep vein involvement is the most dangerous type, which requires an early diagnosis with early and adequate treatment. A blood-pressure cuff placed on the suspected area (the most likely area is the calf area of the leg) when pumped to a pressure of 150 to 180 mm. of mercury, will cause pain if thrombophletitis is present.[5] This test is as easy to do as Homan's test. Each is efficient diagnostically and should always be done in complete examinations and in all patients complaining of leg pains. Pulmonary embolism is a common sequel of thrombophlebitis in the deep venous system. This type of thrombosis leaves little time for the inflammatory change in the vessel wall to allow a firm attachment. It waves freely from a loose attachment to break loose from where it is sucked into the pulmonary vein.

Treatment—Prophylactic

Varicosities of the short or long saphenous veins showing incompetent valves, as tested by the Trendelenburg test, multiple turniquet test[9] or a modification thereof, should be ligated or stripped before elective major surgery. This procedure is to prevent stagnation, thrombophlebitis and subsequent embolism in a bed patient.

Treatment—Early

The Physician should prevent dehydration, and especially be on the alert during or after sieges of vomiting, diarrhea or intestinal suction cases, by administering adequate electrolyte requirements. All anemias, infectious diseases, high blood sugars and gouty tendencies should be cleaned up or normalized by adequate treatment before any operation is done. Time will usually allow adequate treatment before surgery.

Patients should be kept as active as possible, even though they are chair or bed patients. They can do exercises or be moved about frequently.

Treatment—Active

Acute thrombophlebitic patients should be in bed. They recover more rapidly when the legs are elevated and kept warm by moist warm packs. Snug leg bandages are also more comfortable in the early stage of the disease. Patients should move or be moved into different positions frequently and be encouraged to take graded exercises. Inactivity increases the danger of embolism.

Anticoagulants should be used as early and rapidly as possible in deep thrombophlebitis.

Heparin is ideal for rapid action. It may be given alone or in conjunction with other anticoagulants for the first day or days until other anticoagulant drugs are at the proper therapeutic level. Other drugs are given because they are effective when given by mouth and they are much less expensive. Heparin is more prompt in its action when given intravenously.[8] For an average size patient, a convenient reliable routine of 50 mg. of heparin may be given intravenously. This is followed in one hour by 50 to 75 mg. given deep subcutaneously; then 30 mg. may be given deep subcutaneously twice daily. The clotting time should be determined one half hour after heparin is given. The dosage following is then governed by the clotting time, which should be maintained from twenty to forty minutes.

Hedulin tablets are a relatively new anticoagulant with rapid action and release from action upon their withdrawal. They are less expensive and are controllable in proper dosage regulated by prothrombin daily determinations. The usual initial dose is 200 to 300 mg. divided into two daily doses. A dosage of 50 to 100 mg. constitutes the average daily dose for maintenance, divided into two twelve-hour doses for best results. Hedulin may be combined with heparin the first day or until a therapeutic level is reached.

Tromexin tablets have been used successfully for

the past year or more because of their quick action and their quick release from the blood stream upon their withdrawal. A prothrombin test should be done before medication, if possible, and repeated daily to govern dosage. A dosage of 900 to 1200 mg. may be given the average patient in three to four divided doses the first twenty-four hours. An average daily maintenance dose is 150 to 350 mg.

Dicumarol is still a popular anticoagulant with many physicians, because of its longer usage. Some physicians favor the long action of the drug as being desirable.[2] This action is favorable, as long as its bleeding level can be controlled. When out of control, as evidenced by severe bleeding, a second chance for choice of drug may not be forthcoming. Withdrawal of the drug or counteracting drugs is less effectual in stopping hemorrhage with dicumarol in comparison to other anticoagulant drugs.

Most anticoagulant treatment patients respond well if treated adequately early in the course of the disease. Treatment must be continued long enough to prevent recurrence. The usual three to six weeks' course of treatment will control the majority of cases. Some few patients, especially the late cases, will require anticoagulant drugs in therapeutic levels for many months to prevent recurrence. It should be continued as long as tenderness or any of the other symptoms are present. It is necessary and relatively safe to treat these patients as outpatients. They can be controlled after a dosage pattern is established by fewer prothrombin tests. Weekly tests are usually sufficient and can be done in nearby urban medical centers.

Bleeding, caused by anticoagulant drugs, can be controlled in the vast majority of cases by withdrawal of the anticoagulant drug. Whole-typed and cross-matched blood given intravenously usually is an added effectual treatment. Intravenous vitamin K, 5 to 75 mg., may be given as needed to stop bleeding. Emulsion of Mephyton is a newer drug used by slow intravenous injections. A dosage of 1 to 15 mg. may be effectual to stop bleeding. A dosage of 50 mg. in saline, 1 mg. to each cc. of diluent, given slowly intravenously until bleeding stops, is quite proficient.

Trypsin in oil given twice daily intramuscularly has been of some value in selected cases. In the successful cases, patients have responded with relatively few injections, varying from four to twelve. Little is to be gained beyond this number, if improvement has not been obtained promptly. Some patients, relieved of pain, redness and induration, have had recurrence within short periods. This drug may be given in conjunction with anticoagulants. The regime does not allow one to judge which drug is proficient.

Vasospasm may be treated by repeated sympathetic nerve blocks with 1 to 2 per cent procaine solution. This relieves pain and edema in selected cases. As a routine treatment, it has lost many of its past enthusiasts.

Ligation of the affected vein proximal to the thrombophlebitic process is used with good success.[11] In the long saphenous vein, it usually is possible to get above the involved area. This is done at the saphenofemoral junction.[4] Ligation of the superficial femoral below the profunda branch usually gives prompt and good results.[6] There is very little postoperative leg edema. When the common femoral is freed of clots by suction or forceps and ligated, edema of the legs will be present for several weeks and may be permanent to varied degrees. The inferior vena cava ligations leave a permanent bilateral leg edema dependent on the eventual collateral circulation established. This should improve up to one year after the ligation. This type of ligation should be followed by anticoagulant treatment for several months.

Pulmonary Embolism Treatment

It is mandatory that the patient be put to bed, however small the embolus may be judged from the symptoms. The patient should be relieved of anxiety and arterial spasm by use of sedatives such as intravenous papaverine 30 mg. given slowly, four to six times daily.[7] Oxygen should be used if any shortness of breath or cyanosis is present. Sodium heparin should be given 50 to 100 mg. intravenously. Then subcutaneous doses may be given deep subcutaneously to keep the clotting time up to twenty to forty minutes. This is given to prevent the original thrombophlebitic process from spreading, as well as to diminish the propagation of the pulmonary thrombus. Other anticoagulants may replace the heparin, if desired. Antibiotics should always be given to combat infections in the pleural exudate and in the infarct. Pleural exudates should be removed, if at all large enough to embarrass breathing.

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General Practice Sections in Hospitals

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CONSIDERABLE discussion concerning the rightful place of the general practitioner or family physician in the modern hospital organization has been stimulated by the several reactions to efforts made by the Joint Commission on Hospital Accreditation to carry out their assignments. Several resolutions were introduced regarding the Commission at the last meeting of the House of Delegates of the American Medical Association at Atlantic City in June, 1955. This indicates the wide extent of misunderstanding and some dissatisfaction with the results of its administration so far.

The question has been posed as to whether or not the American Medical Association, the parent body of all medical organizations, should have control over the educational activities for interns, resident allocation and the practice of medicine in hospitals. If such were the case, the function of the Commission would be concerned primarily with the physical set-up of the hospital.

Whether resulting from directives or suggestions of a misguided field man or due to innocent or willful misinterpretations of such, there have been several discontinuances of general practice sections in hospitals that have been surveyed.

Although a larger number of new ones have been established than have been discontinued, order should be established out of chaos, suspicion and uncertainty abolished, and harmony restored in order that the public, who really are the ones concerned, will be enabled to receive what they should have in medical care both in the art and the science of the practice of medicine.

Every general hospital large enough to have a well-organized staff should include a department of general practice, along with those of surgery, medicine and non-clinical specialties. Each of the three last named have their several different divisions, but inasmuch as the general practice section is not a clinical entity, its members will have privileges in the clinical branches. Also, the chairman must be a member of the executive committee of the hospital.

A general practitioner is defined as a legally qualified doctor of medicine who does not limit his practice to a particular field of medicine or surgery. He may, however, elect to devote particular attention to one or more special fields. He should then be accorded basic clinical privileges in general medicine, pediatrics, obstetrics (including low forceps, episiotomy, cervical and perineal repair) and surgery (care of wounds and reduction of simple fractures). Specific privileges in a clinical service, in which he feels especially fitted by training or experience, may be applied for by him. His application should be passed upon by a committee of his own department before being presented to the Credentials Committee. If granted such privileges in the department applied for and thus becoming an active member of that service, he must attend 75 per cent of its monthly meetings as well as those of his own department and the quarterly general staff meetings.

Some hospitals have assigned all of their general practitioners to a department of general medicine. This is neither good for the hospital nor the physician. To do his best work and thus serve his community as it is entitled to be served, the general practitioner must be allowed the incentive of being permitted to serve his patients in a hospital according to his best abilities. Encouraging his postgraduate education and developing his capabilities are included in the functions and duties of a general practice department. Only in this way can the hospital gain the full benefit of his services.

The staff of the smaller hospitals is composed of a large percentage of general practitioners and usually functions better by not setting up a separate department of general practice. Instead, each one should take an active part individually and as a group to improve standards of medical care in all departments.

The basic function of a hospital is to provide a place for physicians to care for the sick and injured. In certain locations, an outpatient department is almost a necessity and should properly be manned by general practitioners. Every licensed ethical physician should have access to a hospital in order that he may properly fulfill his responsibility to his patients. The extent of privileges accorded to him, however, must be determined by the staff itself in each individual case.

It is recognized generally that the rate of recovery and even recovery itself depend, to a great extent, on the patient's confidence in his doctor

The ability of his personal physician to fulfill this trust depends, in turn, upon his integration in the organization of the staff, with consultations and referrals when indicated and the direction of treatment when on his own resources.

Many hospitals have set up general practice residencies. A really efficient one can fulfill requirements within a two-year period, if properly arranged. A well-organized and functioning general practice section is a necessity, if such a residency is to be established or, if established, is to be worth the time spent in it.

The foundation of the practice of medicine is the general practitioner. Encouragement for a larger number of medical students to go into general practice must be more in evidence and must be carried on into the hospitals themselves, if we are going to be justified in insisting that we be permitted to carry on under the American way of life.

In order to clarify the situation regarding some misunderstandings, we wrote to the Director of the Joint Commission on Accreditation of Hospitals. His reply was stated clearly and to the point:

"The Joint Commission on Accreditation of Hospitals recognizes the value of the general practitioner to a hospital and always has encouraged, where applicable, the formation of a general practice section in a hospital.

"The Joint Commission has taken a positive stand to the effect that a general practice section cannot be a clinical department or entity in any hospital structure. This I believe is expressed very clearly in the August, 1953, Bulletin of the Commission.

"A general practice section in any hospital, if functioning properly, would be considered by our surveyors an attribute to the hospital more than anything else and no demerits are ever given for a section of general practice unless it is functioning improperly."

The statement referred to in his second paragraph follows:

"The standard on a department of general practice in well departmentalized hospitals was clarified. The responsibilities of this department shall be limited to administration and education since the department will not be a separate clinical service to which patients are admitted for care. Its members shall have privileges in the clinical service of the other departments as recommended by the credentials committee and approved by the governing body. They shall be subject to the rules of the service and, like all other members, shall be under the jurisdiction of the chief of the service."

Required attendance at staff meetings varies with the local staff organization:

"Such staff meetings are held for the purpose of a thorough review of the medical care of patients in or recently discharged from the hospital and frequent meetings of the clinical department staffs are regarded as essential in well organized departmentalized hospitals."

After the discussions, the following was stated as proper:

"In a well departmentalized hospital electing to hold at least monthly clinical departmental meetings and quarterly general medical staff meetings in accord with contingent No. 2, a doctor who holds an 'active staff' appointment in a Department of General Practice should attend at least nine (75 per cent of twelve) departmental meetings per year held by the clinical service in which he has privileges in addition to 75 per cent attendance at the quarterly meeting of the entire active medical staff. One of the following patterns for attendance at clinical departmental meetings should be followed by 'an active staff member' of a Department of General Practice:

"1. If he has privileges as an active staff member in a clinical department, he should attend 75 per cent of the monthly meetings of that department just as all other active staff members of that clinical department. It is understood that no physician will have active staff appointment in more than one clinical department.

"Or

"2. If he has privileges other than as an active staff member in clinical departments, he should attend at least nine departmental meetings per year among the clinical services in which he has such privileges. The clinical departmental meetings attended shall be of his own choice, with the exception that he might be requested to attend a particular departmental clinical meeting."

Briefly stated, a general practice section should also meet once a month and a 75 per cent record of attendance should be in vogue. The agenda can be varied to meet local needs. The chairman of the section should be on the executive committee of the staff and should be able to assist his fellow members in applying for and obtaining privileges in the clinical departments in which he is interested and qualified.

It is recognized that individual hospital staffs have their problems, and some changes in recommendations may be made in the future.

At present, we can say quite emphatically that a well-integrated general practice section is an asset to any general hospital and should be so recognized.

The Philosophy in Office Procedure

By John R. Fowler, M.D.
Barre, Massachusetts

THE DEFINITION of *philosophy* is: "The knowledge of the questions of all phenomena, both of mind and matter; reasoned science; practical wisdom; a particular system; calmness of temper."

The definition of *procedure* is: "Manner of proceeding; conduct; process."

The definition which concerns us here is "reasoned science." Therefore, in applying this philosophy to office procedure, it is imperative to have detailed knowledge of not only the procedure itself, but the reasons for the procedure, based on experience and scientific data; the immediate effect of the procedure on the patient; and the end results also based on scientific data and reasoning.

This means that, in order to apply any procedure, one should be aware of the full history of the condition for which the procedure is given. There must be a full awareness of the immediate effects, and the knowledge of expected results so that the prognosis can be rendered with reasonable certainty.

A typical example of this philosophy is the use of penicillin prior to or immediately following extraction of an infected tooth. It is known that immediately following the extraction of a tooth, the blood stream is flooded with the released organisms. It is known that, in the past, such a release of organisms has been followed by bacterial endocarditis. It is known that, with antibiotic treatment, endocarditis can be prevented or cured. Therefore, in the use of pencillin, the reason for giving it and the expected result are based on "reasoned science."

Whether or not this procedure should be given routinely in all cases is a matter of individual judgment, always bearing in mind the fact that many antibiotics are given needlessly. Careful consideration should be given before antibiotics are used routinely and there should be good reason for such use.

Presented at the Michigan Clinical Institute, Detroit, Michigan, March 11, 1955.

Dr. Fowler is president of the American Academy of General Practice.

Another office procedure which meets the test of "reasoned science" is the use of the Papanicolaou test. This is a valuable test, much too sparingly followed in office procedure. There are now consecutive cases amounting to tens of thousands which give a very factual and compelling reason why this test should be done much more often than is now the custom.

Thirteen years ago, I had my first indoctrination in the Papanicolaou test. This procedure, along with the vaginal smear, was hailed as a great advance in the possibility of early recognition of cancer of the cervix, uterus, and vagina.

The slowness of the recognition of this method and its application was due largely to the fact that few cytologists were trained to properly interpret the findings. However, sufficient data have been obtained, and in every large area cytologists have now been trained to properly interpret the tests, and to make definite statements as to their value.

The test, itself, is simple. The technique preferred by many is simple aspiration with the curved glass tube of material from the posterior cul-de-sac and the cervical canal. This material is smeared on clean slides, thin enough for examination, one from the cul-de-sac and one from the cervical canal. These are immediately immersed in equal parts of ether and 95 per cent alcohol and sent to the cytologist for examination. If this is done with many cases routinely, the average results to be expected would be 95 per cent negative, 4 per cent doubtful, and 1 per cent positive. The cytologist has five classifications of these smears: the first two—negative; the third—doubtful; the fourth—probably positive; and the fifth—positive.

Of the positive smears, 68 per cent may be expected to be found in cases presenting no signs of symptoms of cancer. This is a significant finding. In the case of positive findings, further testing and possible biopsy are essential.

The Shiller test, which was so long used for testing the cervix, whereby an iodine solution was painted on the cervix and any unstained area suspected, is, to my mind, a rather poor test, and need not be done. More effective and more reliable is the simple wiping of the cervix with a pledget of cotton on an applicator; if there is bleeding at any point, that point should be suspected and a biopsy taken. The only instruments needed in any of these tests are a speculum, hook, sound, curette, aspirator, and forceps.

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Some Unusual Manifestations of Mitral Stenosis

By Paul S. Barker, M.D.
Ann Arbor Michigan

RHEUMATIC heart disease is common. Gelfman[2] reported an incidence of rheumatic heart disease of 9.4 per cent in 4,400 autopsies on adults in one of the Boston hospitals. The incidence in Michigan is probably almost as high. Most adults with rheumatic heart disease have mitral stenosis. Mitral stenosis, therefore, is a common condition.

The usual "picture" of rheumatic heart disease with mitral stenosis is described adequately in our medical textbooks. The medical students take great interest in becoming familiar with the rumbling, apical, diastolic murmur which is the most helpful diagnostic sign of the lesion. The younger physicians take equally great interest in the subsidiary signs, the roentgen appearance and the pathological physiology, and in the course, prognosis and treatment, especially surgical. They soon become well informed regarding all of these aspects of mitral stenosis. Because the lesion is so common they become thoroughly familiar with the usual "picture" of rheumatic heart disease with mitral stenosis. Yet, because of the exceptional and unusual manifestations of the disease, it never ceases to be of interest.

The purpose of this paper is to present some of the exceptional or special problems which are sometimes encountered.

Mitral Stenosis in Old Age

Case 1.—A patient was hospitalized several times during the last ten years of her life for congestive cardiac failure from which she usually recovered quite well. She had rheumatic fever in her youth when she was a student in medical school. Her heart was affected and she was advised to give up the study of medicine, which she did. She led an active life without significant cardiac difficulty until about the age of seventy when she began having episodes of congestive failure, usually after respiratory infections or overexertion. She had enlargement of the heart, auricular fibrillation, blowing systolic and rumbling diastolic murmurs at the apex, moderate elevation of blood pressure, rales at the lung bases, enlargement of the liver and edema of the legs. She responded well to treatment on several occasions, but died at her home near Ann Arbor shortly after her last hospitalization at the age of eighty-four.

Case 2.—A patient has been followed since 1942 when she was sixty-one years of age. She had her only attack of rheumatic fever at the age of thirty. Cardiac symptoms began ten years later, and at the age of fifty she developed auricular fibrillation. She took digitalis and continued to do most of her housework and had shortness of breath only upon strenuous exertion. She had slight enlargement of the heart, auricular fibrillation, a mitral opening snap, a mitral diastolic murmur and a faint pulmonic diastolic murmur. She continued to do well and in 1948 at the age of sixty-seven was riding her bicycle for an hour each day without symptoms. In the last three years her heart has become larger and with increasing difficulty with cardiac failure she has become a partial invalid at the age of seventy-three.

Rheumatic heart disease with mitral stenosis is a disease of early adult life, uncommon beyond middle age and rare in old age. White[3] and Friedberg[1] in their excellent books mention briefly its occurence in old age. Such cases illustrate the fact that the lesion may be well tolerated for many years and even into old age, not apparently shortening life. It is obviously an error to recommend mitral operations for all who have apical diastolic murmurs without regard for lack of disability or absence of progression of the disease. And when cardiac failure finally occurs it may result as much from coronary atherosclerosis as from the mitral stenosis.

Thromboembolic Complications

Case 3.—A middle-aged woman had mitral stenosis and a toxic adenomatous goiter. Subtotal thyroidectomy was performed, but her moderately severe congestive cardiac failure did not improve. She had episodes of extreme weakness and of syncope and died in one of these episodes. Autopsy showed pronounced mitral stenosis and a large, free or ball valve thrombus in the left atrium. This rare complication may be suspected clinically when a patient with mitral stenosis has loss of consciousness and absence of the pulse while the heart beat continues as shown by the physical findings or electrocardiogram. It is not likely to be recognized during life.

Case 4.—A woman of thirty-one was seen in 1943, having had shortness of breath upon moderate exertion for several years. She had rheumatic fever at age ten. X-ray films of the chest, obtained irregularly because of exposure to tuberculosis, showed normal appearance of the heart in 1940 and moderate enlargement in 1943, with the configuration characteristic of mitral stenosis and prominent pulmonary vascular shadows. She had

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From the Department of Internal Medicine, University of Michigan Medical School, and the University Hospital.

the characteristic physical signs of mitral stenosis and insufficiency and rales at the lung bases. Digitalis was given. Although the heart rate was always quite rapid, she had little difficulty until 1948 when auricular fibrillation appeared and the heart enlarged further and there were several emboli to the lungs with infarction. In May, 1949, she had another pulmonary infarct and long-term dicumarol therapy was started. It was continued with satisfactory prothrombin levels. In April, 1951, she had a cerebral embolus with right hemiplegia, the prothrombin concentration was 30 per cent. Three days later she had a subarachnoid hemorrhage and dicumarol was stopped. In December, 1951, operation was performed and calcification of the mitral valve with marked stenosis and moderate regurgitation was encountered. The attempt to enlarge the mitral orifice was unsuccessful and the patient died at the conclusion of the operation. Autopsy showed chronic rheumatic pancarditis with mitral stenosis and insufficiency, hypertrophy of the left ventricle, an organized mural thrombus in the left atrium, an old infarct in the left cerebral hemisphere, a recent infarct in the spleen and an early carcinoma in an adenoma of the thyroid.

This case is instructive in several respects. The heart rate was kept slower after the onset of auricular fibrillation than when the rhythm was normal. Abscessed teeth were removed without incident on several occasions, the patient being protected by sulfadiazine and by penicillin from bacterial endocarditis. After the onset of auricular fibrillation there were emboli to the lungs and anticoagulant therapy with satisfactory prothrombin levels did not prevent further embolism to the brain. Emboli, auricular fibrillation and calcification of the valve are not contraindications to operation for mitral stenosis, but they often add considerably to the difficulties and to the risks of operation. Calcification and mitral insufficiency are especially unfavorable. Embolism is a serious complication of mitral stenosis.

Absence of Murmurs

Case 5.—A fifty-four-year-old man was admitted on October 28, 1954. He had acute rheumatic fever in 1927. He developed exertional dyspnea, orthopnea and palpitation in 1949 and was told that he had auricular fibrillation and was given digitalis. He had sudden impairment of vision of the right eye in 1952, and a few weeks later sudden left hemiplegia, and probably pulmonary infarction, too. Residual hemiparesis persisted and the exertional dyspnea became more pronounced. Examination showed enlargement of the heart and auricular fibrillation, but no murmurs. The blood pressure was 130/90, the lungs were clear, the liver was not enlarged and there was no edema. There was left hemiparesis. X-ray films showed left atrial and right ventricular cardiac enlargement characteristic of mitral stenosis and angiocardiography confirmed the presence of this lesion.

On November 30, 1954, mitral commissurotomy was performed and a pronounced stenosis was enlarged satisfactorily. A thrombus was felt in the left atrium. A few minutes after completion of the operation the left leg became cold and blue. Left common iliac arterial embolectomy was performed promptly. Anticoagulant therapy was started on December 2, and the patient left the hospital a few days later.

The patient returned on January 24, 1955, because of necrotic areas on the left leg. The heart was somewhat smaller, auricular fibrillation was present and there was a systolic murmur at the apex. There were necrotic areas on the left leg, which was pulseless and edematous. Anticoagulants were stopped on January 22 and on February 2 surgical debridement was performed. On February 5 right femoral embolism occurred and right femoral embolectomy was followed by improvement. On February 8 pulmonary embolism occurred. Anticoagulant therapy was resumed on February 9. Right hemiplegia occurred on February 14. The patient died on February 16.

Autopsy showed chronic rheumatic heart disease with severe calcific mitral stenosis remaining after commissurotomy: a mural thrombus in the left atrium at the closure of the auricular appendectomy; multiple arterial emboli to brain, spleen, kidneys, lower extremities and small intestine; old right and recent left cerebral infarcts; multiple pulmonary arterial emboli; recent pulmonary infarcts; cardiac enlargement and myocardial fibrosis; and other subsidiary findings.

This case is remarkable for the absence of clinical findings by which mitral stenosis could be recognized. Credit for demonstrating the lesion must go to the roentgenologists. The seriousness of embolism is apparent.

Case 6.—A twenty-eight-year-old housewife was seen on June 1, 1955, complaining of shortness of breath upon moderate exertion for the past year. There was no history of rheumatic fever, although she had frequent tonsillitis in childhood. In February, 1955, she had pneumonia or pulmonary infarction with pleuritis, effusion and blood-streaked sputum. In March, 1955, she had auricular fibrillation, quinidine was given and normal rhythm returned. Examination showed slight enlargement of the heart, accentuated mitral first sound and pulmonic second sound and faint systolic murmurs at the apex and pulmonic area, but no diastolic murmur. The blood pressure was 130/80. There was dullness at the base of the right lung. There was no evidence of cardiac failure. X-ray films, fluoroscopy and angiocardiography showed changes characteristic of mitral stenosis and possibly slight mitral regurgitation.

This is doubtless an example of mitral stenosis without a diastolic murmur, although anatomical confirmation is lacking. We have seen other pa-

tients with mitral stenosis whose apical diastolic murmurs were usually clearly audible but on occasions could not be heard on the most careful examination. One of these was the second patient described in this report. It is well known that murmurs may become inaudible in the presence of polycythemia or pericardial effusion, but these explanations do not apply here. Zinsser and Wood[4] mention the absence of the diastolic murmur in patients with mitral stenosis.

Misleading Murmurs

Case 7.—An eighteen-year-old boy was first seen in 1945 because of exertional dyspnea. There was no history of rheumatic fever. He enjoyed good health until the age of thirteen when he had pneumonia and was told by a cardiologist of recognized competence that he had rheumatic heart disease with mitral stenosis. His activities were restricted but fatigue and exertional dyspnea increased in severity. Examination showed gross cardiac enlargement and accentuation of the pulmonic second sound, but no murmur, gallop or friction. The pulse was paradoxical, the neck veins were distended, the liver was enlarged and there was slight edema of the ankles, but the lungs were clear. The electrocardiogram showed broad, notched P-waves and low amplitude of the ventricular deflections. Nine x-ray films made from 1941 to 1945 showed much variation in the size and shape of the cardiac shadow.

Auricular fibrillation appeared in 1947, dyspnea and edema increased and ascites developed. The patient was in the terminal stage of constrictive pericarditis. Pericardiectomy was performed but the patient died sixteen hours later. Autopsy showed chronic constrictive pericarditis; chronic, active, fibrous pericarditis, pleuritis and peritonitis; partial pericardiectomy; and a normal mitral valve—there was no stenosis and no evidence of rheumatic heart disease.

This patient had chronic pericardial disease with recurring effusion leading ultimately to constrictive pericarditis. It is likely that an apical, diastolic, third sound, commonly present in pericardial disease, so closely resembled the murmur of mitral stenosis as to be mistaken for it.

Case 8.—A thirty-year-old housewife and mother of four children was seen on June 4, 1953, complaining of shortness of breath. There was a vague history of diminished exercise tolerance in childhood. In 1948 she had acute rheumatic fever and was first told that she had heart disease. Following that she had exertional dyspnea and orthopnea and more recently edema and paroxysmal nocturnal dyspnea. There were several brief episodes of faintness and cyanosis. Examination showed borderline cardiac enlargement, normal rhythm, accentuated mitral first sound and pulmonic second sound, an apical diastolic murmur with presystolic accentuation, a mitral opening snap and no systolic murmur. The blood pressure was 124/80, the lungs were clear, the liver was slightly enlarged and there was no edema. The electrocardiogram was not definitely abnormal. X-ray films and fluoroscopy showed borderline prominence of the left auricular appendage and pulmonary artery.

It was thought that the findings were characteristic of mitral stenosis with progressive cardiac disability, and that mitral commissurotomy was indicated. At operation on August 10, 1953, no mitral lesion was found. It was thought that she might have an atrial septal defect, but this could not be recognized with certainty. Examination on September 10, 1953, showed no change in physical signs.

It is well known that atrial septal defect may give rise to murmurs which resemble those of valvular disease. This case is probably an instance of this. In other instances the clinical diagnosis of rheumatic heart disease with mitral stenosis and aortic regurgitation has been made and the autopsy has shown atrial septal defect and normal heart valves. Angiocardiography should lead to the correct diagnosis in these cases, but, of course, it is not always possible.

Case 9.—A twenty-year-old woman was admitted to the hospital for the thirteenth time in 1951. She had rheumatic fever at the ages of seven and eleven years, and had been followed since 1945. She had progressive cardiac disability in spite of close adherence to a full program of medical and dietary treatment. Examination showed obvious dyspnea, cyanosis, distended neck veins, congestion of the lungs and liver and edema of the legs. The heart was greatly enlarged and auricular fibrillation was present; the pulmonary second sound was accentuated, but not the mitral first sound; a systolic murmur and thrill were maximal at the apex and there was a rumbling apical diastolic murmur. The electrocardiogram showed auricular fibrillation and right axis deviation. X-ray showed pronounced cardiac enlargement with a greatly enlarged left atrium. It was thought that mitral valvulotomy offered the only chance for improvement although this was not a favorable case. The patient did not survive the operation.

Autopsy showed active, chronic, rheumatic pancarditis with Aschoff nodules; chronic, productive endocarditis of the mitral, tricuspid and aortic valves; marked hypertrophy and dilatation of the heart; insufficiency of the mitral, tricuspid and pulmonic valves; acute exacerbation of chronic passive congestion of all organs.

The pathologist would not make a diagnosis of mitral stenosis because the orifice was normal in size. It was not enlarged in proportion to the great enlargement of the heart chambers, and this relative narrowing doubtless accounted for the loud and typical mitral diastolic murmer. Patients such

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Alkaline Treatment of Acute Allergic Shock

By Harry G. Clark, M.D.

Detroit, Michigan

MORE and more frequently reports are appearing in the literature of death following the administration of penicillin. For every death reported there must be many deaths unreported. Most physicians do not write for the journals, and it takes more than the usual amount of fortitude to broadcast such a major disaster. Inquiring among physician friends, we found that most had had cases of allergic reaction to penicillin and many had observed severe reactions. In the last four years we have had enough experience in combating allergic reactions with alkalis as to feel assured that the alkali treatment described here will add greatly to our armamentarium in such disasters.

In conformity with the acid-anoxi-endocrine theory of allergy, we have been giving sodium bicarbonate and potassium bicarbonate, in various proportions and amounts, to patients with acute and chronic allergic manifestations. Five grams (one teaspoonful) of the combined alkalis dissolved in water are given every hour or two for one, two or three doses with consistently good results, particularly in the acute cases of allergy. Chronic allergic diseases such as asthma with emphysema involve more than one pathological change, and are not so much benefited by the alkalis as is the acute case. In anaphylactic shock due to penicillin the recovery is rapid and complete: so much is this so, that we have discarded any other medication such as adrenalin, aminophyllin, and the antihistaminic drugs.

For the last eight months we have been injecting intravenously sodium bicarbonate into the more severe cases of penicillin and other allergic attacks. The solution used is in an ampoule containing 3.75 grams of sodium bicarbonate in 50 cc. of water (Abbott Laboratories). Also we have used 1/6 molar sodium lactate (Baxter Laboratories). Time is very important in penicillin allergic shock. Some patients die in a few minutes. The patient's physiological response to the intravenous use of the alkali is very rapid, occurring in from seventeen seconds to a minute or two. With it given orally, improvement takes from twenty minutes to an hour. When sodium bicarbonate is given intravenously, the beginning of relief is initiated by a general feeling of warmth, particularly of the forearms, hands and face. The face becomes pinker. The changes are obtained frequently when only 8 to 10 cc. of the solution has been injected which amounts to one-half gram of the sodium bicarbonate. Even though relief of the itching occurs with the first ampoule, it may be necessary to inject two, three, or four before the hives completely disappear. Following this higher dosage, an excessive thirst may signal the need to terminate the treatment.

A round trip of the circulating blood takes forty-five seconds or more. It seems that the onset of improvement is predicated by the complete circulation of the alkali rather than by the amount of the alkali. A slow injection is indicated. The most rapid improvement that we have noted was in a case of migraine type headache following the eating of hot dogs the night before, of eighteen hours duration. In seventeen seconds the patient announced that the headache was gone. This rapid improvement co-relates with the greater speed and volume of the cephalic circulation to the slower speed of the peripheral circulation.

We are accustomed to giving our patients more of the powder, which they take every two hours by mouth if necessary. This produces slower and more sustained control of the allergic reaction than does the intravenous route.

Sodium bicarbonate raises the blood pressure, is poorly excreted, and in large doses will cause edema. This edema is particularly noticeable in the eyelids and hands. A finger ring becomes tight. Potassium bicarbonate tends to lower the blood pressure; is rapidly excreted, and tends to reduce the edema caused by the sodium bicarbonate. By clinical experimentation we have found that the optimum mixture of sodium bicarbonate to potassium bicarbonate, is the proportions of four to one. This satisfactorily stabilized the blood pressure and did not cause edema. In acute anaphylactic penicillin shock, one wants to raise the blood pressure, so no potassium is used in the intravenous solution.

In a self experiment, 50 grams of sodium bicarbonate were taken in an hour. The blood pressure rose from 136/84 to 240/118. Overnight it remained nearly the same. In the morning 20 grams of potassium bicarbonate were taken rapidly. The blood pressure dropped from 210/116

to 112/76 in one hour and fifteen minutes. The acute alkalosis with muscle tetany and carpopedal spasm which was present was relieved promptly with 12 grams of calcium chloride.

The following case reports are typical of many of our results in allergic shock, treated with alkali.

Case 1.—Mrs. S., a nurse, aged thirty-eight. Four hundred thousand units of procaine penicillin were given in the treatment of impetigo. In thirty minutes she had a severe pain through the lower right chest and a generalized cutaneous burning sensation of the skin with giant urticarial bullae. One teaspoon of the 4-1 mixture was given to her. There was a disappearance of all symptoms in thirty-five minutes. She was able to carry on her work that evening.

Case 2.—Mr. C., fifty-eight years old. Four hundred thousand units of procaine penicillin were given for a follicular tonsillitis. He returned to the office in distress with generalized urticaria. Intravenous sodium bicarbonate was given as described above. Relief of itching occurred in fifty-five seconds after 10 cc. of solution had been injected. The skin wheals were gone in three minutes. He was given sodium-potassium powder which he took at home.

We have had eight similar cases of allergy following penicillin administration with almost identical rapid recovery. In one such patient a second 50 cc. of the solution was given before the patient felt well. No patient was hospitalized. We have used the alkalis in over a thousand cases of chronic food and dust allergies.

Histologically the skin, on being stung by a bee reacts similarly to that of allergic attack with eosinophilia, and edema. Occasionally one reads of deaths from a single bee sting. The following case report is interesting.

Case 3.—Mr. J., a white man, aged forty-two, had had previous bee stings. This time, in contrast to the other ones, he had a severe local reaction with generalized symptomatology. A hard nodule the size of a large cherry was felt at the angle of the jaw. The whole face was swollen. The left eye closed. A headache, and generalized joint pains were complained of; coupled with weakness and shortness of breath. The man was acutely ill. The intravenous injection of sodium bicarbonate was started. He was asked, as usual, to tell us as soon as he noticed improvement in symptoms. In thirty seconds the headache was gone, and soon after the general joint pains. In seventy seconds the jaw was no longer sore, and was not tender to pressure or squeezing. In the next few minutes the facial swelling was noticeably reduced. He was sent home apparently much improved.

Case 4.—Mrs. C. H., suffered a violent reaction when she was given coffee in the office during specific food tests. She slid to the floor, complained of an epigastric pain, violent headache and became semi-conscious. Her face was blue white. Generalized muscular rigidity and clonic spasms of the muscles of arms, legs and abdomen developed. Intravenous sodium bicarbonate was given with the usual result. There was better mental response in fifty seconds, no epigastric pain in seventy seconds, and disappearance of the convulsive contractions in ninety seconds. She was given powder by mouth. We feel that this epileptiform attack represented an allergy, with the central nervous symptom as the major shock organ.

These four cases are typical of many others. No other therapy except the alkalis was given nor needed to be given. The dramatic speed of recovery might suggest that we are correcting some basic physiological mechanism involved in an allergic reaction. It might be that subjecting the tissue to such a powerful alkalis such as sodium bicarbonate, one is counteracting the intracellular acidosis of allergy as promulgated by the acid-anoxi-endocrine theory of allergy, or perhaps the effects are produced by nervous mechanisms. Since our work is on a clinical level such questions must be left to the biochemist and physiologist.

We have used the sodium lactate intravenously in five cases of surgical shock and hemorrhagic shock. When more prolonged and less prompt action is desired, such as during a major operation, lactate solution is preferable to the sodium bicarbonate. Like the bicarbonate there is a prompt rise in blood pressure. Other symptoms of shock disappear such as pallor, cyanosis and coldness of the hands.

Sodium bicarbonate should be used with caution when cardiorenal, hypertensive, and arteriosclerotic diseases are present. It is poorly excreted and has pressor effects. Also it should not be used in severe edema, since it increases the edema. In these later cases, the proportion of potassium should be changed. In an emergency these cautions should be ignored since they pertain to a lesser evil, which may be corrected when the emergency is passed. We have had no distressing incidences attributable to our alkaline treatment. In some, a laxative effect is produced.

This report is given in the hope that other practicing physicians will be relieved of the acute anxiety caused by anaphylactic shock which the

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Cancer of the Breast

By Isadore Lampe, M.D.

Ann Arbor, Michigan

ALTHOUGH a half century has passed since the radical mastectomy was devised and applied, and although about three decades have elapsed since high voltage x-ray radiation became available for the attack on carcinoma of the breast, many problems still face us in prosecuting, to a successful result, the treatment of mammary malignancy.

The past decade has witnessed innovations in the treatment of this disease, notably hormonal methods, either direct, using certain drugs, or indirect by surgical elimination of ovaries, adrenals and the pituitary gland; these, however, are palliative and not curative procedures. Some workers have looked closely at the radical operation of Halstead and believe they have found evidence that its contribution to the control of this disease is considerably less than is popularly believed.[11] Other workers have attempted to enlarge the procedure by including resection of the chest wall[14] or removal of supraclavicular and mediastinal lymph nodes.[15] Still others, notably Haagensen,[8] have refined and limited the indications for the operation, believing that operation on those beyond these indications only shortens survival.

On the side of radiation therapy we find controversy between those who claim no benefit for routine postoperative irradiation and those who stoutly proclaim its merits and benefits. An enterprising radiotherapist, Robert McWhirter of Edinburgh, has rocked the surgical world by limiting the breast operation to a simply mastectomy and following it with unusually vigorous radiation treatment.[9] The advocacy of such a procedure has been severely criticized but the critics have been confounded by the fact of results which compare favorably with those of the classical procedure.

It is beyond my competence to resolve this confused and controversial situation. Of the many aspects available, I shall limit myself to a few.

To begin with, I shall present briefly the results of treatment of this disease at the University of Michigan for the years 1936 to 1947 inclusive.[3] During this period, 1,227 women with carcinoma of the breast were seen (Table I). These patients were in all stages of the disease; 431 had been treated previously elsewhere, most of them coming to us with recurrences and metastases. A small number (forty-five) left us for treatment elsewhere and nine refused any treatment.

TABLE I

Total number patients seen	1,227
Number with previous treatment	431
Number left for treatment elsewhere	45
Number refused treatment	9
Number untreated on admission	742
Number alive 5 years without evidence of cancer	246
Number alive 5 years with cancer	52

5-year survival: $\frac{289}{742} = 40.2\%$

5-year "clinical cure": $\frac{246}{742} = 33.2\%$

TABLE II

	Years	No. Cases	Five year "Clinical Cure" Rate	Five year Survival Rate
Adair (Memorial Hosp.)[1]	1935-42	3573	—	37.2%
Nohrman (Sweden)[10]	1936-41	1042	—	40.1%
Windeyer (England)[16]	1936-42	961	—	32.5%
Smithers (England)[13]	1937-46	1093	29.5%	34.6%
Haagensen (Presbyterian Hosp.)[5]	1935-42	668	38.6%	47.2%
University of Michigan[3]	1936-47	742	33.2%	40.2%

Of the 742 previously untreated patients, 298 were alive five years after treatment, survival rate, 40.2 per cent; 246 were living without evidence of neoplastic disease, "clinical cure" rate, 33.2 per cent. Thus one in three of all cases coming to our institution without previous treatment were alive without evidence of disease five years after treatment. An additional group of fifty-two were living with disease making four in ten alive five years after treatment.

It may come as a surprise but the fact is that not many figures are available on survival of all untreated cases regardless of stage of the disease coming to an institution. Most reports deal only with patients treated by radical mastectomy. Table II presents some survival rates based on all untreated cases as reported in England, Sweden and this country. We note a range of 32.5 to 47.2 per cent.

"Clinical cure" rates, that is, the proportion of patients alive without apparent disease at five years are even less commonly reported. As seen in Table II, our rate of 33.2 per cent represents a median figure.

Most reports deal with the results obtained in

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TABLE III

Number of radical mastectomies, with and without P.O. x-ray treatment	440
(Operability: 440=59.3%)	
	742
Number alive 5 years without evidence of cancer	223
Number alive 5 years with cancer	34
5-year survival:	257=58.4% / 440
5-year "clinical cure":	223=50.7% / 440

the cases subjected to radical mastectomy. Of our 742 previously untreated patients, 440 were treated by radical mastectomy, an operability rate of 59.3 per cent. I may say it is my impression that our indications for this operation were somewhat less stringent than the Haagensen criteria of operability. (The remaining 302 patients were variously treated by limited operations plus irradiation or irradiation alone; of course in some cases because of advanced disease only palliative irradiation or no treatment was given.

As shown in Table III, 58.4 per cent were alive five years later, and 50.7 per cent was the "clinical cure" rate. This compares favorably with Haagensen's rates of 58.2 per cent and 48.7 per cent, respectively.[5]

When routine microscopic examination showed no metastases in the axillary nodes (we had 197 such cases), the survival rate was high, 82.7 per cent (the "clinical cure" rate, 75.6 per cent). Axillary node metastases depressed these figures to a survival rate of 38.7 per cent ("clinical cure" rate, 30.5 per cent).

It may be pointed out that Saphir[12] has shown in thirty patients with negative axillary nodes on a routine type of microscopic examination that a detailed and comprehensive examination of all the axillary tissue revealed metastases in ten cases. It can be confidently accepted that a certain proportion of the cured cases with allegedly negative nodes did in fact have axillary metastases. Coupled with know cures of obviously involved axillae, the pessimistic critics who decry the radical operation as curative only when the disease is limited to the breast should find here an effective denial of their viewpoint. In addition it should be noted that the incidence of recurrence in the axilla in cases dying of the disease is amazingly low when a good radical operation is done in a properly indicated case.

In our own material (197 patients with negative axillary nodes), if Saphir's findings apply, simple mastectomy would give us 132 "clinical cures" at five years as against 149 obtained by the radical operation, a loss of seventeen lives.

As a radiation therapist, the effectiveness of post-operative irradiation is a matter of prime interest. Our material includes a considerable experience in routine irradiation after radical mastectomy in both axillary negative and axillary positive cases. The high voltage x-ray treatment administered through anterior chest wall, direct axillary, supraclavicular and posterior shoulder fields, concentrating the dose in the axilla was reasonably intensive and of the order of 5000 r in three and one-half weeks in the middle of the axilla.

Of the 197 cases with negative axillary nodes, about half were treated by surgery only, the rest with post-operative irradiation in addition. The difference in the five-year survival rates was negligible. Of the 243 cases with positive axillary nodes, about one-fourth received surgical treatment only, three-fourths surgery plus irradiation. Here also the five-year survival rates did not differ significantly. Our experience did not encourage the view that post-operative x-ray treatment of the chest wall and axilla (sites already attacked by the radical operation) improved results. It must be clearly understood that this applies to those patients who had the benefit of a technically good and complete radical mastectomy. It does not necessarily apply to less adequate and less extensive surgical procedures; indeed we have no data on such material.

Most of you are acquainted with the work of McWhirter. Briefly, he has advocated a simple mastectomy and vigorous post-operative irradiation of the chest wall, axilla and supraclavicular region in all cases except the obese and those with homolateral active upper lobe tuberculosis. The technique of radiotherapy which he employs, from the viewpoint of biologic effect on tissue, is more intensive than that commonly employed in the past in this country, consisting of a tissue dose of 3750 r in eighteen days. In 1,606 patients (treated 1941 to 1946, inclusive), the survival rate was 41.7 per cent; compare with our figure of 40.2 per cent. Of these patients, 907 were candidates foı radical mastectomy; in these McWhirter's five-year survival rate was 58 per cent; our figure is 58.4 per cent and Haagensen's is 58.2 per cent for those treated by radical mastectomy. McWhirter has also reported ten-year survival rates

on 226 patients which compare favorably with surgically treated series.

Thus it is seen that the results obtained by simple mastectomy and high dose radiation therapy in McWhirter's hands are equal to those obtained by the best workers employing the radical mastectomy as the basis therapeutic method. To me, two questions are of paramount interest. In the face of evidence presented by some workers such as ourselves which indicate postoperative irradiation does not enhance the results of radical mastectomy, and in face of the fact that simple mastectomy by itself can cure only a limited number of breast cancers, on what grounds can one explain these good results? I believe these survival rates result from a combination of factors: (1) the simple mastectomy cures those patients in whom the disease is absolutely limited to the breast, (2) in cases with advanced axillary disease, the surgical dissection actually disseminates the neoplasm and shortens survival—this is avoided in McWhirter's approach, (3) a certain proportion of breast carcinomas are radioresponsive and are eradicated or held in check for years by the intensive radiotherapy.

The fact that same of us who employed postoperative irradiation following the radical operation have been unable to demonstrate augmented survival rates does not mean that mammary carcinoma is unaffected by radiation. Indeed there is ample evidence to the contrary. Patients, on occasion, have been cured by radiation methods alone. To cite only one piece of work, Lumb with careful histologic studies has shown that doses of 3500 to 4000 r in thirty-six to forty days in the series he investigated produced either complete eradication of the neoplasm or damaged it so severely that only abnormal cells, probably nonviable, remained.[6]

The second question: Should the radical mastectomy be abandoned in favor af McWhirter's method of treatment? Some have already answered this question in the affirmative.[4] I am not ready to do so because I do not see how it can achieve the objective we are aiming at, namely, to increase the proportion of cures or survivals. The evidence to date shows that simply mastectomy plus expert radiotherapy produces results equal to but not superior to those obtained by the radical operation, that skilled workers employing either approach will end up with essentially the same over-all survival rate on all previously untreated patients, e.g., University of Michigan 40.2 per cent, McWhirter 41.7 per cent. This does not advance our ability to cope with this disease. The arguments employed by either school of thought relate to expediency, convenience, presumed applicability, et cetera; although they may be cogent, they are not of prime importance.

The radical operation if restricted to properly indicated cases efficiently clears the chest wall and axilla of the neoplastic disease. Since disease may exist at more remote sites, this may not result in cure, but recurrence on the chest wall with proper surgical technique will be of infrequent occurrence and in the axilla of rare occurrence. It is probably due to this fact that our postoperative irradiation technique directed as it was to the chest wall and axilla failed to demonstrate increased survival rates. Ideally one should restrict the use of the radical operation to those cases in which it will be effective and use McWhirter's approach in those cases where the axillary disease is actually beyond the scope of the operation. Such a combination would carry the potentiality of an increased survival rate. Unfortunately, at the present time there is no *a priori* way of distinguishing between the two groups. Not even Haagensen's "triple biopsy" (breast, supraclavicular and internal mammary nodes) makes this distinction because it does not define the axillary node status.[8]

In the endeavor to improve results some surgeons have sought to extend the scope of the operation; as far back as 1907, Halstead[8] reported 119 supraclavicular dissections with metastases found in forty-four. The attempt at such an extension of the radical operation was dropped when it was found that only two patients survived five or more years. Recently Urban[14] has advocated en bloc resection of the internal mammary lymph-node chain in continuity with the radical mastectomy. Wangensteen[15] has reported forty-four "superradical' operations for cancer of the breast with a 12.7 per cent mortality. This operation consists of a radical mastectomy, supraclavicular cervical node dissection as high as the upper border of the thyroid cartilage, excision of the entire internal mammary lymph-node chain and a mediastinal dissection. The qualifying term "super" is indeed appropriate. Haagensen has presented cogent reasons for believing that such extensive

procedures have no chance of increasing cure rates.[8]

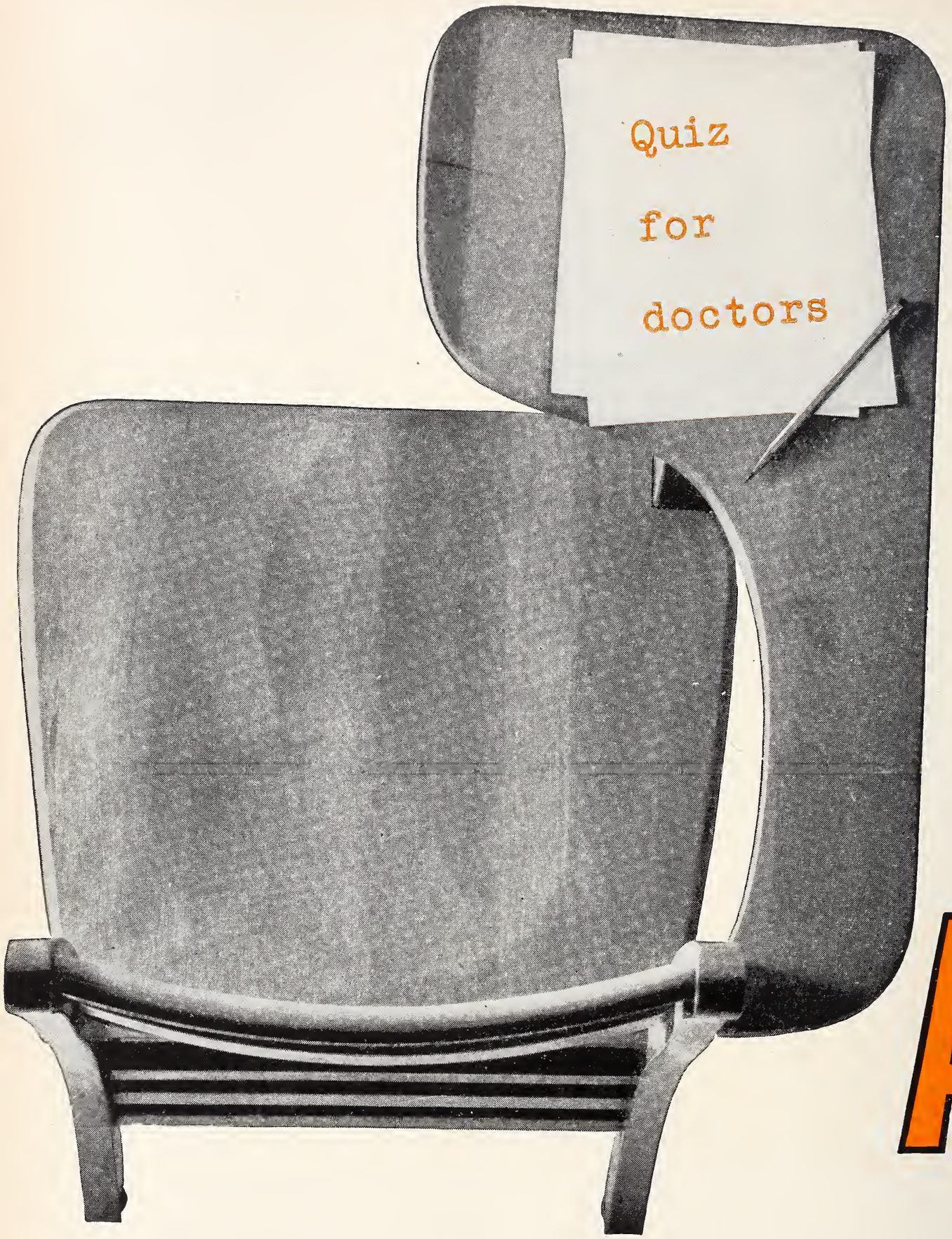
Our policy at the present time is that of continuing with the classical radical mastectomy in properly indicated cases. The indications essentially are those of Haagensen[8] with the exception that we do not biopsy supraclavicular nodes when these are normal clinically, and we do not permit the finding of positive internal mammary nodes to act against performing the radical operation. The interspaces are opened and the internal mammary nodes are removed for information, not to determine operability. In all cases except those with tumors of the outer half of the breast with negative axillary and internal mammary nodes, it is now our policy to irradiate the supraclavicular node-bearing area along with the subclavicular and lowed cervical nodes. Andreassen and Dahl-Iverson[2] have reported in ninety-eight supraclavicular dissections, occult supraclavicular metastases in 33 per cent of those with axillary metaseases. At the same time the internal mammary nodes are irradiated. The radiation treatment is carried out with a Co^{60} teletherapy unit. Only two fields are required: one over the supraclavicular region and one over the sternum. In twenty to twenty-three days a dose of 3,780 to 4,200 r can be delivered to a level 4 cm. below the skin without significant skin reaction. Since many of the nodes we are interested in are less deep than this, their dose is higher. This is the order of radiation dose demonstrated to be effective by McWhirter and others. I am optimistic about our ability to produce significant effect on metastatic neoplasm in the nodes we are irradiating but whether we will get higher cure rates will probably hinge on the critical factor of whether involvement of these nodes can exist without more remote involvement. If this is the case, we may improve our survival rates; if it is not, death from more remote involvement will occur despite this procedure. For cases in which the radical operation is not indicated, various approaches are employed: simple mastectomy plus irradiation as per McWhirter or irradiation only.

One may ask, what is the curability potential in carcinoma of the breast with current methods of treatment? My purpose in presenting this question is to make certain that we do not delude ourselves with the naïve viewpoint that all we have to do is to make an early diagnosis and 100 per cent of the patients will be cured. Certainly it is important to make the diagnosis as soon as possible and immediately institute adequate treatment. Delay by patient or physician can be of critical import in an individual case. This does not mean, however, that early diagnosis will insure cure rates approaching 100 per cent. Breast cancer presents a broad spectrum ranging from viciously malignant tumors which have metastasized before the primary tumor comes to the clinical horizon to neoplasms which may be limited to the chest wall for years, even without treatment. It has been estimated[7] that 40 per cent of breast cancers will be incurable by any method of treatment because of the high malignancy potential of the lesion, that 25 per cent are slow growing lesions which metastasize late, perhaps only several years after the primary appears (some delay in diagnosis would not be critical in this group) and that 35 per cent exhibit development of metastases in months after the primary tumor appears (it is in this group that early diagnosis and treatment is of critical importance). On the basis of this estimation, if we could diagnose every case on the first day the primary tumor became clinically detectable, our cure rate would not be 100 per cent but 60 per cent: this is our true objective.

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(Continued on Page 1256)



A

ou probably know every answer!)

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General Practitioner's Role in Otolaryngologic Management

By Francis L. Lederer, M.D.

Chicago, Illinois

IT IS pertinent perhaps to examine into how best to serve the needs of the patient and the role otolaryngology plays in the general practice of medicine. While there are seasonal and sectional or geographic variations, the head and neck areas provide the practitioner with from 25 to 45 per cent of his tasks. The common cold alone, not to mention its sequelae and complications, provides a goodly number of the cases in the daily routine of practice. Otolaryngology bears a kinship to each field of medicine. The specialist in the field recognizes the challenge of the symptom-rich areas of the head and neck which house all of the special senses.

Evaluation of Antibacterial Therapy

There is an erroneous bit of propaganda sweeping the country that complications of ear, nose and throat infections have entered the realm of rarities. This unfortunately is far from the truth and the very promulgation of the thought has led to a disastrous attitude of complacency, a profligate pharmaceutical debauch and the creation of a group of new diseases encouraged by an era of promiscuous therapeutics. It would be a gross misunderstatement to say that a medical revolution has not taken place. The antibiotics have played a most important part in the general advance of medicine and surgery. However, the naïve confidence of the nonmedical public, the noncritical acceptance by the profession, and the promotional activities of pharmaceutical houses has led to a casual attitude in their application and a deterioration in diagnosis.

Sufficient time has now elapsed to properly assess the miracle decade, a period characterized by trial and error in the application of synthetic and biologic chemotherapeutic research. Each physician has been a self-appointed investigator and the patient his test tube. Over 80 per cent of our pharmacologic agents were unknown a decade ago. Why in 1950, seven million pounds of sulphonamides, 250 thousand pounds (138 trillion units) of penicillin, and 193 thousand pounds of streptomycin were used. In 1951, 741 tons of antibiotics were produced in the United States, 524 tons were of penicillin, each person in this country receiving two million units at a cost of ninety-three million dollars. Streptomycin totaled 167 tons at a cost of fifty million dollars. This was enough to treat one million cases for a year or to treat all the cases of tuberculosis which developed in the previous ten years. More than one-half of all prescriptions during that year were for antibiotics and that constituted one-third of all ethical drug sales. By 1952 penicillin was used to the tune of two million units for every person living in this country. These astronomical figures have been showing a yearly climb in spite of the dissemination of knowledge of resistant strains of bacteria, organismal dependence upon the drugs, stimulating effects upon the organism, encouragement of new forms of bacteria and what concerns us greatly is that we have created a generation of diagnostic vipers in the form of robots with needles instead of the corporate members of that dependable team, viz., patient listener, careful observer and common sense.

Importance of Diagnostic Approaches

Inasmuch as it is estimated that only 10 per cent of the dosage of antibiotics is necessary (90 per cent being wasted) we need to ask if the antibiotic is really necessary; if it is the proper one in the first place; what the dose should be; how long should it be given; is the host sensitive (20 per cent will react again); is administration going to alter in any way the ultimate immune status, and what is most important, have you provided the patient with an accurate clinical and etiologic diagnosis? The responsibility for the accurate diagnosis of otolaryngologic states has not been altered or diminished by the advent of the newer drugs and no one would class shotgun therapy as intelligent therapy. The head and neck areas are host to a group of interesting symptoms which may be characteristic of numerous entities challenging the best in our skills and diagnostic acumen. We realize only too well that there may be many forms of treatment but there is only one correct diagnosis. Intelligently utilized procedures furnish information to the physician and educa-

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tion to the patient. For the former, who is desirous of properly evaluating, integrating and co-ordinating, a set routine minimizes the omission of important data and findings.

Otolaryngologic states have an imposing array of symptoms and symptom-complexes in common, including headache, dizziness, nasal blockage, dysphagia, otalgia, hoarseness, swellings about the orbit face or neck, sore throat, cough, laryngeal obstruction, epistaxis, tinnitus, and disturbances in hearing. None of these symptoms is in itself diagnostic and all of them call for alertness and, not infrequently, prompt action if an early, accurate diagnosis is to aid recovery, preserve the function of a special sense organ, or save a life. Detailed description is not possible but the diagnostic significance of numerous clinical entities, their course and medical or surgical management may be vividly demonstrated by color photography. Such pictures are an invaluable part of the patient's permanent record, not to mention their teaching value.

It is not always certain that physicians need not be repeatedly reminded of the basic concept that a carefully obtained history is necessary to a correct diagnosis. This would reduce the toll of iatrogenic excursions. The thought that "prejudice is a great time saver; it enables one to form opinions without getting the facts," supplies the mounting evidence to the production line of improper assumptions in the guise of diagnosis and is the creative force in adding to the numbers of patients who are victims of unreasoning fears due to misinformation and misinterpretation.

More and more attention is being directed toward the emotional preparation of children to visit the physician's office or to enter a hospital for surgery. Inasmuch as today's children are the adult patients of tomorrow, a greater effort must be made to win them over rather than conclude they are "bratty" or unco-operative. Ten pediatric rules favor proper management:

1. Rapid initial assessment of child's morale, disposition and probable reactions.

2. Initial period of small talk within scope of child's experiences and environment.

3. Addressing child by his or her first name or some appropriate pseudonym from the comic strips.

4. Absence of a display of frightening instrumentarium.

5. Desirability of explaining each step of the examination before carrying it out.

6. Cardinal rule of never hurting the child.

7. Avoiding personal attitude of impatience, anger or irritation, no matter how unruly the child.

8. Realization that the child comes for medical attention, not punishment or discipline.

9. With an unco-operative child, carry out only those procedures which are possible and absolutely essential and arrange for the patient to return after a friendly parting.

10. The parents are patients too—give them the feeling that there is no such thing as a silly question; teach them so that they may aid their child.

Authors of modern textbooks hesitatingly submit manuscripts because the management of numerous diseases is affected by the continuous and rapid pharmaceutical advances in the fields of synthetic and biologic chemotherapeutic agents. The formula for a new product is already in the making when another preparation is beginning to arouse a frenzy of acclaim that the millenium has been reached in the treatment of a given condition. Regardless of the trends, accurate diagnosis and common sense clinical appraisal are the order of the day. As was previously emphasized, the diagnosis of the specific organism is desirable before treatment is instituted. At least in bacteremia before it is complicated by bone disease, a working diagnosis should be made and adequate treatment started while organisms are being isolated and their sensitivity determined.

While the organisms are being sought it seems rational, although at best empirical, to give penicillin or aureomycin. In other instances, the so-called broad spectrum antibiotics (terramycin and chloramphenicol) may be administered while awaiting the results of culture and sensitivity tests. Some years ago I heard Sir Alexander Fleming express concern over the increasing resistance of the staphylococcus to penicillin. Present-day clinicians have changed their concern to alarm in the anticipation of what increasing bacterial resistance to antibiotics signifies for the future. Other ugly thoughts have entered the picture, such as, dependence of the organism upon the drug and stimulation of the organism. As one authority once remarked, "The bacteria are not going to take this lying down."

Complications of Sinus Disease

The etiologic factors, routes of extension, protean manifestations, pathologic differentiation, and clinical pictures of osseous complications of rhinogenous origin, are of interest to the practitioner,

the ophthalmologist, the neurosurgeon, dental surgeon, as well as the rhinologist. The anatomic configurations, osseous and venous factors make possible some rather interesting but bizarre combinations of clinical pictures of puffiness and swellings over the cheek, about the eyes or on the scalp. The proper management of the common cold looms importantly in permitting nasal ventilation and drainage. The influence of acute sinus suppuration, trauma (both accidental and operative), swimming and dental infections play a major role.

It might be more readily understood that three-fifths of the orbital complications arose from the nasal accessory sinuses if there were an awareness that two-thirds of the orbit is bounded by sinuses. Prevention of rhinogenous complications follow the "Rules of the Road," such as: (1) in acute sinusitis the management is directed toward ventilation and drainage, without undue trauma of intranasal manipulation; (2) all sinuses must be dealt with in the management as an overlooked focus can be serious; (3) in the surgical removal of mucosa lining the sinus, the bone should not be curetted; (4) free drainage or communication of the sinus with the nose must be established and maintained; (5) the possibility of an acute exacerbation of a chronic infection or the presence of a latent sinus disease must be borne in mind; (6) anatomic relations to vital structures such as the brain must be known as well as respected; the antibiotics are no substitutes for good surgery; (7) diagnostic or therapeutic puncture of the maxillary sinus is not without danger.

Osteomyelitic manifestations of rhinogenic origin must be known to the clinician, both as to their fundamental pathological change and their expected clinical course. Gradations of osseous alterations are capable of producing different forms of clinical disease, for which the management may hold forth a variable therapeutic range. While chemotherapy and antibiotics have increased the therapeutic index of safety, they have not eliminated the need for concern or surgical interference for drainage of a suppurative focus or the removal of involved bone.

Basically, acute hematogenous bone involvement has not changed pathologically, nor has it become clinically extinct. Antibiotic therapy produces a decrease in fever and relief of pain but it does not always obviate the need for surgery. Peculiar to the bones of the skull are their proximity to vital structures, such as the brain, and the presence of the arbor of communicating veins that make possible the localized infection of the morning, a diffuse spread by nightfall. Moreover, the chronic type of bone disease frequently begins where the acute leaves off. Both, however, produce osteolysis and osteogenesis, but in a different degree. Even in the chronic state the new bone, which may partially or completely obliterate a sinus, must be better understood by the clinician if impending disaster is to be avoided. Enzyme products used as debridement agents (tryptar, streptokinase, streptodornase, veridase, et cetera) exert a favorable influence on surfaces of sloughing and granulating wounds involving bone.

Middle Ear Suppuration

Where we, as is so frequently the case, deal with pus within the confines of a middle ear or sinus cavity or with pus within the known tissue spaces of the head and neck, here again it behooves the clinician not to deviate from the well-known surgical principles of drainage of a suppurative focus. There were those physicians who violated such principles long before the antibiotic era and "got away with it." In inflammatory bony alteration about the skull (not to be compared to long bone involvement of the extremities), when it has reached the stage of abscess formation, basic surgical approaches still prevail.

Less well understood are the limitations of antibiotic therapy in suppurative ear disease, the implication being that as such it should not and does not exist any more. Such erroneous information has led to situations impugning the motives of the otologist who suggests surgery of the ear. Little is appreciated among practitioners at large, of the potentialities of the organization into scar tissue and adhesions of middle ear fluid, of middle ear suppuration, or of the menacing specter of cholesteatoma. The antibiotic crutch of dependence has produced a new generation of physicians—their service to their patients being open to question when viewed in the light of the resultant hearing loss and life-endangering complications. No mention of antibiotics is complete without the inclusion of the omnipresent experience of seeing patients manifest untoward skin and mucous membrane responses, the destruction of the "capitalistic class" of bacteria while encouraging the nasty

"proletariat order" of the yeast-like organisms such as the monilia. In addition, we find ourselves busily engaged in appraising the disagreeable eighth nerve responses to streptomycin and dihydrostreptomycin. As has been previously stated, other newer manifestations can be anticipated in the future when indiscriminate usage is as prevalent.

Tumors of the Head and Neck

The areas of the head and neck, the air and food passages, are very common sites of both benign and malignant types of tumors. Cancer kills 200,000, or 13.5 per cent of all deaths in the U.S. are thus accounted for. Of these, over 6 per cent are of the head and neck regions. The various tumors involving the ear, nose and throat, including the salivary glands, the sinuses, the nasopharynx, the larynx, the trachea and bronchi and the esophagus are accessible to viewing by those qualified to do so, requiring special instrumentarium and technique. The ability to view the nasopharynx by means of the posterior rhinoscopic mirror may serve to solve the mystery of a lump in the neck, or being able to visualize the vocal cords will remove the guesswork from hoarseness. The final determinant of the type of tumor, and whether it is benign or malignant, is made on the basis of a carefully removed piece of tissue, removed by direct vision and studied under the microscope. Nasal blockage, bleeding from the nose or pharynx, swellings, hoarseness or an alteration in the voice, dysphagia and difficulty in breathing, are a few of the symptoms which may be indicative of commonplace or benign tumors and on the other hand may signalize malignant disease of the various anatomic areas so affected. It must be borne in mind that some of the benign tumors, by virtue of their site and size, to say nothing of their bleeding tendency, present formidable surgical problems.

Restrictions to successful cancer management comprise the lack of early diagnosis occasioned by the fact that some patients just fail to heed warning signs that would have them seek early medical aid and the fact that some physicians may fail to recognize the beginning of malignant disease. Additionally, successful cancer management may suffer from the failure of doing the most adequate procedure at the very start of treatment (primary inadequacy). Cancer is just one of those diseases that brooks neither procrastination nor incompetence, nor does it call for timid decisions to spare some part of the physiognomy just to serve feelings of vanity or false implications that a sparing approach to a tumor is being conservative. Cancer is a relentless foe, not to be defeated by injudicious application of various methods of treatment, the fear of cosmetic deformity or timidity in sacrificing an organ or part of the body, or believing radiation to be a more conservative form of effective treatment.

The advances made in the past decade in preoperative and postoperative care, in the use of blood and blood substitutes, improved techniques of anesthesia and of extensive surgical procedures, the better knowledge of fluid and electrolyte balance, the proper employment of antibiotics and chemotherapy, the methods of reconstructive surgery and the replacement of lost parts by artificial moulds or prostheses, all make for increasingly improved and successful care of the cancers about the head and neck areas. Irradiation and surgery are to complement each other and are not to be used competitively. Each anatomic area may be blueprinted for an attack based upon the experience of those who have devoted much study and effort to combatting an adversary who often slowly stalks its victim and suddenly viciously strikes a low blow.

In cancer of the external ear canal and middle ear, any attempt to preserve the auricle leads to failure. The surgery must ignore cosmesis and function. Results in nasopharyngeal cancer are poor because of the cellular type of malignancy and delayed diagnosis. External and intracavitary irradiation is the treatment of choice. Involvement of the nasal and nasal accessory sinuses calls for wide excisional resection of the parts; the willingness to sacrifice the maxilla and hard palate and the orbit and its contents if need be. Carcinoma of the lip is most favorable for controllability by wide surgical excision by a V excision or a sliding flap. Tongue involvement lends itself to surgery. The indications for resection of part of the mandible in mouth cancer depend upon the close proximity or actual involvement of the mandible by the primary tumor; fixation to the mandible by a metastatic node or nodes and the need for wide exposure of large lesions, particularly those extending into the posterior third of the mouth. This will permit local excision of the primary cancer and closure of the oral defect. The hypopharynx and larynx call for surgery. The

only contraindications to surgery in all head and neck cancer are the condition of the patient, the extent of the disease being beyond the likelihood of control and the presence of extensive bilateral metastases, nodes adherent to the carotid artery, distant metastases or in uncontrollable primary lesion.

Implications of Hearing Loss

Since communication is an essential function of civilization, the partial or complete loss of hearing becomes the concern of everyone. The nature and causes of hearing loss, its effect upon the life of the individual, and the modern methods of helping him to live in a normal, hearing world, are of interest to the physician, the educator, the public health official, the military industry and the community. While it is true that hearing deficits lack the drama of other disabilities that tug at the heartstrings of public imagination, an informed public being a prepared public, will have an awareness of the social, economic, educational, vocational, psychologic and medicolegal implications of hearing loss. Medical and nonmedical workers have joined forces in the positive effort of the prevention of hearing loss, the conservation of this important special sense and lastly, in formulating a program of rehabilitation of those so handicapped.

The care of the handicapped is said to represent the index level of our civilization. It is the concern of the physician to recognize the total person in relation to:

1. The interpersonal relationships of family and the community.
2. Adequate physical or medical care.
3. The patient's need to be wanted or accepted.
4. The convergence of medical, physiologic, social, educational and economic services.

An estimated two to three million persons in the United States suffer from a handicapping hearing loss in one or both ears. Some believe it to be anywhere from 2 to 3 per cent of the total population. Affected are the preschool child, the school child and the adult (including the older age group). Within recent years much more light has been thrown on the so-called congenital or intra-uterine factors in the causation of hearing loss. The once innocuous German measles looms now as a formidable foe because it can cause, among other conditions, deafness in the newborn (ruebolic embryopathy) if the disease is contracted by the expectant mother during the first four months. Then, too, we have come to regard the Rh (rhesus) factor of the mother's blood as a cause of such hearing loss as affects the newborn. The newer knowledge and special test procedures have permitted studies which have discovered that some of the children previously regarded solely as deaf are in reality either deaf-cerebral palsied, deaf-mentally retarded or aphasics due to brain damage incurred before or at the time of birth. To discover these children early is a necessity and within the province of the physician so that proper educational approaches may be employed. It is also necessary to ferret out of the schools those who have substandard hearing with mass surveys before they are placed in the frustrating atmosphere of a classroom with groups of normal hearing children.

In the city of Chicago, we have come up with some interesting statistics on the basis of over 150,000 children examined during the past five years. This has been carried out under our direction, aided by a team of trained personnel. A large percentage of these children (8 per cent) were found to have hearing deficits. The importance of finding these deficits was that many were remediable and in 69 per cent parents had no prior knowledge of hearing difficulties. Family doctors and specialists have been alerted and the pupils have been followed up relative to seating placement special education and definitive treatment.

The over-all importance of this type of survey lies in finding large numbers of children with remediable losses and some requiring other forms of medical care. Of importance also is what it means to the child in regaining normal hearing acuity. The city of Chicago finds that as a result of this survey one million dollars a year are saved through the salvaging of so-called educationally retarded cases. It is important that these children are discovered early so that they do not lose grades, because a grade lost is a grade cost to a community.

Adult hearing loss presents a problem in every community, posing personal, social and economic implications for the individual. Education of the public as to what may be accomplished for the hard of hearing person is of paramount importance. Some types of hearing loss are reversible

if discovered early and treated correctly by medical or surgical means. For some people, hearing loss may bring about a crisis in life in that a means of livelihood is in jeopardy, capacities, interests and aspirations are threatened, while in others a social crisis is precipitated. The ability to hear and understand speech is so universal that any impairment of this function is likely to undermine self-respect. The hard of hearing person may come to regard himself as peculiar and eccentric. He readily moves into an attitude of self-pity and anti-sociality. When well-meaning friends offer false hopes and will-of-the-wisp remedies it is obstacle, but when physicians do the same they prevent the patient from accepting his hearing loss as a reality. The person, rather than the disorder, becomes the main goal of rehabilitatory effort to restore his self-respect, make him self-sustaining, socially invincible and educationally adequate. The experiences of World War II have set the patterns for rehabilitation of the adult hard of hearing.

The economic implications of hearing loss for the individual are great but the cost to the nation is fantastic. The yearly outlay of Veterans Administration for 90,000 ear cases is $14,000,000, not including the replacement and upkeep of hearing aids. Industry faces a similar economic loss if pre-employment hearing tests and preventive measures against noise hazards are not followed.

Maintenance of the Airway

Newer trends have broadened the indications for tracheotomy, no longer is the procedure reserved for the heroics of a last-minute stand against impending death. Maintenance of the airway is of paramount importance in all forms of surgery (the lack of it may lead to cardiac arrest), in any condition of unconsciousness lasting over forty-eight hours (head injuries, barbiturate poisoning, et cetera), in serious injuries or burns of the body, in debilitative states where removal of secretions from the pharynx, larynx and bronchi makes for a more practical nursing problem (as in laryngotracheobronchitis and bulbar poliomyelitis) and in conditions of intrinsic or extrinsic origin resulting in laryngeal obstruction (edema, bilateral abductor paralysis, stenosis and the like.) The proper technique of tracheotomy is generally not well known or practiced. Too frequently is a tracheotomy site placed high, even into the cricothyroid membrane. In children and in females the smaller size of the larynx and trachea must be respected by the selection of a size tube in accordance with the age and sex of the patient. Midline incisions and a minimal dissection of the peritracheal region are preferred; the latter encourages emphysema especially if tight closure of the wound is made.

Nasal Bleeding

Hemorrhage from any site in the upper or lower respiratory tract may be very alarming. The initial phase calls for identification and control of the bleeding site and the second phase concerns the establishment of the causative factor, whether local or constitutional. While nose-picking figures prominently in trauma to the superficial veins anteriorly on the nasal septum, neoplasms, foreign bodies and pin-head size angiomas (multiple and familial) may also be the cause. Hypertension and arteriosclerosis not infrequently are present in the bleeding which occurs posteriorly, underneath the inferior turbinate. While the anterior site lends itself to control by local pressure, vasoconstrictors, packing, and chemical or electrocoagulation, the posterior bleeding must be supplemented by postnasal packing and occasionally, ligation of the external carotid artery. It is well to caution against indiscriminate cauterization and/or packing as it makes a messy intranasal cavity, further handicapping recognition of a bleeding site or its control. Good illumination and suction, proper local topical analgesia and a nonapprehensive patient aid in achieving the objective. If anterior and posterior packs are required, the gauze (preferable to cotton) should be saturated in petrolatum and sulfanilamide powder and gently introduced under direct inspection. Depending upon the severity and site of the bleeding, packs may be removed after forty-eight hours, however, having at hand fresh replacements for the packs so that they may be immediately reintroduced. Otitis media and sinusitis are occasionally encountered after prolonged packing. They must be viewed as serious complications in an already exhausted or debilitated patient and treated by drainage and antibacterial therapy.

Dizziness

Under the generic term "dizziness" come the goodly and confusing number of descriptive sensations described by patients as lightheadedness, unsteadiness, swooning, blacking-out, staggering,

seasickness, giddiness, faintness and the like. Almost any system in the body is capable of producing such feelings of a disturbance in balance. A careful history avoids the unfortunate approach of diagnosis by the elimination one by one of gastrointestinal, central nervous system, ocular, cardiovascular and finally, some thought is given to the labyrinthine end-organ system. The psychosomatic reference point to anxiety states, hysteria, neurasthenia, hypochondriasis and malingering are frequently favored as diagnostic tools. Employment of test procedures such as gastrointestinal series, dwelling on the nausea and vomiting, only adds to the patient's discomfiture and the trial-and-error therapeutic approach to the diagnosis of a disturbance of the labyrinth by prescribing the newer drugs such as dramamine and bonamine is not rational. The catch-all diagnosis of Ménière's disease must be supported by a history of sudden, severe, paroxysmal attacks of environmental vertigo, a true sense of movement in which objects seem to move around him, hearing loss and tinnitus, frequently accompanied by nausea, vomiting and vasomotor symptoms of pallor and cold perspiration. A valuable diagnostic sign is the presence of a characteristic spontaneous nystagmus different from that found in uveal tract or central nervous system involvement. Physical findings required include tuning-fork tests, audiometric evaluation, caloric, and/or rotational tests. The internal auditory meatus may occasionally be occupied by an acoustic neuroma and produce the triad of symptoms of vertigo, hearing loss and tinnitus. It is, therefore, advantageous to employ x-rays of this site to rule out such a possibility. The treatment of labyrinthine vertigo is purely symptomatic, including bed rest, control of the anxiety by the administration of barbiturates and instruction in the hygiene of motion such as the avoidance of sudden turning or bending. Antihistaminics have been of value in the treatment of the vasomotor symptomatology. Surgical ablation of the labyrinth is reserved for a very small group of carefully selected unilateral cases in which the hearing loss is severe and irreversible and the dizziness incapacitates the patient.

Head Pains and Aches

Head pain, which includes headache and neuralgia, is to be regarded as a medical orphan. The sufferer is on a merry-go-round, consulting medical and surgical specialists of varied interests. Caricatures and barbs in the lay press depict the stormy excursion of the patient seeking relief from a headache, ending up with so simple and logical a remedy as getting a proper collar size! Some clinicians would simplify the problem to a reducible minimum by regarding all pains relieved by a placebo or an aspirin tablet to be mere nothings or only evidence of tension states. One has only to experience the contrary to be made keenly aware of the fact that this need not be the case.

All tissues, particularly the arteries, covering the cranium are pain sensitive, whereas those of the cranium itself are relatively insensitive. Of the intracranial structures the venous sinuses and their tributaries, the dural arteries at the base, the dura of the tentorium, falx cerebri and at the base, are pain sensitive. The mechanism of pain is basically either by traction, distention or pressure of and on the pain sensitive areas. It is readily understood that vascular types of headaches are associated with vasodilator substances (alcohol, tobacco, nitrites, histamines, auto fumes, et cetera); occupational or situational tension states; emotional upsets; mental conditioning in which each episode is related to a chain of events; endocrine imbalance; hypertension; nonspecific factors embodying temperature changes and fatigue; or allergy may play a role. Inflammation leading to hyperemia, swelling or fluid may, by expansion or distention, bring about pain. The same may be said regarding the effect of tumor masses. The fifth, ninth and tenth cranial and the upper cervical nerves frequently are in the path of aural, sinal, nasal, pharyngeal, nasopharyngeal and laryngeal involvement. Their recognition may be difficult because the pain is atypical or referred to an area from another site. Otalgia is a typical example of this when it is realized that an earache may originate from such areas as the sinuses, the nasopharynx, the larynx, from the teeth, and even centrally. A discussion of head pains can always be enlivened by the recitation of the bizarre etiologic factors we discovered in the cases where our colleagues failed. They undoubtedly could be very embarrassing if they revealed our errors of omission and commission. It applies generally to many of our tasks but particularly to the realm of headaches and pains that we recall Oliver Wendell Holmes'

aphorism, "Keep your doubts to yourself and give the patient the benefit of your experience." *Skill* is the physician's stock in trade. The lack of it spells out *not: S*eeing; *K*nowing what to look for; *I*nterpreting correctly; *L*ooking at all; *L*istening, which is, of course, the most serious indictment.

Summary

Conservatively estimated, anywhere from 25 to 45 per cent of general practice is related to areas of the head and neck. Commonplace infections of the upper respiratory tract are frequently forerunners of many of the conditions observed which involve the eyes, ears, nose, nasal accessory sinuses, nasopharynx, pharynx, larynx and structures of the neck. The miracle era of antibacterial therapy may now be rationally assessed. Accurate diagnostic approaches and common-sense clinical appraisal based on the knowledge of basic anatomy, physiology and pathology are still the order of the day.

The symptom-rich head and neck areas, housing as they do, all of the special senses, offer a challenge to the practitioner, who is first to observe the patient with such presenting complaints as headache or pains, dizziness, nasal blockage, dysphagia, hoarseness, otalgia, sore throat, swellings about the orbit, face or neck, laryngeal obstruction, nose bleed, tinnitus, hearing loss and the like. Inasmuch as none of these symptoms are in themselves diagnostic, how effectively they or their emotional counterparts are analyzed, may mean the difference between good medicine or the physician's contribution to the patient's shopping excursion from one practitioner to another and the frequently disastrous creation of latrogenic disease. Inasmuch as disease is not a static condition, it is well to bear in mind that before organic or irreversible structural change occurs, it is usually preceded by physiological change which may be reversible. It is a recognized fact that tension and emotions can initiate physiologic change in various structures. It is difficult to tell just when such a nebulous barrier is crossed or to isolate or even separate either the psychic or somatic factors and treat them as independent functions.

The general practitioner is more than just a breathing, compartmentalized reference point. He is the trusted guide for each of his patients who seek his advice and a community leader as well. To this end otolaryngology offers its basic knowledge of the principles of practice, rational medical and surgical therapy, and the patterns of rehabilitation of sensory handicapped persons who present socio-economic problems to the community and to the nation if their needs are not adequately met. It is apparent that there are many forms of treatment employed, some purely empirical, but there is only one correct diagnosis. Intelligently utilized, diagnostic procedures furnish information to the physician and education to the patient. A set routine minimizes omission of important data and findings. The practitioner stands as a heroic figure if suitable preventive remediable and curative measures are to be effectively applied.

SOME UNUSUAL MANIFESTATIONS OF MITRAL STENOSIS

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as this would not be considered for operation today, angiocardiography would demonstrate the high degree of mitral insufficiency if the clinical signs were not sufficiently convincing.

Summary

Some of the unusual and exceptional problems of rheumatic heart disease with mitral stenosis are discussed briefly and illustrative cases are presented. These include mitral stenosis in the aged, thromboembolic complications, the absence of murmurs and misleading murmurs. There is a need for better selection of cases for mitral operation, and when this is accomplished the results will be better. Angiocardiography is of great value in demonstrating the nature of the cardiac lesion.

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Dilemma of the Relaxed Inguinal Ring

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THERE has been a courageous effort among our more altruistic surgeons and educators in recent years to analyze critically the necessity for many surgical operations and to influence the curtailment of those which fail to benefit the patient. The promiscuous removal of hypertrophic tonsils, of the so-called chronically inflamed appendix and of undiseased female pelvic organs have been nationally condemned by doctors such as A. C. Furstenberg, F. A. Coller and N. F. Miller,[4] to mention but a few.

We should like to call attention at this time to still another situation with somewhat unique ramifications in which we feel that surgical license is frequently overextended. We refer to the rather widespread practice of exploration of the inguinal canal in patients whose only evidence of hernia is a relaxed external inguinal ring, an operation which is all too frequently dictated by economic rather than medical necessity.

Statistical Data

Our rather limited statistical data is derived from the surgical service of the Ann Arbor Veterans Administration Hospital. Although this may represent a somewhat selected group of patients, they have afforded us an opportunity to study objectively a problem which has bothered us in military and private surgical practice as well.

Since the opening of this hospital for patient care in October, 1953, we have been confronted by a group of veteran patients who have requested repair of inguinal "hernias" detected during routine pre-employment physical examinations and which have constituted the basis for rejection from employment. These men have all been under forty-four years of age, and have been anxious to resume a productive place in civilian society after recent military experiences. We have become disturbed by the relatively high percentage of these patients in whom preoperatively we could find only minor abnormalities of the inguinal area without evidence of actual hernia and whom we would customarily reject as surgical candidates. Upon the insistence of the patients themselves and because of their economic predicament—they could not get jobs!—we have, in this small group, relaxed our usually strict insistence upon personal demonstration of an actual hernia and have operated upon them. We have kept them under surveillance however in an attempt to better evaluate the extent of the problem and the degree and manner in which operation has benefited them.

During the period October, 1953, to March, 1955, a total of 130 patients have been operated upon in the Ann Arbor Veterans Administration Hospital for suspected hernia, twenty-eight of whom were in the pre-employment group. Time does not permit a complete analysis of all these patients but, except for a small group of chronic neuropsychiatric patients and the pre-employment group with which we are directly concerned, they have presented no special problems. Operation has been accomplished only when we could definitely confirm the presence of hernia preoperatively in the 102 patients accepted for operation through regular channels. The findings at operation have been consistent with the preoperative evaluation in essentially all of these.

The diagnosis of hernia, initially made by an industrial medical examiner, was said to have been confirmed by another physician prior to admission in 75 per cent of the patients rejected from employment, though we ourselves could confirm the diagnosis in but 25 per cent. We attribute this discrepancy primarily to the reticence of one physician to refute the diagnosis of another in such situations as well as to a high degree of suggestibility in the presence of equivocal findings. The surgical procedures have been performed, without exception, by surgical residents under the close supervision of the senior staff.

The presence of a hernia of some type or degree was confirmed at operation in fifteen patients, or 53.6 per cent of this pre-employment group. Only six (21.4 per cent) were found to have unequivocal hernias of a direct or indirect type and in general were those patients in whom we could confirm the presence of hernia preoperatively. Nine patients, or 32.2 per cent, had small or equivocal hernias. There were abnormal accumulations of fat as well (so-called "lipomas" of the cord) in three of these. Such fatty deposits, particularly

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when associated with small hernias, are frequently mistaken for bowel or omentum within a hernia sac and are a justifiable cause for diagnostic error. The hernia sacs in most of these patients were little more than peritoneal diverticulae however and did not contain intra-abdominal structures. We have given this group the benefit of the doubt and have considered operation to have been justified in them though it is problematic whether true hernias would have developed subsequently if left alone.

The pre-employment diagnosis of hernia was not confirmed at operation in thirteen, (46.4 per cent) patients. The only defect noted in seven (25 per cent) was relaxation of the external inguinal ring while globular fatty deposits, unassociated with hernia and not descending through the ring, were found in addition to the relaxed ring in six (21.4 per cent). We have concluded that operation in this group was not justified.

We may generalize by saying that operation was of immediate or ultimate benefit in approximately one-half of the patients and of no obvious benefit in the other half of the patients in this group.

There were no deaths in the entire series and the only complication in the pre-employment group was a delayed superficial wound infection which rapidly regressed under conservative management. There have been no recurrences. The economic benefit to the patient is reflected in the fact that 75 per cent have been gainfully employed since operation. The majority of these (64 per cent) are employed by the industrial organization which had initially refused employment and are presumably performing jobs in which they have some degree of special skill.

Discussion

We present this small group of patients with some apologies but they do provide objective data of a type which is difficult to acquire and which is pertinent to a problem which has been disturbing to us. It is the rare surgeon who has not, with some reticence, been forced to operate upon patients in whom he doubted the presence of hernia and merely "snugged up" the external inguinal ring when a hernia was not found. Such operations are usually performed to pacify the medical examiner rather than, in the opinion of the surgeon, to provide any lasting benefit for the patient.

The problem was familiar to many surgeons in military life. Many conscientious young men, desirous of fulfilling their military obligations or of advancing themselves in an impersonal military environment after induction by attending specialized schools, were forced to submit to surgical correction of relatively minor abnormalities of the inguinal region. A tight external inguinal ring was seemingly an essential prerequisite for admission to many desirable assignments. Although disqualification was largely a matter of individual interpretation on the part of the examiner, the decision once made was difficult to reverse.

We have no quarrel with the insistence upon careful and strict examination of the inguinal canal and upon the immediate correction of hernias when discovered. It represents good surgical practice. Evaluation of defects of the inguinal area are frequently difficult however and even the most experienced surgeon or examiner is entitled to an occasional error. This is particularly true when abnormal fat deposits occupy the inguinal canal and are forced through the external ring during diagnostic maneuvers. The evaluation and disposition of men with abnormalities of the external inguinal ring constitutes a problem of much greater magnitude.

There is a prevalent opinion among most surgeons and many medical examiners that the configuration of the external inguinal ring has little bearing upon the subsequent development of inguinal hernias.[5] There is no evidence that relaxed rings detract from the support of the inguinal wall or that they are associated with other anatomical variants which predispose to weakness of the wall. Congenital peritoneal sacs and defects in the posterior inguinal wall (the transversus abdominis aponeurosis and the fused transversalis fascia) are the anatomical defects which are most rationally held to be at fault.[3] Clinical observation in general tends to support this concept, though factual data is sparse. Flack[1] has noted relaxed external inguinal rings in approximately 10 per cent of men between the ages of twenty and forty seeking employment in oil fields. He has had an opportunity to follow these men, who were not operated upon, and has not found the incidence of the subsequent development of hernia to be greater among them than among men with small rings.

In contrast to this there is a lingering belief in the minds of many medical examiners that the presence of relaxed external rings does increase the susceptibility of an individual to the development of hernia. This has become engrained in legal au-

thority as well.[2] Industrial compensation boards are inclined to rule that any hernia which develops on the job is compensable and will not honor a waiver of responsibility for their development. As long as acceptance of such men for work constitutes a potential financial liability, one cannot criticize an industrial organization too severely for refusing these individuals employment.

The medical examiner finds himself impaled squarely between the horns of a dilemma. On the one hand, he must consider his responsibility to the industry for which he is examining and, on the other, his responsibility to the individual whom he may force into an operation. All too frequently in equivocal situations he rules against the best interest of the individual because of uncertainties of the natural history of minor abnormalities of the external inguinal ring. We believe that rejection of such individuals from employment is based upon erroneous concepts.

Once rejection has been accomplished, the surgeon in turn faces the dilemma of deciding whether to operate to correct an anatomical variant which he feels to be of no importance, actually or potentially, or of refusing humanitarian aid to a deserving patient. Unless he can fortuitously influence a reversal of the erroneous diagnosis, because of economic pressure upon his patient he may be influenced to carry out an operation which he does not feel to be indicated. Should he refuse to operate, the patient must either seek out another surgeon with less rigid standards or accept less gainful or less desirable employment. Neither course is very satisfying.

In our opinion, many so-called "hernia repairs" are being done at present because of economic pressure rather than sound surgical judgment. This constitutes a medical and economic problem upon which greater attention should be focused. There is a great need for the accumulation of factual data regarding the natural history of patients with minor abnormalities of the inguinal canal. And there is an equally great need for engendering a feeling of greater responsibility by the medical examiner toward the individual, with wider use of consultation before rejection from employment because of inguinal abnormalities. Only by co-ordinated study and effort can such unnecessary operations upon the inguinal canal be curtailed.

Summary

1. A small group of twenty-eight patients, refused employment because of abnormalities of the inguinal canal, have been studied and operated upon.

2. The pre-employment diagnosis of inguinal hernia was confirmed at operation in 53.5 per cent of these. The diagnosis was not confirmed in 46.5 per cent.

3. Many operations presently being performed upon the inguinal wall are indicated by economic pressures rather than by sound surgical principles. Basic problems are involved which are deserving of greater attention and study.

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HYPOTHYROIDISM

(Continued from Page 1183)

3. Non-iodine salt should be used in hypothyroidism.

4. All cases were helped by taking thyroid extract.

5. Cases of depression and overeating were helped by taking desoxyphedrine.

6. A number of other conditions had to be treated at the same time to get patients feeling better.

7. Quite a few hypothyroid patients possessing an ambivalent attitude toward society can be reclaimed through medication, diet and psychotherapy as integrated individuals of greater usefulness.

Benign and Malignant Lesions of the Esophagus

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ONLY within the last few years have the lesions of the esophagus been made accessible to major surgical procedures. The very rapid advances in surgical technique in association with the almost unbelievable advances in anesthetics have brought many of the lesions of the esophagus within the province of the surgeon. Therefore, it behooves us not only to acquire a knowledge of the physiology of the esophagus and its roentgen manifestations but to be familiar with the various pathologic lesions which involve the esophagus.

As is well known, the symptoms of esophageal disease are principally manifested by difficulty in swallowing and are often associated with substernal discomfort. These symptoms occur in efforts to swallow solid food and at a later stage may accompany the swallowing of even liquids or saliva. It is a known fact that we all swallow saliva without any sensation of conscious realization of such an act. However, in esophageal obstruction the inability to swallow food becomes serious, and the inability to swallow saliva is even more serious because the quantity of saliva throughout the twenty-four hours must be expectorated or drooling will occur, particularly during sleep, as the saliva tends to accumulate in the throat and may pass into the tracheobronchial passages, producing cough. Coughing may be one of the "alarm" symptoms of an esophageal lesion. The symptoms which have just been described not only exist in benign but also in the malignant lesions of the esophagus, so the symptoms themselves are not definitely indicative of the type of lesion which may be subsequently found. It is of paramount importance that lesions of the esophagus be diagnosed and treatment instituted in the hope of restoring the nutrition of the body.

Among the more distressing benign lesions of the esophagus is *cardiospasm*, or *achalasia*. This is a disease of unknown etiology, producing a spasm or contriction in the distal end of the esophagus which prevents free passage of food into the stomach. The esophagus in time becomes increasingly dilated above the constriction, and as the dilatation continues, the esophagus may distend sufficiently to occupy a large part of the right chest, displacing to a more or less extent certain portions of the right lung. It is also observed that a dilated esophagus rarely extends to the left of the mediastinal area, though at the upper or cephalic tracheal area the esophagus may extend to the left if the dilatation becomes marked. The roentgen diagnosis of cardiospasm is not difficult if the patient receives a proper fluoroscopic and detailed film study of the esophagus. However, one must constantly keep in mind that the expression of cardiospasm may not be intrinsic in the esophagus but may be secondary to a gastric neoplasm involving the cardiac portion of the stomach.

It is well known that the patient may experience relief from the symptoms of cardiospasm from time to time, and if the patient is examined during the time he is more or less symptomless, a lesion of the cardiac end of the stomach producing the cardiospasm may be completely overlooked. It is of greatest importance that the patient have a complete x-ray examination of the esophagus during the time that he is experiencing his greatest difficulty in swallowing. With the proper technique in the roentgen examination a lesion of the cardiac end of the stomach producing the "cardiospasm" may be demonstrated. One of the most helpful methods in the examination of the esophagus in a suspected lesion of the cardiac end of the stomach is to distend the cardiac end of the stomach with bicarbonate of soda or with one of the carbonated beverages. Even a small lesion occupying the cardiac end of the stomach may be demonstrated by this procedure. The lesion may be comp'etely overlooked if barium only is administered. Once the lesion is demonstrated by the use of carbonated beverage or bicarbonate of soda, further studies may be instituted with the use of "thin barium solution." With proper positioning of the patient additional information may be obtained regarding the extent of the lesion in the cardiac end of the stomach.

Other lesions of a benign nature which may involve the esophagus are *ulcers*. Peptic ulcers of the esophagus are much more frequent than is generally appreciated. As is well known, they are frequently associated with ulcer of the stomach and duodenum, and it is presumed that this association of ulcers of the cardiac end of the esophagus probably results from regurgitation of gastric

juice into the esophagus. This regurgitation of gastric juice into the esophagus may be due to inadequate sphincter control at the esophageal hiatus or, as has been stated, insufficient function of the diaphragmatic muscles.

The diagnosis of ulcers of the esophagus is not always easy but with roentgenographic studies, including of course a careful fluoroscopic study, most ulcers of the esophagus may be demonstrated. In our experience, ulcers of the esophagus occur most frequently in the distal portion of the esophagus, and we have also observed ulcers of the esophagus associated with hernia of the stomach through the esophageal hiatus. As in the stomach itself, ulcers of the esophagus may vary as regards their size and depth, and may be difficult to demonstrate unless the most careful type of roentgen examination—utilizing the so-called "spot" film device—is instituted. Ulcers of the esophagus may produce a marked degree of cardiospasm in the area of the ulcer and cause difficulty in swallowing. If the ulcer be of sufficient size the mucosal pattern of the esophagus may be changed, and not infrequently the ulcer and its associated changes in the esophageal mucosa may give one the impression that it is a neoplastic process with ulceration. The roentgenologist should be on his guard in the interpretation of such lesions, as many of the ulcers of the esophagus are amenable to medical treatment; however, certain types of ulcer that do not respond to medical treatment must be surgically treated.

Esophageal *diverticula* are not uncommon. We are all familiar with pharyngeoesophageal diverticulum, so-called Zenker's diverticulum (Zenker was the first to describe this type of lesion). Zenker's diverticulum is fairly common, and it may be quite small and yet be productive of symptoms, such as some difficulty in initiating the swallowing act, or be the causative factor in a persistent "hacking" type of cough. Zenker's diverticulum occurs at the triangle of Lanier, which is one of the weakest spots in the pharyngoesophageal area. If the diverticulum is large it may be productive of more distressing symptoms. It is remarkable, however, how a patient soon accustoms himself to a large Zenker's diverticulum without the more distressing symptoms frequently seen in the small diverticulum in the region of the triangle of Lanier. (We observed one patient who said if he swallowed a dozen oysters before he started to eat his main meal he had no difficulty in swallowing. Of course, this was due to the fact that he completely filled the Zenker's diverticulum with the oysters, leaving no room for the remainder of the repast.) To detect a Zenker's diverticulum requires careful examination, as do all studies of the esophagus. Many reontgenologists are so interested in the esophagogastric portion of the esophagus that they fail to fluoroscope carefully the pharyngoesophageal area. So often a Zenker's diverticulum is unsuspected by the clinician, and the radiologist who is more interested in the cardioesophagus may completely overlook lesions in the pharyngoesophageal area.

Traction diverticula occur most frequently in the mid zone of the esophagus near the tracheal bifurcation—rarely in the distal third of the esophagus. These traction type of diverticula are rarely symptom producing unless they be of considerable size, and even then they may be symptomless so far as the patient is concerned until his attention is called to the presence of the diverticulum.

Strictures of the esophagus are being encountered much less frequently than formerly. We are all familiar with the strictures of the esophagus resulting from the ingestion of corrosive substances, and lye is the most frequent etiological agent. Contrary to what many of us think, these strictures may occur at any age but, of course, are much more frequent in children. Thanks to the educational program that has been carried out during the last several years corrosive strictures of the esophagus are much less frequent than they were formerly. Caustic substances, as would be expected, produce strictures throughout the esophagus. However, the most extensive damage is frequently noted at the points of normal constriction—namely, the pharyngoesophageal area, at the level of the transverse arch of the aorta, at the level of the bifurcation of the trachea, and less frequently the distal portions of the esophagus. An extensive fibrosis, as well as stenosis, rapidly develops from the deglutition of the caustic solutions and requires immediate adequate treatment, the discussion of which I will not enter into.

There are other types of strictures which are seen in the esophagus in increasing numbers, particularly among the older group of patients. Many of these patients give a history of drinking hot liquids, such as hot coffee and tea, over long periods of time. This type of stricture is most

often seen at or about the level of the tracheal bifurcation. This type of stricture must be differentiated from the *malignant* lesions of the esophagus, as *they* occur in that age group.

A short time ago Schatzki and Gary listed a group of cases exhibiting dysphagia which was due to diaphragm-like localized narrowing in the esophagus in its lower third, and they designated it "the lower esophageal ring." The patient's first complaint was an intermittent type of difficulty in swallowing, and the roentgenologic picture was characterized by a concentric smooth diaphragm-like narrowing in the lower esophagus, approximately 5 cm. above the diaphragm.

The ring was present constantly and did not change its position in any of the patients who were examined. It was easily visible when the esophagus above and below was filled enough to dilate to a caliber greater than the diameter of the ring. When the esophagus collapsed following the passage of barium into the fundus of the stomach, the remaining coating showed a change in the mucosal pattern starting at the level of the ring, even though the ring itself was no longer visible. This smooth, concentric ring was usually 2 to 4 mm. thick and always constricted the caliber of the esophageal lumen to the same diameter in a given patient.

Interesting enough, there was no delay in passage of the barium mixture even if the narrowing at the site of the esophageal ring was marked. Solid food, however, occasioned some difficulty in swallowing in some patients.

The dysphagia which the patients exhibited varied from one to nine years, and during this time had become progressively more severe. Curiously enough, in spite of the symptoms of which the patient complained, only one patient in their series had loss of weight, but all usually experienced difficulty in swallowing solid food.

In their group of cases the roentgenological picture was so characteristic that most of the usual causes of dysphagia could be excluded. The smoothness and thinness of the ring eliminated cancer. A web, such as seen in Plummer-Vinson's syndrome, did not enter into the differential diagnosis in their group of cases because of the thickness of the lesion, its location, the absence of anemia, and the sex of the patient. Again there was no evident similarity to cardiospasm. The diaphragm-like short segment of narrowing in their observation was completely different from the awl-shaped stenosis in cardiospasm. In contrast to cardiospasm, the esophagus above the narrowing appeared normal, and finally, there was no delay in emptying of the esophagus, as is seen in cardiospasm. However, fibrosis in the lower esophagus, as produced by a healed ulcer or by so-called reflux esophagitis, simulates the ring more than any other lesion in the distal third of the esophagus, and it required careful differentiation from these two conditions to determine whether the constriction was the result of healing of an ulcer or was due to the "lower esophageal ring."

In cases which were operated upon it was found that the constricting ring coincided with the herniated esophagogastric juncture. They also observed that a similar ringlike structure was frequently seen in patients who exhibited no dysphagia. The exact nature of the ring, as determined by their cases, was not known.

It is of importance that we be aware of the existence of such a so-called lower esophageal ring in order to differentiate it from other lesions in that region of the esophagus, principally constriction of the esophagus incident to a healed esophageal ulcer.

Benign tumors of the esophagus have been thought to be rare, but they are being seen in increased numbers due to the fact that in most hospitals and clinics a study of the patient's chest is not considered complete unless the esophagus is examined; and with the greatly increased interest in cardiac and aortic lesions of all types, the employment of the barium swallow during the fluoroscopic and film studies of the chest is of paramount importance. Therefore, tumors of the esophagus which are classified under the general term, benign tumors, are seen with increased frequency. These benign tumors of the esophagus may or may not produce obstructive symptoms. Very frequently they are symptomless and are accidentally discovered. They may produce symptoms not immediately referable to the esophagus itself, but may produce symptoms referable to the left shoulder or, in one of our cases, the diaphragm, the patient being sent with a clinical diagnosis of pleurisy involving the left hemothorax. The patient had no esophageal symptoms, and a benign extraluminal neurofibroma was later removed from the proximal third of the esophagus. Upon removal of this, the patient's pleuritic pains completely disappeared.

The various benign tumors that may involve the esophagus are leiomyoma, which represents the

most common of the benign lesions seen in the esophagus; cysts are not too common but they are seen with increasing frequency. According to Boyd and Hill, these esophageal cysts "occurring in the thorax and lined with gastrointestinal or respiratory epithelium, have been described under many terms, including: intrathoracic cysts of foregut origin, paraesophageal cysts, diverticula of the esophagus, duplications of the alimentary tract, conglomerate gastroenteric cysts, gastrogenic cysts, accessory esophagus or accessory stomach, enterocystomas and esophagenic cysts." In our own experience esophageal cysts are extremely uncommon.

One of the more common benign lesions of the esophagus in our experience is fibroma. This type of benign tumor may be completely symptomless and be an accidental discovery.

Polyps of the esophagus are seen with increasing frequency and in one patient in our series of cases the polyp occurred in the mid-zone of the esophagus just distal to the tracheal bifurcation, and the polyp produced some obstruction to the lumen of the esophagus—sufficient at times to cause symptoms of asthma. The patient was treated for a number of months because of asthmatic attacks, without the underlying cause of the so-called asthma being detected until the patient entered the hospital in acute respiratory disturbance one evening following dinner. At the time of fluoroscopy of the chest there was noted a fluid level which proved to be fluid in the esophagus. There was sufficient pressure on the trachea by the fluid to cause the asthmatic attack. There was rather marked dilatation of the esophagus proximal to the polypoid lesion. The polyp was later removed and the patient's asthmatic attacks completely disappeared.

A rarer type of lesion of a benign nature is hemangioma of the esophagus. We have not observed such an esophageal lesion.

With careful study, the radiologist is able to differentiate the benign lesions from the malignant lesions of the esophagus with a considerable degree of accuracy.

Schatzki has shown both clinically and experimentally that mucosal, extramucosal and extrinsic lesions pressing on the esophagus have certain distinguishing characteristics. The mucosal lesions are usually irregular, polypoid, and tend to ulcerate, whereas the submucosal lesions are smooth and rarely ulcerate. In addition, extramucosal lesions are often demonstrable as large, soft tissue masses outside the lumen of the esophagus, in contrast to the mucosal tumors.

In malignant lesions of the esophagus the mucosal outline of the esophagus is usually irregular, whereas the extramucosal tumors produce a sharply defined outline forming a more or less abrupt angle with the outline of the uninvolved mucosal lining of the esophagus. It is well known, of course, that extrinsic tumors of the esophagus which become attached to it over a wide area of the esophageal circumference produce an outline similar to that of an extramucosal tumor. This is particularly true of large lymph node involvement adjacent to the esophagus associated with tuberculosis or neoplasm.

Benign esophageal tumors may be diagnosed with certainty with the barium swallow and careful fluoroscopy accompanied with film studies at the time of the barium swallow.

There is a somewhat rarer condition of the esophagus, the so-called Plummer-Vinson syndrome. The outstanding symptom is dysphagia. There is associated organic stenosis—namely, web formation. This lesion often goes completely unrecognized becaused of the difficulty of its recognition roentgenoscopically and roentgenographically; however, it can be demonstrated if careful studies of the esophagus are instituted. It is thought by some that Plummer-Vinson disease is a precancerous condition.

Carcinomas of the esophagus are seen with increasing frequency and this is explicable on the basis of a greater number of people reaching more advanced age. The nature of carcinoma of the esophagus, its rapid progress, and its tendency to metastasize pose a real problem for the internist, the radiologist and the surgeon. Too frequently only palliative measures, even of a surgical nature, are required due to the distressing symptoms of inability to swallow, and the prolongation of the patient's life may be only for a few months. Would it be possible to diagnose these cases at an early stage with the hope that an increased number of cures might be obtained? Too often the patient consults his physician when the disease is far advanced because such symptoms as substernal discomfort and minimal inability to swallow are ignored by the patient until the neoplastic process assumes an extensive nature. As might be expected, the most common symptoms of carcinoma of the esophagus are manifested in difficulty of swallow-

ing. All patients who have carcinoma of the esophagus eventually develop this symptom. The patient may only complain of dysphagia when it becomes persistent and progressive in nature. As has been observed, the symptoms may not be constant but may fluctuate with relapses and exacerbations. Not infrequently the patient may locate the level of the esophageal obstruction with considerable accuracy as has been observed when the lesion is definitely identified by proper examinations. Often the point at which the patient localized the lesion beneath the sternum may be at a higher level than the actual lesion. This is easily explained by the fact that distention of the esophagus usually occurs and the patient is apt to indicate the lesion at the level of the most distended part of the esophagus. Brown has pointed out in his discussion of carcinoma of the esophagus that the patient rarely points to a lower level than the site of the esophageal carcinoma. It was usually above the level of the carcinoma of the esophagus, as actually determined in proper examination. Quite naturally one of the symptoms accompanying carcinoma of the esophagus is loss of weight. This may be rapid or slow, depending upon the extent of occlusion of the lumen of the esophagus by the malignant growth.

Too frequently the symptoms of which a patient complains may be dismissed as of no consequence until the lesion of the esophagus reaches a very advanced stage. The diagnosis of carcinoma of the esophagus may be made with considerable accuracy by proper roentgen studies, though the employment of esophagoscopy is in many instances a necessary procedure to arrive at a correct diagnosis.

The characteristic malignant lesions of the esophagus which present definitely pathologic signs in the roentgen studies are the irregularity of the esophageal lumen at the site of the carcinoma and the reduction in caliber of the lumen of the esophagus. A fairly accurate diagnosis may be arrived at with proper studies.

One should always keep in mind the possibility of a malignant lesion involving the cardiac end of the stomach as a causative factor in dysphagia. This cannot be too strongly emphasized, as lesions about the esophageal orifice in the cardiac end of the stomach may produce symptoms of difficulty in swallowing and the tumor itself may be quite small in size. If the examination of the esophagus is entirely negative, carcinoma at the cardiac end of the stomach must be kept in mind.

Carcinoma of the esophagus may involve any portion of the esophagus, but occurs most frequently in the distal portion of the esophagus; the next area, in our experience, is in the mid-portion of the esophagus, in or near the tracheal bifurcation; and the third site for carcinoma of the esophagus is in the region of the pharyngoesophageal area. Lesions occurring in this area spread quite rapidly to adjacent lymph nodes of the neck and upper mediastinum. Minimal lesions in the mid-portion of the esophagus extend to the paratracheal lymph nodes and paraesophageal lymph nodes. Carcinomas involving the distal third of the esophagus spread to the paraesophageal lymph nodes, as well as to the lymph nodes in the celiac axis.

The complicating factors in carcinoma of the esophagus are those involving the lungs themselves, where there is actual extension of the tumor into the bronchus; or else the obstructive lesion in the esophagus causing aspiration of the esophageal contents into the trachea, bringing about a chronic type of penumonic process due to the presence of foreign particles in the bronchi and alveoli from the inhalation of the esophageal contents into the trachea.

If we are to bring about an increase in the percentage of cures of carcinoma of the esophagus from the present low level, patients presenting dysphagia of any type must have careful fluoroscopic and film studies of the esophagus at an earlier period than is being done at the present time in the radiological departments of the hospitals and clinics. Too, more careful roentgen studies must be generally instituted than are being done at the present time. The esophagus lends itself to careful studies in the identification of abnormalities of this structure. The lesion may not always be definitely diagnosed by roentgen studies, but its presence and the accuracy of its location are possible if examinations are carefully done.

There are, as recently reported by Franklin, certain simple conditions of the esophagus which simulate cancer. He presents four cases in which the symptoms and radiological signs led to an erroneous diagnosis of carcinoma of the esophagus. In his cases they all gave a history of progressive dysphagia for fairly long periods of time, and some of his cases exhibited a scoliokyphosis. He found at operation in all of these four cases that the lower end of the thoracic esophagus was grossly

thickened, and upon opening the lumen of the esophagus it was found to be quite narrowed but there was no evidence of carcinoma. Upon removal of the portion of the involved esophagus and subsequent histological examination of the specimen, it was shown that the lumen would just admit a 2 mm. probe and that the esophageal wall at the point of stenosis was about 14 mm. thick, the greatest increase in thickness being in the submucosa. The esophagus at the site of stricture had lost its epithelium, being lined by nonspecific granulation tissue made of young capillaries, fibroblasts, polymorths, macrophages and lymphocytes. Outside this layer and replacing the submucosa was a layer of collagen, 5 mm. thick, infiltrated with plasma cells, polymorphs and eosinophils. The whole picture presented that of a chronic nonspecific esophagitis with stricture formation. We have observed similar types of cases, and the differentiation from carcinoma of the esophagus roentgenoscopically and roentgenographically is not always easy. But, as a rule this type of lesion of the esophagus exhibits less irregularity of the mucosal lining than does carcinoma, and this may be a helpful point in differentiation. However, the lesion demands surgical intervention and its recognition roentgenoscopically and roentgenographically should be made, and the extent of the lesion made available to the surgeon.

We have discussed certain lesions of the esophagus which may be recognized if the proper radiologic studies are instituted. It is the function of the clinician to have these patients examined at an earlier period in their illness or discomfort if further progress may be made in the alleviation of the distressing symptoms, particularly those associated with carcinoma of the esophagus and the strictures of the esophagus simulating carcinoma.

In the discussion of the esophageal lesions we have, due to space limitations, completely disregarded that very important subject of *arterial malformations* which cause compression of the trachea or esophagus. This subject is of such importance and is so timely we cannot forego this opportunity of mentioning it. If one is not familiar with the recent discussion of these lesions by Gross, he should at once avail himself of the opportunity of reading this most important contribution.

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ALKALINE TREATMENT OF ACUTE ALLERGIC SHOCK

(Continued from Page 1199)

physician produced in his patient. He will be able to treat such disasters with the confidence that our experience has given us.

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Small Intestinal Rupture from Non-penetrating Abdominal Trauma

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RUPTURE of the intestine from trauma which does not penetrate the abdominal wall has been due to industrial accidents in the majority of the cases seen at the Henry Ford Hospital during the last twenty-five years. These accidents lie in three categories: crushing accidents in which the patient was pinned between a moving vehicle or machine and a stationary mass; blows from objects falling from a height or propelled with force from a power source; and falls, in which the patient struck his abdomen on a hard object. Sixty per cent of the injuries in this series resulted from such accidents. The remaining resulted from traffic accidents with one exception. The preponderant ratio of industrial accidents is no doubt related to the concentration of industry in this locality. Other surveys, such as that of Bosworth in the New York City area, have yielded a higher ratio of traffic injuries.[1] The mildest injury producing intestinal rupture in our patients was a simple fall to the sidewalk. A sixty-three-year-old man in good health fell while walking toward his home and ruptured his distal ileum.

Incidence

Rupture of the intestine from non-penetrating trauma to the abdomen is not a common lesion. During the past twenty-five years nineteen cases have been seen in the Henry Ford Hospital. In the six metropolitan hospitals in the New York area surveyed by Bosworth the lesion was encountered once in every 10,000 to 20,000 admissions during a ten-year period.[1] Bowel rupture secondary to the introduction of liquid or gas under pressure into the intestinal lumen is not included in this study.

Prognosis

In addition to their comparative infrequency these cases have been noted for their poor prognosis. After collecting all of the reported cases between 1935 and 1942 with a total mortality of 61 per cent, Poer and Woliver commented, "The treatment up to now has been significantly unsuccessful."[2] This part of the picture shows evidence of changing. In the first five years covered in this report (1928-1933) four cases were treated with a mortality of 75 per cent. During the last five years (1948-1953) five cases were treated, none of whom succumbed.

Age and Sex

The patients in this series were all males between twenty-one and seventy-seven years of age. The majority were in the third to fifth decades of life.

Symptoms and Signs

The usual lapse of time from injury until the patient was seen in the emergency room was about two hours. Upon first being seen, signs of peritoneal irritation were present in the form of abdominal tenderness and rigidity, either localized or generalized, in all patients. An elevated leukocyte count was always obtained, although the initial count was not always abnormal. Shoulder pain was present in three cases, none of whom had fractures of the spleen. Of the ten patients who had x-rays of the abdomen, free air was visualized in three. Three patients had absent bowel sounds. One patient had a systolic blood pressure below 100 mm. of Hg.

Only one patient had associated traumatic lesions of significance. In most instances the patients had no pre-existing abdominal disease. One patient with a rupture of the terminal ileum fell on the truss he wore for an inguinal hernia. The single patient with a duodenal perforation had a history of peptic ulcer.

Site of Lesion

It is a commonly taught principle that rupture of the intestine through the intact abdominal wall involves segments of gut which are fixed in position by a short mesentery. If this teaching were accurate, one would expect the duodenum to be the most common site of small bowel rupture. However, in our series, as well as in others,[1,2] perforations of the jejunum and ileum are far more common. No cases of rupture of the stomach or colon from this type of injury were

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TABLE I. SITE OF INTESTINAL PERFORATION FROM NON-PENETRATING ABDOMINAL TRAUMA

Site	*Cases*	*Deaths*
Duodenum	1	0
Jejunum		
Proximal	4	
Distal	3	
?	2	
	9	4
Ileum		
Proximal	6	
Distal	2	
?	1	
	9	2

found in our files. The duodenum was involved in but one instance. The jejunum was the site of the lesion in nine cases. In four of these the perforation was within 60 cm. of the ligament of Treitz; in three it was more than 60 cm. from the ligament of Treitz; in two the exact site was not specified. Perforations of the ileum accounted for nine cases, six of which were within 60 cm. of the ileocecal junction. Two were more than 60 cm. from the ileocecal junction, and the remaining site was not specified exactly. The antimesenteric border was most often the involved side.

Mechanism of the Rupture

Poer and Woliver, discussing the mechanism of intestinal rupture from non-penetrating trauma, state, "Most frequently such perforations result from a crushing injury in which the external force compresses the bowel against the spine or pelvic bones. Occasionally tearing injuries may result from a violent force being applied at a tangent to the body. Bursting injuries of the normal bowel are rare, except those which result from the introduction of air into the anal canal."[2] It is our belief, however, that the majority of ruptures of the bowel from nonpenetrating trauma represent bursting injuries.

When a sudden force is applied to the abdominal wall, the increase in the intra-abdominal and intra-peritoneal pressure is transmitted to the hollow viscera. The length and tortuosity of the intestinal tube is such that the sudden increase in pressure in the mid portion of the gut may not be dissipated by release through its open ends. The pressure reaches a maximum at a point near a turn or kink in the bowel which provides a trap for the fluid and gas. It is at this point where a rupture occurs.

In order to determine if the sudden application of a force to the intact abdominal wall can induce a critical rise in the pressure within the lumen of the bowel, the following experiment was done on anesthetized dogs. Hydrostatic bags containing saline were placed in various portions of the bowel and peritoneal cavity and connected to a manometric system. The pressures in these sites were then measured as graded forces were applied to the anterior abdominal wall of the supine animal. Eight food-pounds of force produced an increase in the pressure in the distal ileum of 300 mm. of Hg. With identical force the pressure in the peritoneal cavity showed a similar response with more marked reciprocal changes coincident with the rebound of the abdominal wall.

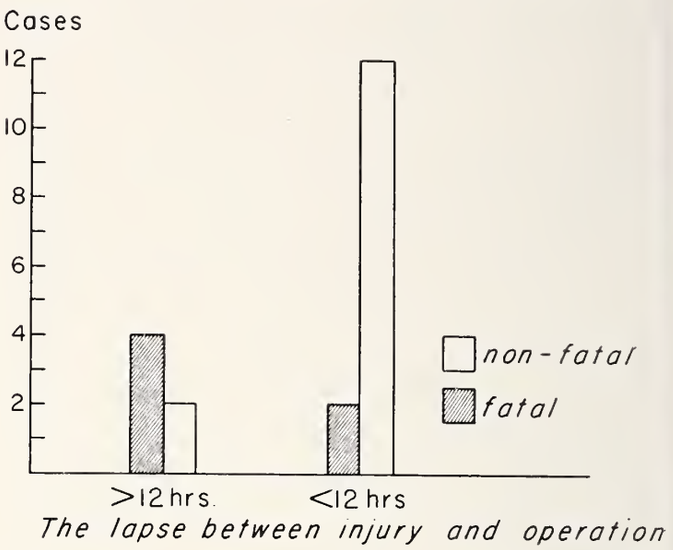


Fig. 1. Graph depicting the relationship between the time of operative intervention and prognosis in cases of intestinal rupture from non-penetrating abdominal trauma.

According to Wangensteen,[3] the bursting strengtn of canine small bowel is between 300 and 1000 mm. of Hg, and that of human small bowel between 140 and 260 mm. of Hg. The experimental findings indicate, then, that when an external force is applied to the abdomen, the pressure in the intestine may approach the bursting strength of the normal intestinal wall. This provides a more satisfactory explanation for the rupture of the intestine than that of direct mechanical crushing.

Treatment

The interval which occurs between rupture of the bowel and the institution of operative treatment is the most important single factor in the patient's recovery. In cases in which this interval exceeded twelve hours the mortality rate was 66 per cent. When the interval was less than twelve hours the mortality rate was 14 per cent (Fig. 1).

The two patients who survived a delay of more than twelve hours were treated with long tube suction, and penicillin and streptomycin initially. Although their survival indicates the value of this treatment, their prolonged convalescence and increased postoperative complications emphasize the importance of early operation. Intestinal decompression and antibiotics should be employed together with indicated blood and fluid replacement in the preparation of the patient for operation.

Spinal anesthesia was the most successful anesthesia used in this series. Six cases were done under general anesthesia with five deaths. Only one of the thirteen cases in which spinal anesthesia was employed terminated fatally. Both of the patients who died even though operated upon within twelve hours of injury received general anesthesia. The two patients who survived a delay of greater than twelve hours received spinal anesthesia.

In all but three cases closure of the perforation with one or more layers of silk or catgut was the operative procedure employed. Two cases necessitated resection of a segment of bowel with end-to-end anastomosis because of multiple perforations or damage to the mesentery. A cecostomy was performed in one instance in which the site of perforation could not be exactly identified. The patient in the latter instance did not recover.

Summary

1. In this review of nineteen cases of perforation of the intestine from non-penetrating trauma jejunal and ileal perforations comprise the bulk of the lesions with the jejunal perforations having twice the mortality of the ileal perforations. No instances of gastric or colon perforations were encountered.

2. Most of the cases resulted from industrial accidents.

3. Prompt surgical therapy with closure of the opening in the bowel remains the single most important factor in restoring the patient to health. Exploration on suspicion is warranted to avoid death or prolonged morbidity.

4. In addition to blood and fluid replacement, long tube suction and antibiotics are important adjuvants in the preoperative and postoperative treatment. These innovations have improved the prognosis for patients with this type of injury.

5. The mechanism of rupture of the intestine with an intact abdominal wall is thought to be bursting of the intestine due to increased intraluminal pressure rather than direct crushing of the bowel.

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LOOKING BACK FIFTY-FIVE YEARS

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6. Vaccination against typhoid and preventive inoculation against diphtheria, pertussis, typhoid fever, tetanus, smallpox, et cetera.
7. This discovery of the vitamins A, B, C, D, E, et cetera.
8. The development of viosterol.
9. The discovery of insulin by Banting.
10. Standardization of medical schools.
11. Idea of yearly physical examination.
12. Liver extract for pernicious anemia.
13. The sulfonamides.
14. Atabrine and the other synthetic antimalarial drugs.
15. Estrogenic hormone and testosterones.
16. Anti-histamines.
17. Vitamin B_{12} anti-anemic factor.
18. Mercurial diuretics.
19. Penicillin and other antibiotic drugs.
20. Atomic medicine.
21. Cortisone and ACTH.
22. Brain surgery.
23. Intra-cardiac surgery.
24. Pulmonary surgery.
25. Formation of the American Academy of General Practice.
26. Salk polio vaccine.

Obstetric Management of the Rh-sensitized Patient

By Tommy N. Evans, M.D., F.A.C.S.
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SINCE Landsteiner and Weiner provided the key to the pathogenesis of erythroblastosis fetalis, attempts to prevent isoimmunization and its fetal effects have been unsuccessful. Repeatedly glimmers of hope of preventing perinatal deaths from erythroblastosis have faded with the therapeutic evaluation of Rh hapten,[5] counterimmunization procedures,[4] cortisone,[1] and many other substances. Although the final solution of the problems created by the incompatibility of maternal and fetal blood has not been identified, salvage among erythroblastotic infants has been improved by the earlier diagnosis of the disease and by better methods of treatment.

Few medical problems have had a wider coverage by the press than this. Since approximately 15 per cent of Caucasian women are Rh negative, a great deal of anxiety has been created by the indentification of these women with erythroblastosis. The alleviation of groundless apprehension by placing the problem in its proper perspective constitutes an important part of the management of the obstetric patient. Less than one per cent of pregnancies involve erythroblastotic infants. Most Rh negative women with Rh positive husbands never become sensitized despite repeated pregnancies with Rh positive infants. Even if isoimmunization does occur, subsequent infants may not be affected. If the father is heterozygous Rh positive, there is a 50 per cent chance that his child will be Rh negative. If a couple has not already had an erythroblastotic infant, the fetal prognosis with a future pregnancy is excellent since the first erythroblastotic in a family is generally only mildly affected and with proper treatment survives without stigma. The preceding observations justify the reassurance of most patients who express concern about their Rh status.

Where facilities are available at any hour for the prompt diagnosis and treatment of erythroblastosis, less and less emphasis has been placed on antepartum detection of the sensitized mother. However, when preparations for treatment must be made individually, prior identification of the Rh sensitized patient assumes major importance. Nevertheless, such advance knowledge is a poor substitute for constantly available facilities which permit performance of the Coombs test on cord blood and prompt exchange transfusion of the infant.

Prenatal detection of Rh antibodies in any amount in maternal blood or a positive indirect Coombs test in any dilution proves only that isoimmunization has occurred. This does not necessarily mean that a current or future pregnancy will involve an erythroblastotic infant. Generally, a rising antibody titre during pregnancy increases the possibility of an erythroblastotic infant. However, a rising Rh antibody titre has been observed with an Rh negative infant, and also low, and at times undetectable, levels of antibodies have been associated with severely affected erythroblastotic infants.[2] Because of these inconsistencies, our management of the pregnancy and treatment of the infant are no longer influenced by the maternal Rh antibody titre. After it has been established that a mother is sensitized, repetition of such testing with a subsequent pregnancy seems superfluous.

Despite the inadequacies of the Rh antibody titre as an indicator, there is no more accurate method of detecting erythroblastosis prenatally in the first infant thus affected. Antepartum roentgenography has proved to be disappointing in this respect. Prenatal x-ray examinations of fifty consecutive erythroblastotic infants failed to reveal evidence of erythroblastosis except when the fetus was already dead or nearly so. In the latter instances, the evidence was not conclusive. It consisted of hydramnios and extension of the extremities in association with questionable distention of the fetal abdomen. Therefore, it appears that x-ray examination is of practically no value in the prenatal diagnosis of erythroblastosis since the associated changes detectable through this medium are inconclusive or appear too late.

The preceding approach is altered when dealing with a patient who has had a previous erythroblastotic infant. The past obstetric history provides the best means of anticipating an erythroblastotic infant. After the first affected infant, examination of the husband's blood and determination of his probable genotype aid in forecasting the obstetric future. If the father is homozygous Rh positive and there has been previous erythro-

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blastosis fetalis due to Rh incompatibility, virtually all subsequent infants will have erythroblastosis and will be progressively more seriously affected. If the husband is heterozygous Rh positive, subsequent infants will have a 50 per cent chance of being Rh negative and therefore unaffected.[7] Although there is a small margin of error involved, as yet we have encountered only one instance where a subsequent infant failed to conform with the laboratory determination of the husband's zygosity.

Early neonatal diagnosis of erythroblastosis is of major importance. A Coombs test of umbilical cord blood with positive and negative controls should be carried out on every infant who has an Rh negative mother. This will detect all infants with erythroblastosis except those whose mother is Rh positive and the disease is due to the major group factors or the small "c" factor. Because of these less common possibilities, careful attention is given to any baby who develops jaundice during the first twenty-four to thirty-six hours of life. Facilities permitting performance of the Coombs test immediately after birth should be available. Until the Coombs test is reported as negative (within one hour), a 5-inch segment of cord is left attached to an infant with an Rh negative mother. This facilitates performance of an exchange transfusion when the Coombs test is positive and there is an anemia or rapidly developing jaundice. With a positive Coombs test and no anemia at birth, the infant must be observed closely with serial hemoglobin determinations because of the sudden and massive hemolysis that may occur neonatally.

Prompt initiation of the exchange transfusion when indicated may spell the difference between death and survival of the infant. For this purpose 500 cc. of group specific, Rh negative blood is used when the infant is Rh positive. When this is not available, or in an emergency, group O, Rh negative blood with the addition of Witebsky substances is used. Utilizing the umbilical vein, the exchange transfusion is usually completed within 2 to 3 hours.[6]

Because of the incidence of erythroblastotic stillbirths and early neonatal deaths, premature interruption of pregnancies believed to involve erythroblastotic infants was widely practiced within a few years after discovery of the Rh factor. Subsequent evaluation of these results seemed to indicate that the addition of prematurity decreased the chances for survival of the erythroblastotic infant. Because of the importance of the degree of fetal maturity, *preterm,* but not *premature,* delivery of a selected group of erythroblastotic infants has been carried out at the University of Michigan Hospital during the past four years. Where there had been a previous erythroblastotic stillbirth or an infant severely affected at birth, subsequent pregnancies were terminated after the eighth month of gestation by medical and/or surgical induction of labor. When two or more attempts to induce labor failed, delivery was accomplished by cesarean section. The time for interruption of each pregnancy was carefully selected on the basis of the history of amenorrhea, x-ray and clinical examinations, and the time of previous intra-uterine fetal deaths. Generally, there is a tendency for fetal death from erythroblastosis to recur at the same stage of gestation. However, it should be emphasized that too early a delivery involves fetal hazards that are as great as when delivery is deferred too long.

Since the adoption of *preterm* delivery in combination with immediate exchange transfusion where it is indicated, this therapeutic program has been applied to twenty-six consecutive pregnancies that fall into the select categories described. In this group the survival rate among previous erythroblastotic infants was only 36.7 per cent—a particularly poor salvage since in eleven cases there had been only one previous erythroblastotic and the first such infant is usually only mildly affected. With *preterm* delivery and exchange transfusion, these same patients had a 91 per cent survival among erythroblastotic infants and none had any residual stigma from erythroblastosis.[3] During the same period of time, there were eight who were the first erythroblastotic infants in their families. Since the maternal blood had not been examined for antibodies, none of these was anticipated. However, the diagnosis was made promptly after birth by the routine performance of the Coombs test and all of the infants have done well. Four received exchange transfusions, two received small transfusions and two required no treatment.

The preceding results have been most encouraging but the presentation of these data alone would paint a false picture. During this same interval, there were five erythroblastotic stillbirths from four pregnancies where fetal death occurred before the last month of gestation. Current knowledge does not permit us to offer much hope to

these mothers regarding future pregnancies unless the husband is heterozygous Rh positive.

In summary, a great deal of reassurance can be given to most Rh negative women regarding future pregnancies. Regardless of the Rh status of a pregnant patient and her husband, the fetal prognosis is excellent with the current pregnancy provided the patient has not had a previous erythroblastotic infant. Such a couple has but a small chance of having an affected infant. Even if the infant has erythroblastosis, the prognosis is good with the prompt recognition and treatment of the disease since the first erythroblastotic infant is usually only mildly affected. Presence of maternal Rh antibodies is deceptive. Antepartum hematologic evidence of isoimmunization does not prove the presence of an erythroblastotic fetus, and Rh antibody quantitation should not serve as a basis for interruption of pregnancy. Until there is a more accurate means of prenatal diagnosis of erythroblastosis fetalis, the Coombs test should be run on umbilical cord blood from every infant with an Rh negative mother. Also, the Coombs test should be carried out on any infant who develops jaundice during the first two days of life. Performance of the Coombs test and exchange blood transfusion of the infant where indicated must be regarded as emergency procedures. Qualified personnel to carry out these procedures should be "on call" every hour.

The past obstetric history remains the most reliable criterion in anticipating an erythroblastotic infant. Laboratory determination of the husband's zygosity is of value in assessing the outcome of future pregnancies in the Rh sensitized patient. Where there has been a previous erythroblastotic stillbirth or an infant severely affected at birth, *preterm* (not *premature*) interruption of subsequent pregnancies with immediate exchange transfusion of the erythroblastotic infants has more than doubled the salvage rate in this group. The degree of fetal maturity is of major importance. As yet there is no evidence that delivery prior to the last month of pregnancy improves the prognosis. Current therapy has nothing to offer in dealing with those pregnancies where fetal death occurs before the last month of gestation. Improved salvage among this small group must await discovery of some means of preventing either isoimmunization or its effects.

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Probably the major obstacle to be overcome in the development of more effective chemotherapeutic agents is the acquisition of resistance by the tumor to an effective agent.

* * *

Silent carcinomas of the lung may be diagnosed by their appearance on the x-ray film alone.

* * *

It is the omission of the simple diagnostic procedures that is responsible for much of the high death rate from cancer.

* * *

It has been estimated that there are more than 50,000 women in this country who now have carcinoma of the breast.

* * *

It is of great importance never to exclude rectal palpation of the prostate gland whenever a physical examination is performed.

If, at digital palpation, there is found within the prostate gland an area which is judged firm upon moderate pressure, and particularly if there is a sharp difference between this part of the gland and the remainder, carcinoma of the prostate gland must be suspected.

* * *

Although statistics vary from one clinic to another, there is agreement sufficient to indicate that at least ten per cent of all glands thought to be benign actually contain early malignancies.

* * *

Physicians who oppose the reporting of cancer should realize that progress in its control will never come from the analysis of death certificates only any more than effective control measures of any other disease have been based on information obtained from death records. Morbidity records are vital to the control of any disease.

* * *

No cancer is ever detected so early that metastasis can be definitely ruled out.

Let Us Hear From You

Our Special Committee to Study Fee Schedule of Michigan Medical Service (Blue Shield), recently appointed by my predecessor, Robert H. Baker, M.D., of Pontiac, has a very important job to perform and should have the support and help of every Doctor of Medicine in Michigan.

Few would question that the old $2,500-income policy, carried by most Michigan Blue Shield policyholders, is far out of line with today's realities. The newer $5,000 policy also has many inadequacies in its fee schedule. As a result, there have been misunderstandings and considerable unhappiness created among persons in all income groups, chiefly where policyholders held the belief that the minimal fee designated in their particular policy was intended as maximum, guaranteeing full coverage.

Although the new Blue Shield fee schedule is the outgrowth of industry-labor negotiations where medical service was laid on the bargaining table with a minimum of consultation with Doctors of Medicine who must render the service, the result has presented us with a golden opportunity to correct inequities of the past. From our current study—carried on by a committee representative of all MSMS Councilor Districts—The Council is striving to develop a realistic fee schedule which is actuarially sound, yet within the economic reach of Michigan's rank-and-file citizens, and which will provide adequate compensation to the physician in line with today's fiscal situation.

Your positive suggestions are needed, Doctor, in arriving at a reasonable new schedule which does justice to both the patient and the M.D. With your help, Blue Shield can maintain its position as one of the strongest bulwarks against the forces which seek to place the practice of medicine in the category of a "public utility" or a paternal responsibility which denies the patient his freedom of choice of doctor.

Doctor, your active personal co-operation is sincerely requested. When you receive our Committee's questionnaire concerning the proposed new $6,000 family-income contract of Michigan Medical Service, take a little time out to supply us with the necessary information. Our plan, offered to Blue Shield, will be based on your instructions. So let us hear from you.

President's Message



W. B. Jones.

President, Michigan State Medical Society

Editorial

NEEDED NATIONAL LEGISLATION

IT is a good time to strike up an active acquaintance while our senators and representatives are home from Washington. They are receptive and eager to please. We can and should have a program of positive legislation in which we are interested. There are several items which we have mentioned before.

Jenkins-Keough.—The measure now in Congress is a much restricted and modified form. It has passed the House of Representatives and is now in the Senate. Many modifications have been made but what is offered is much better than nothing. The self-employed professions are asking only for fair treatment in relation to employes and officers in industry. The professional people are peculiarly constituted. As a rule, they are mostly not prepared to work until they have reached middle life or are at least thirty years of age, and the productive years are closing in the middle fifties—giving them but twenty-five years of maximum earning power.

In industry, that period starts earlier and continues until sixty-five in most cases. The amounts set aside for retirement benefits are fabulous. Many corporations provide a retirement fund based on earnings, of course, but reaching a maximum of $40,000 a year at retirement. The professions—our members—should demand a more liberal consideration. We have the same right as salaried workers.

We proposed years ago that a special retirement income bond be offered by the government to be purchased from tax-exempt income of self-employed or professional people. This would give the government additional borrowing power. The interest rates could be low and cumulative until the amount became an endowment. A retirement plan would automatically be established.

Group Health Insurances.—We hope government will leave that field to private enterprise. Suggestions have been made by many groups for benefits provided in whole or in part by government. The new HEW secretary, Marion B. Folsom, promised "a new look at the whole health program," mentioning the reinsurance proposal:

"Mr. Folsom explained that HEW has to make a decision soon on health proposals in order to formulate recommendations to the President for possible inclusion in his program. He added: 'We have reached no conclusions. Our reconsideration does not mean that we will drop any of the proposals any more than it means that we may decide to stick by them exactly as they were.' "

Withholding Privilege.—Congress should provide, as the late Senator Taft suggested, that federal (or state) employes have the right of setting up withholding provisions which are now denied. Workers in industry may instruct their employers to deduct certain sums from their pay allowances to cover community chest donations, gifts to Red Cross, voluntary group health insurance, et cetera. This entails a bookkeeper's experience, but is most useful. Government should make the same allowance.

Social Security.—The medical profession has been misrepresented in this whole scheme. Not many understood it, and a canvas has never been taken. We believe most of our members would favor voluntary inclusion instead of exemption from the plan as at present. There are many advantages listed and questioned by our members which we might but do not, compensate for. Our interest in the disability insurance amendment is in the method of medical supervision provided in the disability clauses now under consideration.

We do believe the penalty imposed on the old man who works is unfair. Once he has earned his "insurance" benefits, no one should be able to remove them. If in spite of his age, he can work—let him. Thus he will continue to pay social security taxes and income taxes. The government should not be guilty of enforcing idleness on many thousands of worthy oldsters who mostly must have some type of work to relieve boredom and worse eventualities.

The problems of gerontology are increasingly evident. We, the medical profession, appreciate them—the government and congress need to be told.

BRICKER AMENDMENT

SENATOR John W. Bricker of Ohio almost succeeded in passing his amendment to The Constitution, "to invalidate any treaty or executive

agreement which conflicts with The Constitution, and to prevent any treaty or executive agreement from becoming internal law except through valid legislation enacted by the elected representatives of the American people."

The supreme courts have ruled (Missouri vs. Holland 1920) "Treaty law can override the Constitution." No provision of a treaty or executive agreement has ever been declared unconstitutional although we have many such. The present rule for approving treaties is by a majority vote of the senators "present and voting." Several treaties have been approved by the vote of only one senator in the recent past. The imminence of danger is truly alarming.

We now have a regulation—an executive agreement—under which American soldiers or civil officers on duty abroad are tried and punished for crimes not under American law, but by the laws and courts of the country where the alleged crime was committed. The individual is deprived of constitutional rights by an agreement which is recognized as treaty.

World Health Organization is a treaty and has proposed socialized medicine in most of the countries of the world. "From an executive agreement, the WHO claims the power to enact legislation effective as internal law in the United States without the knowledge or approval of Congress."* We need a modification of the provision.

MEDICAL PROFESSION STRIKES

WE have many times heard serious suggestions that the medical profession officially unionize. Labor has called AMA a union—and a tight one. We all know this is not true. Our members are too hopelessly and personally independent. How often have our beliefs prevailed on certain economic or professional problems? If we formed a labor union affiliation what would be the reaction? There are many grievances for which labor unions would demand satisfaction: (1) Underpayment for services to governmental relief and care agencies. Our attempts at a solution have met with meagre success. (2) Uneconomical use of medical man power for military needs. (3) Threat of interference in free enterprise through a compulsory health insurance.

IT CAN NEVER HAPPEN! So we thought, but a national news broadcast Thursday, August 25, at 8:00 a.m. told a story. The doctors in Vienna get 8 cents a call under the compulsory health program. They appealed in vain and finally "struck." They will accept only life and death calls for forty-eight hours and, if demands are not met, will strike again and longer if necessary.

A newspaper man in Michigan told this editor recently that he plans an editorial about doctors becoming unionized. He was intrigued. We are reporting facts not program. But it could happen.

Unprofessional? Yes, but so are other affairs which are taking our active attention—splitting fees for one.

EMBARRASSING

UNDER the instruction of the House of Delegates of the American Medical Association at Miami in 1954, the Board of Trustees appointed a Special Study Committee to survey the basic causes leading to certain unethical practices and to unfavorable public reaction, and to offer corrective suggestions.

A long report on this controversial subject was submitted. The AMA Board of Trustees, instead of transmitting the report to the members of the House of Delegates as requested, made a short comment which was accepted by the reference committee.

John S. DeTar, M.D., Michigan delegate and President-elect of the American Academy of General Practice, led a fight which postponed action on the report and ordered the distribution of the complete report to the delegates before the December AMA meeting in Boston.

GP published that entire report in its July number—a very unusual procedure. That report belonged to the AMA and not to the American Academy of General Practice. It was only a committee report, not yet even presented to the body which had asked for it, and it was in no way official. Commentators and publicists immediately discussed the report as official and representing accepted facts. In our Michigan Society, we have always been exceedingly careful never to allow such reports, especially controversial ones, *any* publicity until the Society has taken action.

We have read the report. It is suitable for presentation where it belonged, but entirely unsuitable for general publication. Wrong impressions can and have been drawn. We doubt if any

(Continued on Page 1232)

*Senator Bricker at Miami, December, 1954.

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

WHAT IS YOUR SCORE?

I. Veneral Diseases—General

A. Which of the following diseases are defined by law as dangerous communicable venereal diseases? (1) Syphilis; (2) Gonorrhea; (3) Chancroid; (4) Lymphogranuloma venereum; (5) Granuloma inguinale.

B. The law requires that every practicing physician give notice in writing of every case of venereal disease under his professional observation within: (1) twenty-four hours; (2) forty-eight hours; (3) one week; (4) one month.

C. In counties and districts having full-time health officers, reports shall be made to the full-time health officer. In cities and counties without full-time health officers, reports shall be made to: (1) county clerk; (2) Michigan Department of Health; (3) nearest health department.

D. The primary responsibility for identifying and bringing under treatment the probable source of the patient's infection and other exposed persons is with the: (1) local health department; (2) the patient; (3) the physician treating the case.

E. If a patient or contact refuses to co-operate or undergo examination, the physician shall: (1) notify the appropriate health authority; (2) notify the police department; (3) do nothing further.

F. A person afflicted with a venereal disease in a communicable stage may not work in an establishment where food or drink is prepared, bottled, packed, manufactured, offered for sale or sold.

True——— False———

II. Venereal Disease—Premarital Physical Examination Law.

A. All persons making application for license to marry shall at any time within thirty days prior to such application be examined as to the existence or non-existence of: (1) syphilis; (2) syphilis and gonorrhea; (3) syphilis, gonorrhea and chancroid.

B. If it shall be found on the basis of the laboratory and clinical findings that the applicant is not free from venereal disease, but that the disease is in a non-communicable stage, the physician should: (1) apply to the Commissioner of Health for a special dispensation; (2) tell the individual that he cannot get married.

C. Early syphilis as defined for purpose of the regulation is of: (1) less than four years' duration; (2) less than two years' duration; (3) less than six months' duration.

D. Persons with *early* syphilis must have thorough treatment with heavy arsenicals and heavy metals or adequate intensive penicillin therapy. Before a special dispensation can be issued, persons treated by intensive methods for *early* syphilis must complete a period of satisfactory observation of: (1) one month; (2) six months; (3) one year; (4) none.

E. Persons with *late* syphilis (more than four years' duration) should have intensive treatment. They are not required to complete an observation period before becoming eligible for special dispensation. True——— False———

F. Which of the following factors are valid reasons for issuing a special dispensation? (1) Persons with late syphilis of many years' duration and are fifty or more years of age. The female partner must be incapable of bearing children through either physical or surgical menopause. (2) Proven congenital syphilis especially in males. (3) Demonstrated pregnancy. Adequate treatment should be arranged for.

G. To support a request for issuance of a dispensation on the basis of a non-specific or biologic false positive serologic reaction, the physician should state that: (1) The patient says he does not have syphilis; (2) No history of syphilis or treatment of same can be secured; (3) No clinical evidence of syphilis is present; (4) That the presence of congenital syphilis is satisfactorily eliminated, preferably including an examination of the mother or siblings.

Answers

I. (A) All; (B) 24 hours from the time of diagnosis; (C) The Michigan Department of Health; (D) The physician; (E) Notify the health authority; (F) True.

II. (A) Syphilis, gonorrhea and chancroid; (B) Apply for a special dispensation; (C) Less than four years' duration; (D) One year: (E) True: (F) All; (G) 2, 3 and 4.

EMBARRASSING

(Continued from Page 1231)

reference committee would have released that report to the world. It would have been restated.

Some editors have written very searching comments. *The Detroit Times,* in an editorial July 28, 1955, quoted extensively from the report but pointed out that the mispractices are being studied and that the profession is trying to correct them. "Talk won't work. Action will." "Let's see that action."

EDITOR'S NOTE: Since this editorial was prepared, we have been informed AMA consent was received to publish the report.

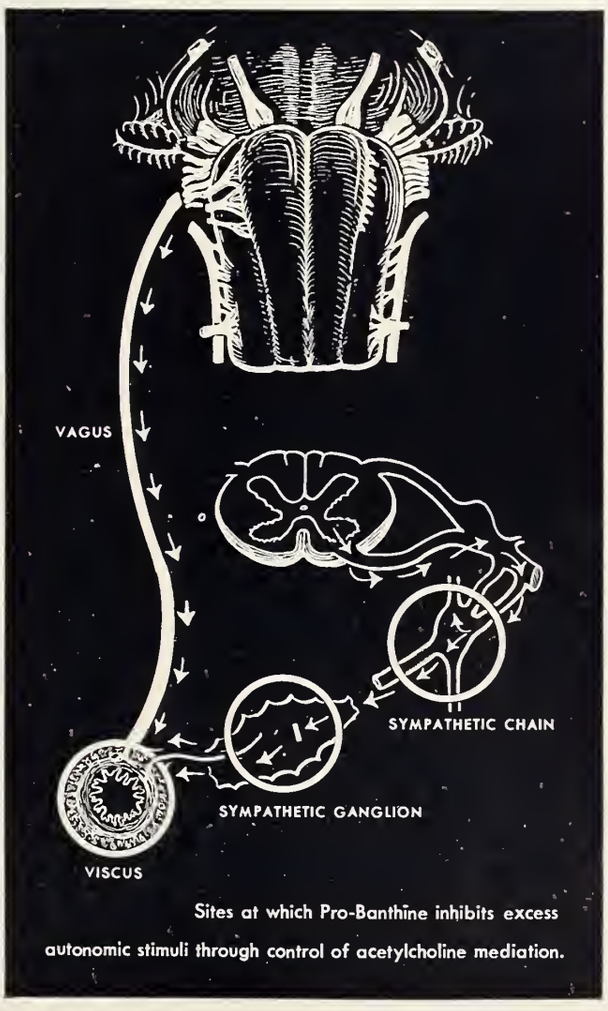
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1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

SEARLE



. . . . . NEWS MEDICAL

MICHIGAN AUTHORS

Robert L. Novy, M.D., Detroit, is the author of an article entitled "Medicine's Unsolved Problem," published in THE JOURNAL of the Michigan State Medical Society, and reprinted in *Medical Annals of the District of Columbia,* August, 1955.

Jack M. Kaufman, M.D., and **Nancy T. Caputo, M.D.,** Detroit, are the authors of an article entitled "Basilar Rales in Myocardial Infarction," published in *The Journal of the American Medical Association,* August 27, 1955.

Thomas Francis, Jr., M.D., Ann Arbor, is the author of an article entitled "Evaluation of the 1954 Poliomyelitis Vaccine Field Trial," published in *The Journal of the American Medical Association,* August 6, 1955.

Frank H. Purcell, M.D., and **George V. Hendy, M.D.,** Detroit, are the authors of an article entitled "First Aid for Simple Fractures in Civil Defense," published in THE JOURNAL of the Michigan State Medical Society, March, 1952, and reprinted in *Arizona Medicine,* August, 1955.

Laurence F. Segar, M.D., Harry A. Kashtan, M.D., Perry B. Miller, Capt. U.S.A.F. (M.C.), Detroit, are the authors of an article entitled "Trichinosis with Myocarditis" published in the *New England Journal of Medicine,* a condensation of which appears in *American Practitioner and Digest of Treatment,* August, 1955.

John M. Shaw, M.D., and **Frank W. Crowe, M.D.,** Ann Arbor, are the authors of an article entitled "Skin-Protective Ointments" published in *Archives of Dermatology and Syphilology,* a condensation of which appears in *American Practitioner and Digest of Treatment,* August, 1955.

Reed M. Nesbitt, M.D., and **William B. Crenshaw, M.D.,** Ann Arbor, are the authors of an article entitled "Treatment of Bladder Neck Contracture by Plastic Operation," published in the *Journal of Urology,* a condensation of which appears in *American Practitioner and Digest of Treatment,* August, 1955.

Edgar E. Martmer, M.D., Detroit, is the author of an article entitled "Radioactive Iodine Uptake Studies in Premature Infants" published in the *Harper Hospital Bulletin,* May-June, 1955.

A. H. Hall, M.D., Detroit, is the author of an article entitled "Hodgkin's Disease in Twins," published in the *Harper Hospital Bulletin,* May-June, 1955.

Edgar E. Poos, M.D., F.A.C.S., F.I.C.S., Detroit, is the author of an article entitled "Geriatrics of the Ear, Nose, and Throat," published in the *Eye, Ear, Nose and Throat Monthly,* May, 1955. He is also the author of an article entitled "Functional Disturbances of the Ear, Nose, and Throat in Airmen," presented at the twenty-fifth annual meeting of the Aero Medical Association, Washington, D. C., March 29, 1954, and published in *The Journal of Aviation Medicine,* February, 1955.

Earl G. M. Krieg, M.D., Detroit, is the author of an original article, "The Use of a Free Cutis Graft in the Operation for Urinary Stress Incontinence," published in the *Journal of Urology,* May, 1955.

Leo S. Figiel, M.D., Detroit, is the author of an article entitled "Radium Therapy and Nuclear Medicine," published in the *American Journal of Roentgenology,* July, 1955.

Edwin M. Knights, Jr., M.D., Detroit, is the author of an article entitled "Ultra-Micro Chemical Methods in a Clinical Laboratory," published in the *Harper Hospital Bulletin,* May-June, 1955.

T. Francis, Jr., M.D., and **R. F. Korns, M.D.,** Ann Arbor, are the authors of an article entitled "Evaluation of 1954 Field Trial of Poliomyelitis Vaccine; Synopsis of Summary Report," pubished in the *American Journal of Medical Sciences,* June, 1955.

John W. Smillie, M.D., Ann Arbor, is the author of an article entitled "Cataract Surgery in Megalocornea," pubulished in *AMA Archives of Ophthalmology,* August, 1955.

* * *

The Trustees of what is considered America's oldest medical essay competition, the Caleb Fiske Prize of the Rhode Island Medical Society, announce as the subject for this year's dissertation "Use of Radioactive Isotopes in the Treatment and Investigation of Disease." The dissertation must be typewritten, double spaced, and should not exceed 10,000 words. A cash prize of $350 is offered.

For complete information regarding the regulations, write to the Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence 3, Rhode Island.

* * *

An article in the August, 1955, issue of *Modern Hospital,* and also the September-October, 1955, issue of the *Bulletin of the American College of Surgeons,* describes the "Limbach Stretcher," also the subject of "Transportation of the Injured" within the hospital. This technique was devised by David R. Limbach, M.D., of Hurley Hospital, Flint.

* * *

Charles W. Shilling, M.D., former Captain in the Medical Corps of the U. S. Navy, has been appointed as Special Assistant to the Director of the Commission's Division of Biology and Medicine.

Dr. Shilling was born in Upland, Indiana, on Septem-

(Continued on Page 1236)



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Dowling, H. F.: Practitioner *174*:611 (May) 1955.

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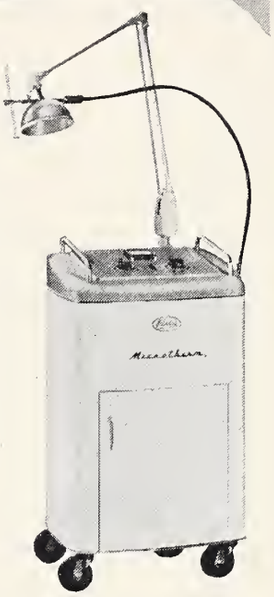
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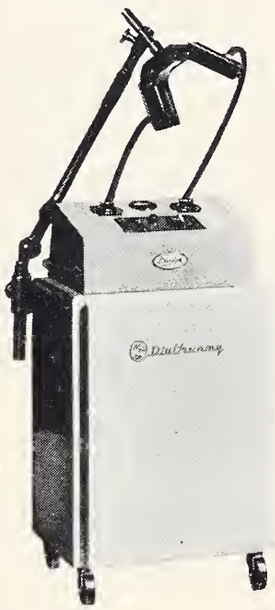
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(Continued from Page 1234)

ber 21, 1901. He holds a B.S. degree from Taylor University, Upland, Indiana, and a B.A. degree from the University of Michigan. He received an M.D. degree from the University of Michigan Medical School in 1927. He attended the Harvard School of Public Health in 1932-33, and in 1954 was awarded an honorary Doctor of Science degree from Taylor University.

* * *

The American College of Gastroenterology held its annual convention at The Shoreland in Chicago, Illinois, October 24, 25 and 26, 1955.

In addition to interesting individual papers on gastrocnterology and allied fields, the program included a panel discussion on "Peptic Ulcer" with Clifford J. Barborka, M.D., as moderator. There were scientific as well as commercial exhibits.

The Annual Course in Postgraduate Gastroenterology, under the personal direction of Owen H. Wangensteen, M.D., of Minneapolis, Minn., and I. Snapper, M.D., of Brooklyn, N. Y., was given on October 27, 28 and 29, 1955, at The Shoreland.

* * *

The Michigan Clinical Institute registration for 1955 was close to 3000. This coming year, the attendance is sanguinely expected to total well over 3500.

Why this marked increase? The extraordinary clinical program was specially devised to celebrate the tenth anniversary of this worthy teaching Institute. A word to the wise—get your reservations *now*. Write the Secretary, Committee on Hotels, Michigan Clinical Institute, c/o Sheraton-Cadillac Hotel, Detroit. The dates are March 7-8-9, 1956.

* * *

The American Medical Educational Foundation, mentioned frequently, have issued its 1954 annual report. Michigan members and contributors will be interested in some facts given. C. B. Saltonstall, M.D., of Charlevoix, was chairman for Michigan.

The total contributions to AMEF in 1954 were $1,181,926. For the four years 1951-1954, they totaled $3,924,410. In addition, contributions of $1,824,269.14 were made by alumni in 1954. The individual contributions are, respectively, $22,996 and $38,582. Michigan members gave the two funds $6,922.00 and $57,534.04 by 119 and 1,085 individuals.

Grants to colleges in 1954 were to the University of Michigan $41,530.50, to Wayne University $23,603.50 and for the four years, $116,367.00 and $81,520.00.

These figures do not include gifts or subscriptions for scholarships or research—only unrestricted gifts.

Michigan has done really well.

* * *

At the 40th Annual International Scientific Assembly of Interstate Postgraduate Medical Association which is to be held in Milwaukee, Wisconsin, November 14 to 17, 1955, attendance awards will be given to all those who have attended ten or more meetings since 1940. The following Michigan men will receive this award: A. U. Axelson, M.D., Stanley H. Brown, M.D., Harry G. Chall, M.D., and Frederick E. Hansen, M.D., of Detroit;

(Continued on Page 1238)

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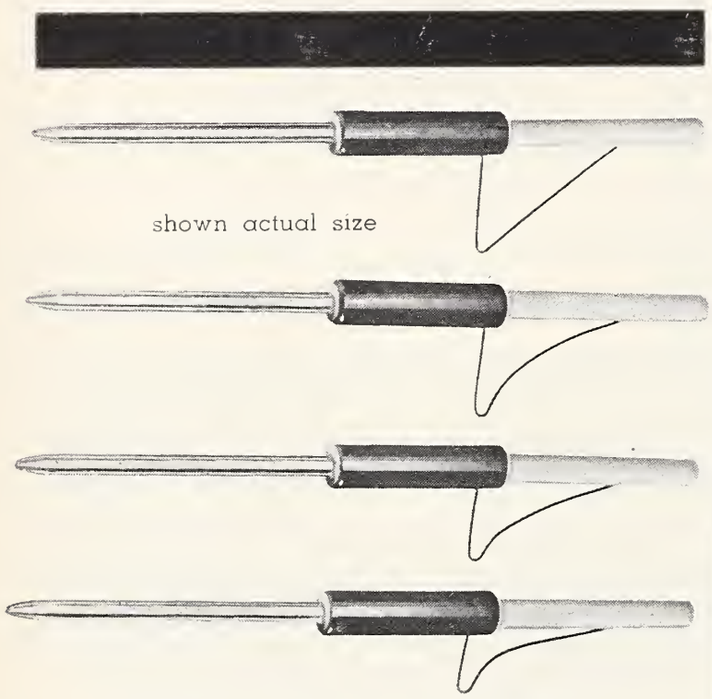
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**Described in his paper which will be sent on request*

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(Continued from Page 1236)

Kenneth L. Crawford, M.D., of Kalamazoo; Edwin L. Hansen, M.D., of Battle Creek; J. Winslow Holcomb, M.D., of Grand Rapids; W. H. Kern, M.D., of Garden City, and Herbert Robb, M.D., of Bellevue.

* * *

American Board of Obstetrics and Gynecology, Inc.—Applications for certification for the 1956 Part I Examinations are now being accepted. Candidates making application or requesting the re-opening of an application must do so before October 1, 1955. Applications are to be accompanied by a list of hospital admissions as outlined in the current Bulletin of the Board.

The next scheduled examination (Part I), written examination and review of case histories, for all candidates will be held in various cities of the United States, Canada, and military centers outside the continental United States, on Friday, February 3, 1956.

Current Bulletins are now available and may be obtained by writing to: Robert L. Faulkner, M.D., Secretary, 2105 Adelbert Road, Cleveland 6, Ohio.

* * *

Ivan F. Duff, M.D., of Ann Arbor, will present a paper at the 40th Annual Meeting of the Interstate Postgraduate Medical Association of North America which is to be held in Milwaukee, November 14-17, 1955. The title of the paper is "Intra-Articular Steroids: Clinical Applications and Laboratory Effects."

* * *

An exhibit on the "Early Recognition of Impaired Hearing in Children: Diagnosis and Therapy" will be presented at the 40th Annual Meeting of the Interstate Medical Association of North America at Milwaukee, November 14-17. Exhibitors will be J. Lewis Dill, M.D., A. Bruce Graham, Ph.D., and Donald S. Bolstad, M.D., Detroit.

* * *

The Graduate School of Medicine of the University of Florida, at its 10th Annual Midwinter Seminar in Ophthalmology and Otolaryngology which will be held in January, 1956, at Miami Beach, will have as one of the lecturers in Ophthalmology. A. D. Ruedemann, M.D., of Detroit.

* * *

A Bit of History: In 1925, Hindenburg was President of Germany. That was the year of the Florida real estate boom. There was talk of world-wide flying. Prohibition wasn't working. The name of Dwight Eisenhower first came to view.

In 1935, there was more spending, more public works. The NRA was declared unconstitutional. The Townsend Plan for old age pensions showed its head. *Social Security was finally voted.* A moratorium on farm mortgages was declared. To help the unions get organized, the Wagner Act came into being—with resulting expansion of the unions: CIO was formed, led by John L. Lewis!

In 1945: The war—long and painful—comes to an end, with Berlin falling May 2 and Hitler and Mussolini both dead, and the atom bomb on Hiroshima, August 6 (Japs surrender August 14). The Russians come into the

(Continued on Page 1240)

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(Contiued from Page 1238)

act six days ahead of the Jap surrender—and were assigned to North Korea! U. S. casualties 1,100,000; U. S. money cost: $300,000,000,000 plus.

* * *

"The Advantages of Private Medical Care" is the subject of the 10th Annual (1956) Association of American Physicians and Surgeons Essay Contest for high school students. For information and assistance in sponsoring this contest locally, write AAPS at 185 North Wabash Avenue, Chicago 1, Illinois.

* * *



L. W. Hull, M.D., Detroit, Past President of the Michigan State Medical Society, is Chairman for the 1956 Michigan Clinical Institute, to be held in the Sheraton-Cadillac Hotel, Detroit, March 7-8-9, 1956.

* * *

M. K. Newman, M.D., presented a paper, "Ultrasonics in Neurofibromatosis." on August 27, 1955, before the American Institute of Ultrasonics in Medicine. On August 28, he presented a paper on "Electromyography in Muscular Dystrophy" at the meeting of the American Association of Electromyography and Electrodiagnosis, and on August 30, he presented a paper on "Electrophoretic Patterns in Muscular Dystrophy" at the annual meeting of the American Congress of Physical Medicine and Rehabilitation. All three meetings were held at the Statler Hotel, Detroit.

* * *

M. K. Newman, M.D., Detroit, was elected Secretary-Treasurer of the American Academy of Physical Medicine and Rehabilitation at the annual joint meeting with the American Congress of Physical Medicine and Rehabilitation held at the Statler Hotel, August 28 to September 3, 1955, in Detroit.

* * *

Approximately 38,000,000 Americans are regular cigarette smokers, although a million and a half have quit smoking entirely since the fall of 1954, according to estimates based on a representative sample of about 40,000 persons surveyed by the U. S. Bureau of the Census for the National Cancer Institute, USPHS.

* * *

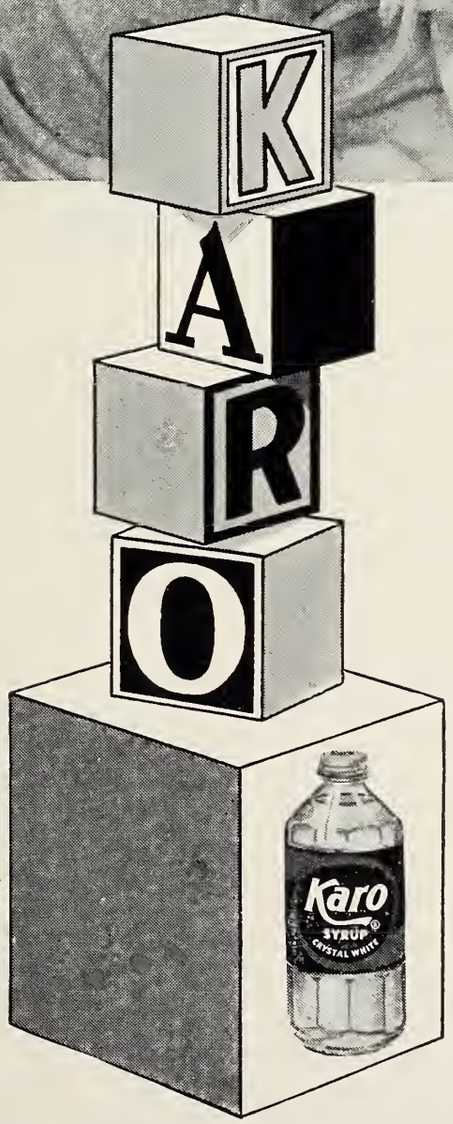
The Fifth Pan American Congress of Ophthalmology will meet in Santiago, Chile, January 9-14, 1956. For program and information, write Brittain F. Payne, M.D., 17 East 72nd Street, New York 21, N. Y.

* * *

The new AMA-Sears Roebuck Foundation offers a helping hand to physicians in need of financial assistance to establish medical practice units. The plan is intended to fill the gap with long-term low cost assistance; un-

(Continued on Page 1242)





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CUMERTILIN Sodium Injection, 1- and 2-cc. ampuls, in boxes of 12, 25, and 100; and 10-cc. vials, individually and in boxes of 10 and 100.

1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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(Continued from Page 1240)

secured ten-year loans of up to $25,000 will be offered to physicians seeking to establish practices but unable to get local financing. One loan in each of five regions in the country will be given in 1955 under an original $125,000 Foundation grant.

The plan, formulated by the recently created Medical Advisory Board, is headed by two members at large: F. J. L. Blasingame, M.D., of Wharton, Texas, Chairman, and Edwin S. Hamilton, M.D., Kankakee, Illinois, Vice Chairman. Applications may be sent to the Director, Sears Roebuck Board, in care of 8 East Congress Street, Chicago 5, Illinois.

* * *

Michigan hospitals cared for 887,331 patients in 1954. 161,570 babies were born in Michigan hospitals during that year. General hospitals of Michigan averaged $26.20 per patient day for short term cases ($1.45 more than in 1953 per patient day).—From News Release of American Hospital Association, August 1, 1955.

* * *

The Michigan Department of Health reported on August 3 that fluoridation of public water supplies has proved a safe and effective way to reduce tooth decay and is being adopted by both big cities and small towns. Chicago soon will replace Philadelphia as the Nation's largest city fluoridating; Chicago's water system serves over 4,000,000 persons and pumps more water daily than any other system in the world, according to Fred Wertheimer, D.D.S., in the *Public Health News* of the Michigan Department of Health.

Re Grand Rapids: Dr. Wertheimer states that after ten years, the reduction in tooth decay in Grand Rapids ranges from 83 per cent in six-year-olds to 26 per cent in 60-year-olds.

* * *

"Stop Rheumatic Fever" is the title of a new health education film recently added to the AMA's Motion Picture Library. The film impresses upon parents, teachers and the public that rheumatic fever can be prevented by early diagnosis and treatment of streptococcal infections. The twelve-minute black-and-white sound film employs symbolic animation and is available for parent groups, service clubs, public health nurses, and high school students.

* * *

President R. H. Baker, M.D., Pontiac, has been appointed by Governor G. Mennen Williams to the State Committee for Citizenship Week for 1955.

The primary goal of the Committee is that of guaranteeing that every potential voter in the State of Michigan becomes registered—a development which will certainly lend strengthening vitality to our democracy.

* * *

The Ninth Michigan Rural Health Conference will be held in Kalamazoo, January 18-19-20, 1956. All meetings will be scheduled in the Harris Hotel under the general chairmanship of Milon Grinnell, East Lansing, Editor of the *Michigan Farmer*. For program and information, write E. H. Wiard, Michigan Health Council, 706 N. Washington Avenue, Lansing 6, Michigan.

(Continued on Page 1244)

Say you saw it in the Journal of the Michigan State Medical Society

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Second 5 days	1 part	1½ parts
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Bronchial asthma
Inflammatory skin conditions

(Continued from Page 1242)

"The Diabetic's Cookbook," with introduction by Charles H. Best, M.D., has just been published by the Medical Arts Publishing Foundation, 1603 Oakdale Street, Houston 4, Texas.

* * *

The eighth Diabetes Detection Drive is scheduled for November 13-19, 1955.

The American Diabetes Association urges all members of the Michigan State Medical Society to co-operate during Diabetes Week to ascertain the number of diabetic persons in each community.

The American Diabetes Association offers up to 1,500 St. Louis Drey Packs without cost to new committees appointed and co-operating for the first time in Diabetes Week, as a means of acquainting them with this new technique for collecting dried specimens of urine. In addition, both Clinitests and Galatests reagents are available without charge for authorized programs—those sponsored directly by county medical societies and by affiliated associations of the ADA. Orders may be sent to the American Diabetes Association, 1 East 45th Street, New York 17, N. Y.

* * *

The Detroit Council of Churches is holding a Noonday Lenten Service at Central Methodist Church, Detroit, during the period of Lent. Those who care to attend can hear Dr. Edward Dahlberg of St. Louis, an outstanding speaker with a vital message. All members of the Michigan State Medical Society, especially those in Detroit for the MCI, are cordially invited.

* * *

"All That's New and Fit to Use" is the theme of the Tenth Michigan Clinical Institute. The program, to be presented in the Sheraton-Cadillac Hotel, Detroit, will feature thirty-seven of the nation's leading clinicians and teachers, each outlining what's new and fit to use—presenting the latest information learned and techniques devised during the last 365 days! The dates: March 7-8-9, 1956.

* * *

"Going Our Way": Parke, Davis & Co. is releasing a new movie, on October 1, which will be shown to public audiences, including civic and service clubs across the country. Prints of the 29-minute colored movie will be available after October 1.

"Going Our Way" tells the story of medicine and pharmacy with the central theme pinpointing the fact that there are good opportunities for service in medicine, pharmacy, research, and nursing. Information regarding this excellent movie can be obtained from Mr. Ralph G. Sickels, Advertising Director, Parke, Davis & Co., Detroit 32, Michigan.

* * *

The Michigan Academy of General Practice will hold its Ninth Annual Fall Postgraduate Clinic at the Sheraton-Cadillac Hotel, Detroit, November 9-10. Fifteen

(Continued on Page 1246)

Add Elegance and Appetite-Appeal

to the Sick-Tray

THERE'S anticipated pleasure when the patient sees an appetizing, colorful glass of wine on the table or tray—wine adds that touch of "elegance" which gives a psychological lift at a time when it is most needed.

And there are also well-authenticated physiological reasons to account for the valuable role of wine as a nutrient beverage for the convalescent and the aging patient:

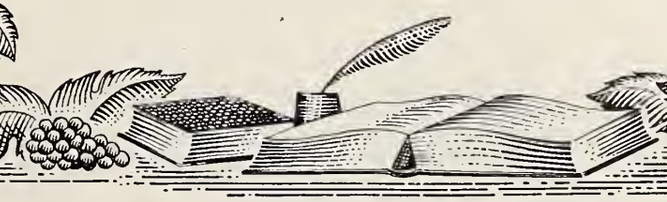
Recent controlled research shows that just 2 or 3 oz. of a dry wine can markedly increase olfactory acuity, increase the desire for food (as in anorexia) and actually aid digestion.

The effect of wine on free and total gastric acidity has been found to differ markedly from that of plain alcohol. Because of the buffering action of its phosphates, organic acids and tannins, the action of wine is gentler and more prolonged.

Wine is also notable for other desirable vasodilating, diuretic, and relaxant properties, and helps to allay restlessness and irritability in the sick and elderly.

A little Port or Sherry at bedtime affords a valuable aid to normal sleep and may obviate the need for sedative medication.

Recent results of laboratory and clinical research on the medical attributes of wine have been condensed into a small brochure entitled "Uses of Wine in Medical Practice." A copy is available to you—at no expense—by writing to: Wine Advisory Board, 717 Market Street, San Francisco 3, California.



Say you saw it in the Journal of the Michigan State Medical Society

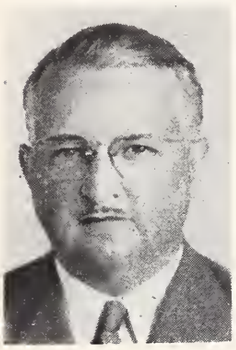
(Continued from Page 1244)

distinguished speakers will present the scientific program.

John R. Fowler, M.D., of Barre, Massachusetts, President of the American Academy of General Practice, will be the banquet speaker the evening of November 9.

F. P. Rhoades, M.D., Detroit, General Chairman of the Clinic, states that AAGP members will secure twelve hours' credit (formal) for attendance at this meeting.

* * *



E. C. Swanson, M.D., Vassar, recently was honored by being elected by his nine confreres on the Michigan State Board of Registration in Medicine as Secretary of the Board, to succeed J. Earl McIntyre, M.D., Lansing, retired.

Congratulations, Secretary Swanson!

* * *

Joseph A. Navarre, Commissioner of the Department of Insurance, State of Michigan, recently was elected Chairman of the Executive Committee of the National Association of Insurance Commissioners.

Congratulations, Commissioner Navarre!

* * *

The American College of Surgeons will hold six sectional meetings during 1956, including one in Jacksonville, Florida, January 16-18, and another in Milwaukee, Wisconsin, February 27-29. For program and full information, write H. Prather Saunders, M.D., Associate Director, 40 E. Erie Street, Chicago 11, Illinois.

The Arthritis and Rheumatism Foundation is offering a number of research fellowships in the basic sciences related to arthritis, running from $1,500 to $7,500 per annum. For information and application forms, address the Medical Director at 23 West 45th Street, New York 36, N. Y.

* * *

H. Waldo Bird, M.D., Detroit, Chairman of the MSMS Committee on Mental Health for the years 1953-54 and 1954-55, has left Michigan to assume an important post in the newly created Department of Psychiatry at the University of Chicago Medical School. Dr. Bird will have the rank of Associate Professor, primarily responsible for out-patient teaching as well as liaison with other departments in the University and outside agencies in Chicago and Illinois. Dr. Bird's new address is 5638 S. Dorchester, Chicago 37, Illinois.

Congratulations, Professor Bird!

* * *

A Symposium on The Medical Aspects of Civil Defense will be held Wednesday, November 16, 1955, under the joint auspices of the Michigan Office of Civil Defense, Michigan State Medical Society, Michigan State Veterinary Society, Michigan State Dental Society, and Lederle Laboratories. The symposium will be held at the Sheraton-Cadillac Hotel, Detroit. All members of the Michigan State Medical Society are cordially invited to attend this medical civil defense meeting. There is no registration fee. For program and information, write Joseph P. Young, Lederle Laboratories, Pearl River, New York.

(Continued on Page 1248)



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We believe this simple fact is one of the principal reasons why so many doctors smoke *and* recommend VICEROY—the cigarette you can *really* depend on!



(Continued from Page 1246)

Charles L. Hudson, M.D., of Cleveland, the new President of the Ohio State Medical Association, is a native of Michigan and received his M.D. degree from the University of Michigan (1930).

Another Ohioan recently honored by organized medicine, who is a native of Michigan, is E. J. McCormick, M.D., of Toledo, Past President of the American Medical Association.

* * *

Harrison Sadler, M.D., Detroit, was guest speaker at the Michigan Rehabilitation Association's annual conference in Jackson on September 20. Dr. Sadler's topic was "Working Through Community Attitudes Toward Handicaps."

* * *

"Free Health Care for Everyone?"—That's the provocative title of a sparkling booklet just released by the Chamber of Commerce of the United States. It answers three important questions: (a) Can we have it? (b) Do we want it? (c) Would it really be free? The leaflet pulls together and boils down interesting and useful information about problems involving the people's health—an important economic subject. Good health care is now the concern of everyone.

The MSMS Council recommends to every MSMS member that he secure a supply of these pamphlets, for reception-room usage. This easy-to-read and interesting material is a good salesman for the American system of private medical practice.

Single copies upon request; quantities, $4.50 per hundred. Write Chamber of Commerce of U.S.A., 1615 H Street N.W., Washington 6, D. C.

* * *

Periodic Health Appraisal.—The importance of this project cannot be overemphasized. The MSMS plan is an American concept; it is one of the best tools in the medical man's practice of preventive medicine; it keeps the physical examination in the doctor's office as a matter between the patient and his physician, thereby reaffirming the basic tenet of the American system of medical care—that the individual is primarily responsible for his own health.

Periodic health appraisal is a vital part of the private practice of medicine.

* * *

Wayne County Medical Society, which led the way in sponsoring community medical forums in Michigan, pioneered the field again with a new idea in subject matter when it presented a highly successful series of three weekly forums during the month of September, in co-operation with the *Detroit Free Press.*

Shifting from the usual presentation of medical facts, the Wayne County Society built its 1955 presentation on a theme of living successfully with serious illnesses. Aided by newest audio-visual materials, panels of Detroit M.D.'s presented tips on how victims of chronic

(Continued on Page 1250)

• **Licensed by State of Michigan, Dept. of Mental Health** • **Registered by American Medical Association**

ST. JOSEPH'S RETREAT



Founded in 1860

Under direction of Daughters of Charity of St. Vincent de Paul

Newly reorganized and modernized for individualized care and treatment of the nervous and mentally ill and alcoholic.

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Borden's has a fresh dairy food for almost any dietary requirement

In addition to such familiar items as Borden's Homogenized Vitamin D Milk, Borden's Cream, and Dutch Chocolate Milk, we'd like to remind you of our regular and low-calorie Cottage Cheese, Buttermilk, and Gail Borden Milk and Skimmed Milk — all helpful in dietary planning.

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DELTRA® tablets
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2.5 mg. - 5 mg. (scored)

the delta$_1$ analogue of cortisone

Indications:
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Bronchial asthma
Inflammatory skin conditions

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(Continued from Page 1248)

illness may revise their way of life to live more efficiently, comfortably, and economically.

The forum schedule, presented at Rackham Memorial Auditorium, was: September 12—Living with Heart Disease; September 19—Living with Rheumatism and Arthritis, and September 26—Living with Cancer. Different panels appeared in each program.

Leadership in planning and presenting the series was given by William Bromme, M.D., Chairman of the Committee on Forum, and Milton A. Darling, M.D., WCMS President.

* * *

Health is people; it begins with the individual in his home and spreads to the family and the community in which he lives. Health is a quality of being —expressed in terms of wealth, contentment, and productivity. Public health is the summation of personal health and no community can be more healthful than the people who reside therein.—HENRY F. VAUGHAN, Dr. P.H., American Journal of Public Health, March, 1955.

* * *

Loan Funds for the Medical Education of Students.—Answering a number of inquiries, the Michigan Foundation for Medical and Health Education is legally and organizationally constituted to administer any type of loan fund for the medical education of students, in the most economical manner. Individual doctors of medicine and medical societies having such funds, or contemplating the establishment of a loan fund, will find the Foundation of value in information and administration. Individual projects may be earmarked for a specific purpose and assigned to the Foundation for expert and economical administration. Moreover, the tax-exempt angle is assured in connection with all grants, donations and funds to the Michigan Foundation for Medical and Health Education. For detailed information write the Foundation at 300 W. Ottawa Street, Lansing, Michigan.

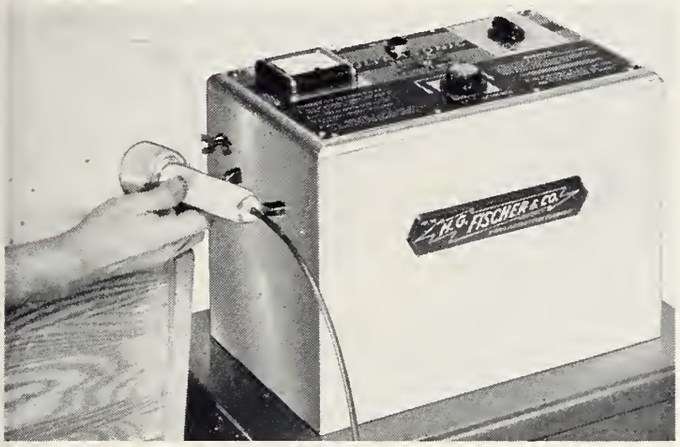
* * *

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(Continued on Page 1252)

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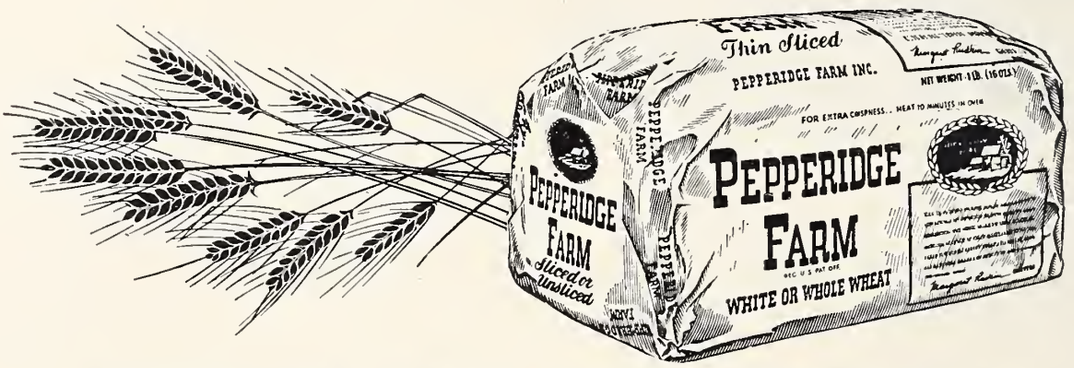
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(Continued from Page 1194)

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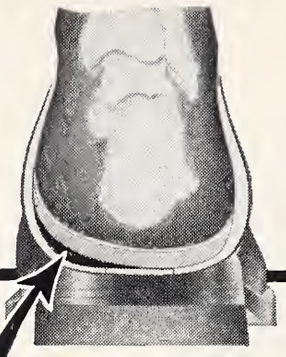
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Donald N. Schwing, M.D.	Manistee	July 25
Robert A. Lowry, M.D.	Muskegon	August
Rodman Jacobi, M.D.	Oxford	August 25
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MICHIGAN MEETING, AMERICAN COLLEGE OF SURGEONS

The Michigan Meeting of the American College of Surgeons will be held at the Sheraton-Cadillac Hotel, Detroit, on Sunday, December 3, 1955. The scientific program will start at 9 A.M. and will reconvene at 2 P.M. All physicians are invited. Members of the College will meet for dinner at 7 P.M.

Wage gains scored by organized labor during the past year are reflected in government statistics showing record take-home pay of factory workers. Part of the increase was due to overtime. The average take-home pay for August totaled $70.92 for a worker with three dependents, and $63.61 for a worker with no dependents. This was about 60 cents above July, 1955.

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CANCER OF THE BREAST

(Continued from Page 1203)

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The term "the cause of cancer" by long usage has come to denote something mysterious, but in fact there are today many different means for causing cancer in animals and in man.

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Surgery of Colon and Rectum, one week, October 17, November 28
General Surgery, one week, October 17
Gallbladder Surgery, ten hours, October 24
Fractures and Traumatic Surgery, two weeks, October 17

GYNECOLOGY—Office and Operative Gynecology, two weeks, November 28
Vaginal Approach to Pelvic Surgery, one week, November 7

OBSTETRICS—General and Surgical Obstetrics, two weeks, November 7

MEDICINE—Gastroenterology, two weeks, October 24
Electrocardiography and Heart Disease, two-week basic course, October 10
Gastroscopy, forty-hour basic course, November 7
Dermatology, two weeks, October 17

RADIOLOGY—Clinical Course, two weeks, by appointment
Clinical Uses of Radioisotopes, two weeks, October 10

PEDIATRICS—Clinical Course, two weeks, by appointment

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THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

THE PREVENTION OF OCCUPATIONAL SKIN DISEASES. By Louis Schwartz, M.D., Medical Director, U. S. Public Health Service (Ret.). Prepared for publication by the Association of American Soap and Glycerine Producers, Inc. McGraw-Hill Book Company, Inc., 1955.

NEW AND NONOFFICIAL REMEDIES. Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1955. Issued under the direction and supervision of The Council on Pharmacy and Chemistry, American Medical Association. Philadelphia and Montreal: J. B. Lippincott Company, 1955.

This is an annual edition which has been brought up to date, and is a very helpful reference.

CLINICAL MEMORANDA ON ECONOMIC POISONS. A publication of the Technical Development Laboratories Technology Branch, Communicable Disease Center, Public Health Service, Savannah, Georgia, U. S. Department of Health, Education and Welfare. Washington, D. C.: National Agricultural Chemicals Association, 1955. No charge.

This publication by the National Agricultural Chemicals Association, is a revised report which is very comprehensive and up to date. The use of agricultural chemicals (pesticides) is required in the production of foods and fibre crops, and controlling of disease-bearing insects.

There are no undue hazards when properly used; however, some cause accidental poisoning. This book would be valuable and is available on request to doctors in agricultural regions or to those who might treat victims of pesticides. To secure a copy, write National Agricultural Chemicals Association, Associations Building, 1145 Nineteenth St. N.W., Washington 6, D. C.

STRESS SITUATIONS. Edited by Samuel Liebman, M.D., Medical Director, North Shore Health Resort, Winnetka, Illinois, Clinical Assistant Professor of Psychiatry, University of Illinois College of Medicine. Philadelphia and Montreal: J. B. Lippincott Company, 1955. Price, $3.00.

This small volume consists of seven essays originally given as a lecture series on the "Emotional Reactions to Stress." The specific stresses include acute illness, divorce, sterility, and catastrophe. The lectures were presented by outstanding men in the field and were intended to provide a psychiatric orientation for physicians in a residency training program. Consequently, the material is presented clearly and without the burden of confusing technical psychiatric terms.

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(Continued on Page 1260)

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(Continued from Page 1258)

conflict and divorce are similarly frequent causes in the production of commonly seen syndromes. As is indicated in this book, the stress produced by the adaptation to marriage is much too frequently neglected in evaluation of causes of emotional disorder, particularly when the marriage appears as calm on the surface. A more complete consideration of such aspects of the problems of living can make the physician more truly "The Family Doctor."

The chapter on "Catastrophe" presents a good deal of valuable information relevant to these times when profound and widespread destruction from nuclear weapons can confront us with dramatic suddenness. In order to understand and be able to help in times of major disaster, the physician should understand not only the reaction of large groups but also those emotional responses of the individual who faces his own specific catastrophic experience. The inability to master his fear, rage or grief and the resulting inffective actions which increase the tension and the danger, require prompt attention. The mental confusion, the frozen fear, the apathy and the aggressive "running amok" are all common syndromes and may become infectious at a time of general catastrophe unless understood. Though of small size, this book contains much in the way of practical information.

THE MEDICAL SIGNIFICANCE OF ANXIETY. Richard L. Jenkins, M.D., Chief, Psychiatric Research, Psychiatry and Neurology Service, Veterans Administration, Washington, D. C. Washington, D. C.: The Biological Sciences Foundation, Ltd., 1955. Price, $1.00.

This pamphlet of forty-six pages presents an interesting review of the problems of anxiety in medical practice. It is the contention of the author that the management of anxiety is not ordinarily considered a significant part of medical treatment. Rather, it is felt to be "a graceful and useful addition to medical competence." Not only does anxiety appear to some extent in almost every illness, but in many it complicates the diagnosis, fosters prolongation of the recovery or profoundly affects the degree of disability.

Discussion of the control of anxiety includes methods for the immediate treatment through reassurance and encouragement with the aids of sedatives and other medication. The use of the newer drugs, reserpine and chlorpromazine is included. Completion of treatment includes the long range methods needed to avoid recurrences. The importance of the problem is well stated by the following paragraph from the preface: "The practicing physician has no choice as to whether or not to deal with the problem of anxiety. His only choice lies in whether he deals with it well or badly. This booklet is an endeavor to aid him to deal with it wisely."

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(Continued from Page 1191)

Summary

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2. Treatment should be started early for thrombophlebitis, as recovery without treatment is rare.

3. Early treatment prevents extension of the disease and an early and safe recovery.

4. Surgical interruption of the venous system proximal to the thrombotic process permits collateral circulation sufficient for normal nutrition if below the common femoral vein.

5. Anticoagulant therapy, given until all symptoms are clear for seven to ten days, is successful.

Bibliography

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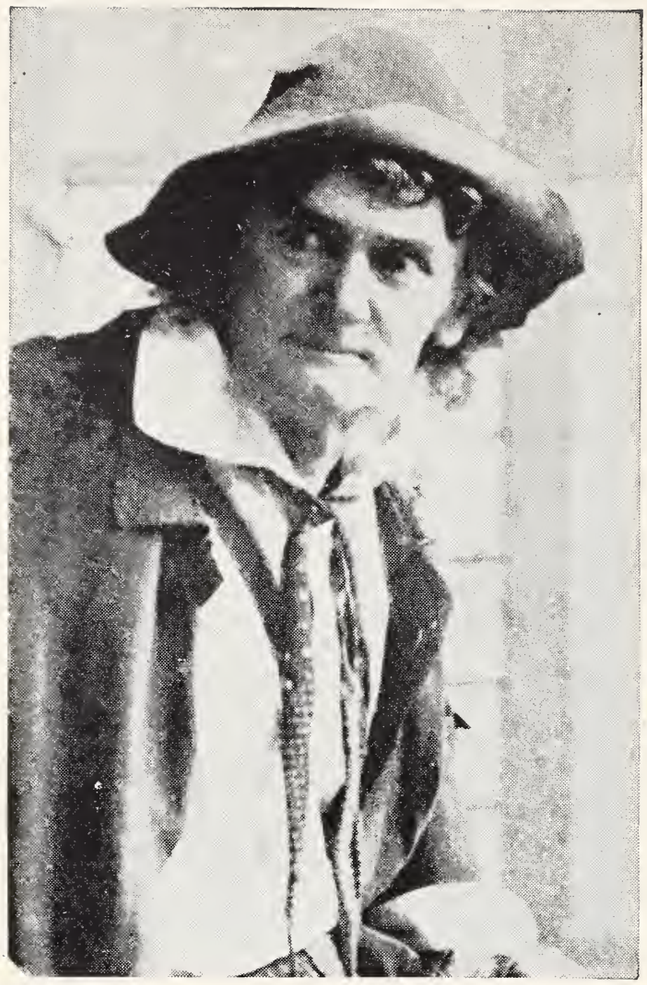
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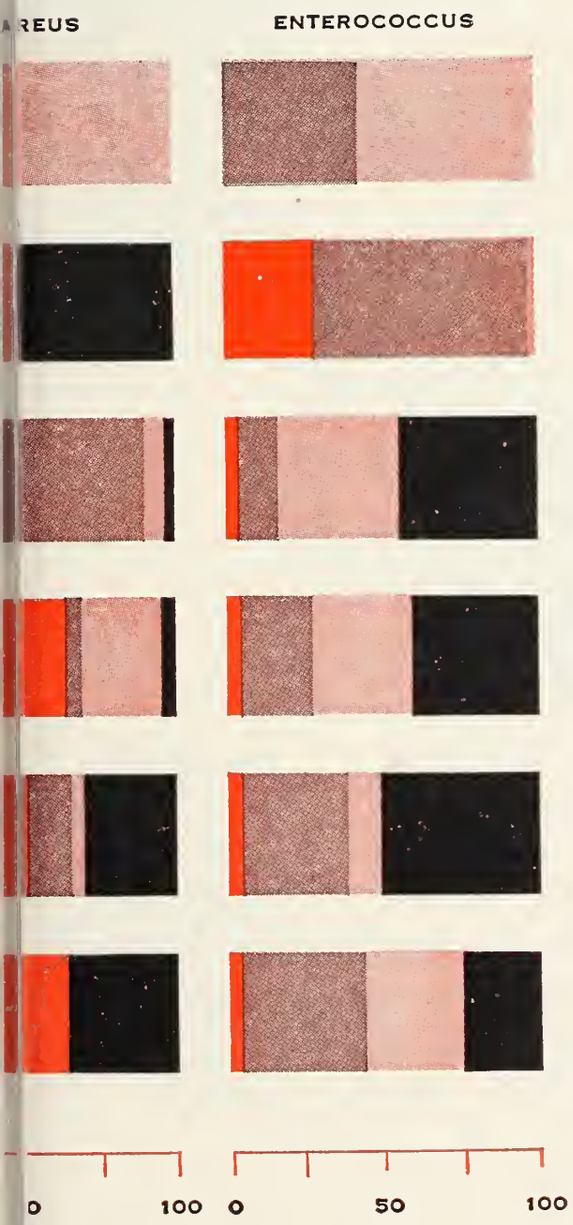
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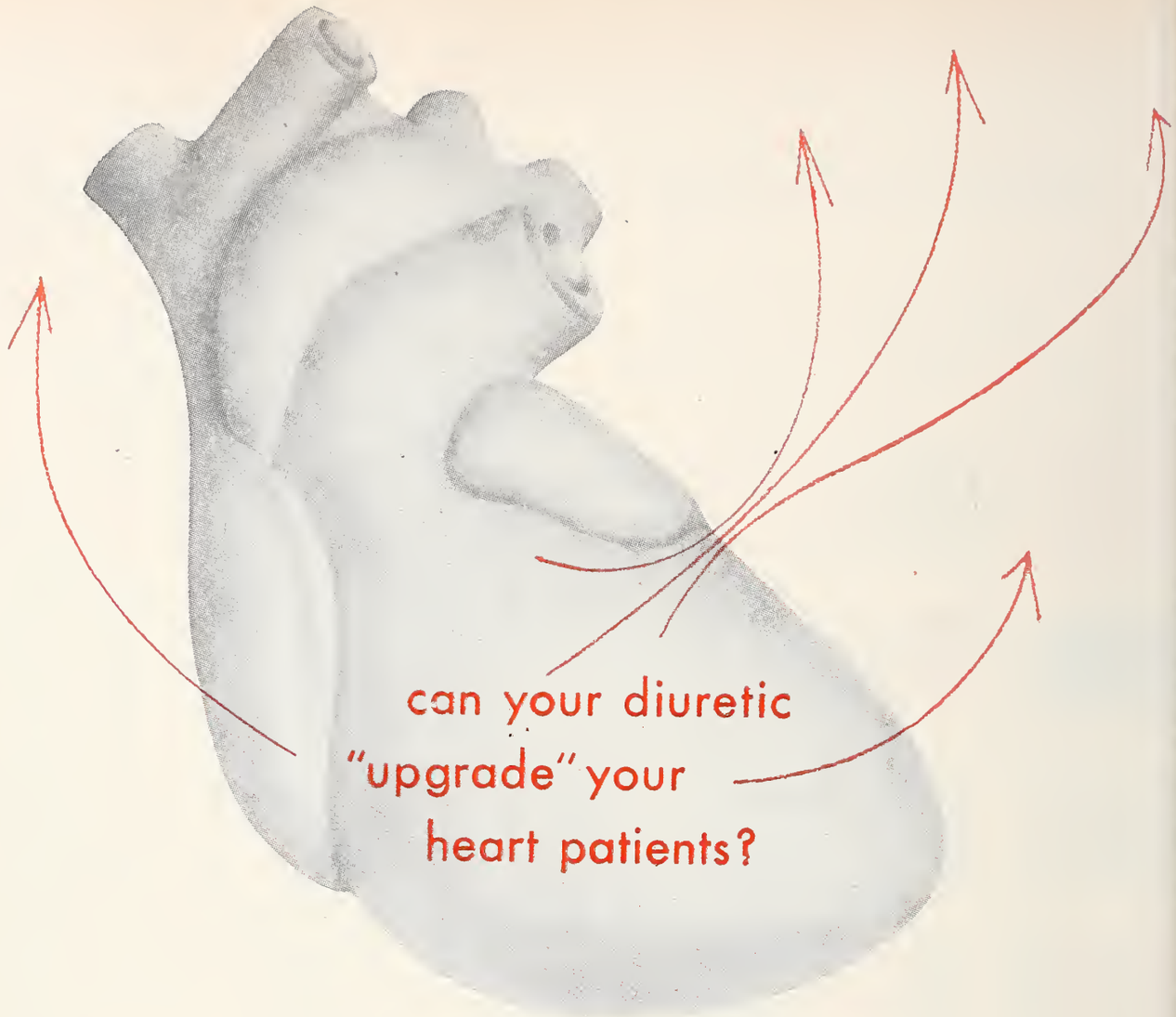
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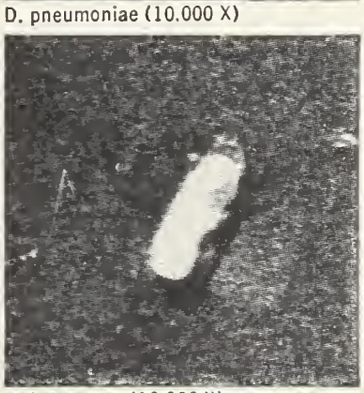
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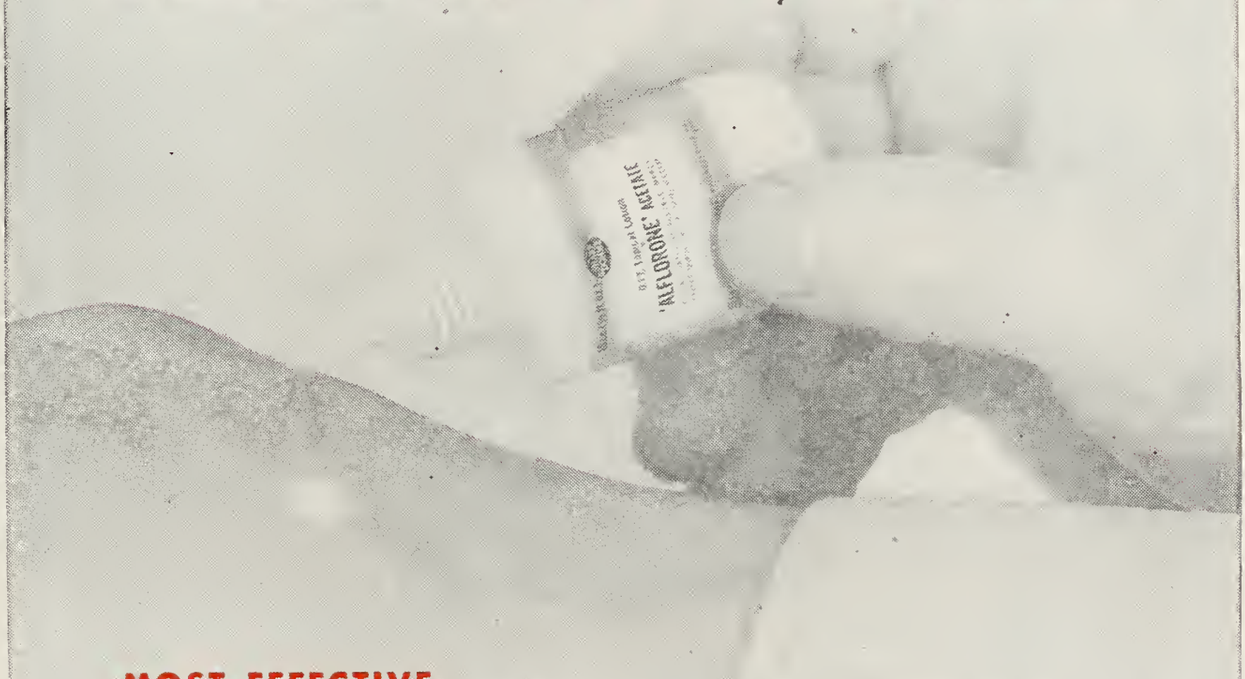
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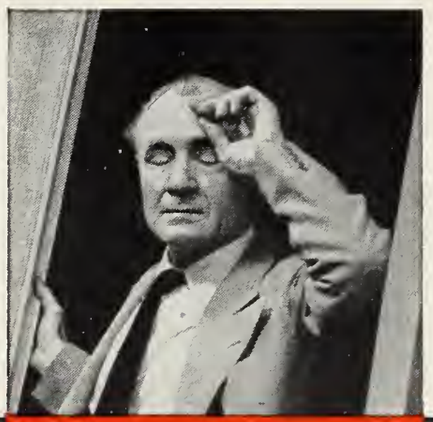
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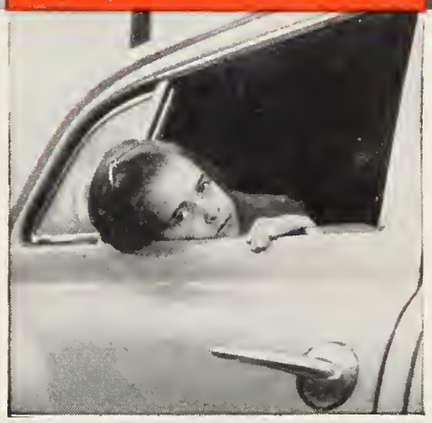




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1. Rosenberg, S. and Oster, K. A., "Gelatine in the Treatment of Brittle Nails," *Conn. State Med. J.* **19**:171-179, March 1955.
2. Tyson, T. L., *J. Invest. Dermat.* **14**:323, May 1950.

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Seated (left to right): W. M. LeFevre, M.D., Muskegon; W. B. Harm, M.D., Detroit; L. Fernald Foster, M.D., Bay City; J. E. Livesay, M.D., Flint; W. S. Jones, M.D., Menominee; D. Bruce Wiley, M.D., Utica, Chairman of The Council; Arch Walls, MD., Detroit, K. H. Johnson, M.D., Lansing; W. A. Hyland, M.D., Grand Rapids; Ralph W. Shook, M.D., Kalamazoo, and G. B. Saltonstall, M.D., Charlevoix.

Standing (left to right): B. M. Harris, M.D., Ypsilanti; J. D. Miller, M.D., Grand Rapids; H. H. Hiscock, M.D., Flint; William Bromme, M.D., Detroit; H. B. Zemmer, M.D., Lapeer; F. H. Drummond, M.D., Kawkawlin; Wilfrid Haughey, M.D., Battle Creek; B. T. Montgomery, M.D., Sault Ste. Marie; G. W. Slagle, M.D., Battle Creek; L. C. Harvie, M.D., Saginaw; G. T. McKean, M.D., Detroit; T. P. Wickliffe, M.D., Calumet, and R. H. Baker, M.D., Pontiac.

Absent on MSMS business at time photograph was taken: O. B. McGillicuddy, M.D., Lansing, and A. E. Schiller, M.D., Detroit.

HIGHLIGHTS OF THE SEPTEMBER SESSION OF THE COUNCIL

September 25 and 30, 1955

A total of one hundred and fifteen items was presented and discussed by the twenty-five members of The Council (eighteen Councilors, the President, President-Elect, Immediate Past President, Secretary, Treasurer, Speaker and Vice Speaker) at the two meetings held coincident with the MSMS Annual Session in Grand Rapids.

Three hundred and eighteen cumulative hours were contributed on these two days by the members of The Council to study and decide upon the problems facing the medical profession of Michigan, including:

- **Reorganization of the Council:** D. Bruce Wiley, M.D., of Utica, was elected as Chairman; W. B. Harm, M.D., Detroit, was chosen as Vice Chairman; William M. LeFevre, M.D., Muskegon, was selected as Chairman of the County Societies Committee; G. B. Saltonstall, M.D., Charlevoix, was again given the post of Chairman of the Publication Committee; and Ralph W. Shook, M.D., Kalamazoo, was re-elected head of the Finance Committee.

- **The monthly financial reports** were studied and approved, as well as bills payable which were ordered paid.

- **Two matters of mutual interest** were discussed with State Health Commissioner A. E. Heustis, M.D., Lansing.

- **The names of thirty-two nominees** for the Michigan State Board of Registration in Medicine were ordered transmitted to the Governor of the State of Michigan, in accordance with Section 1 of the Medical Practice Act which authorized MSMS to submit recommendations for appointments to said Board. The terms of five members expired September 30.

- **Congratulations were extended** to E. C. Swanson, M.D., Vassar, newly elected Secretary of the Michigan State Board of Registration in Medicine. MSMS stands ready to be of any assistance to Dr. Swanson and his Board.

- **Committee Reports**—the following were given consideration: (a) Finance Committee of The Council, meeting of September 25; (b) County Societies Committee of The Council, September 25; (c) Publication Committee of The Council. September 25; (d) Committee on Accreditation of Hospitals, August 24, (report ordered published as part of the Supplemental Report of The Council); (e) Committee on Courses in Medical Economics and Ethics, August 26; (f) Public Relations Committee, August 28; (g) Committee on Study of Michigan Medical Service Fee Schedules, August 31

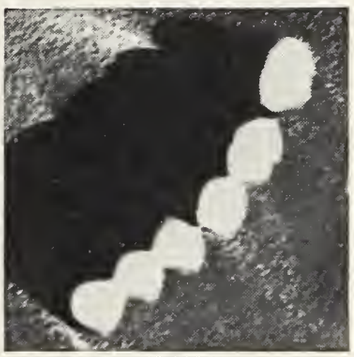
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The organisms commonly involved in

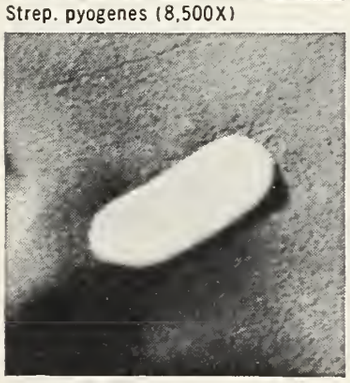
Bronchiectasis

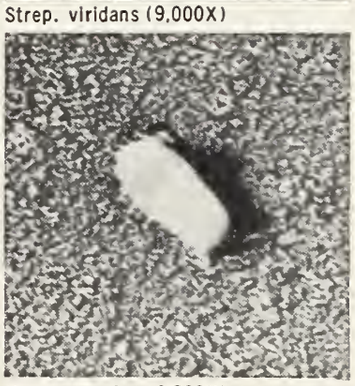

Staph. aureus (9,000X)

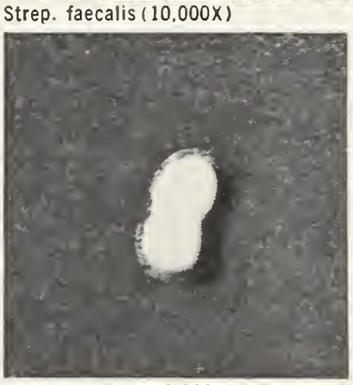

Strep. pyogenes (8,500X)

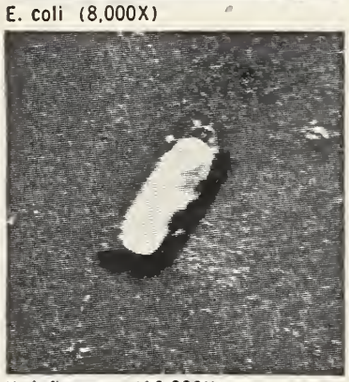

Strep. viridans (9,000X)

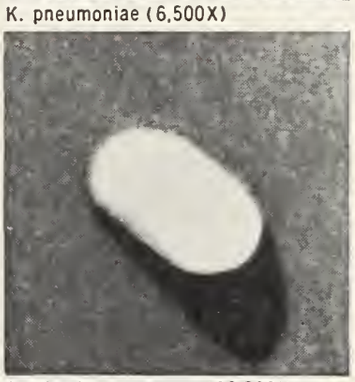

Strep. faecalis (10,000X)


E. coli (8,000X)


K. pneumoniae (6,500X)


D. pneumoniae (10,000X)


H. influenzae (16,000X)


Aerobacter aerogenes (12,500X)

Upjohn

ELECTRON MICROGRAPHS

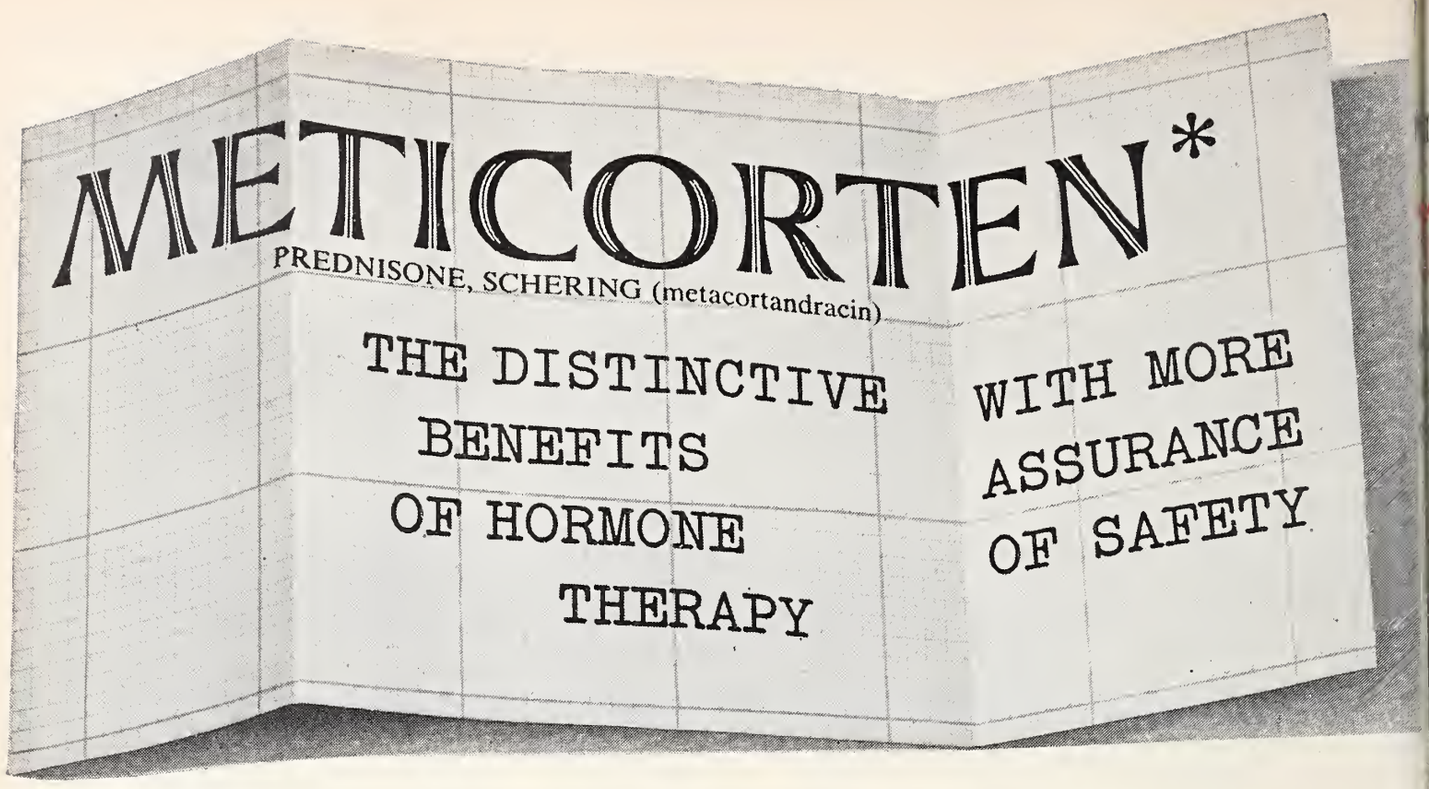
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- clinical response even where cortisone or hydrocortisone ceases to be effective—"cortisone escape"
- effective in smaller dosage

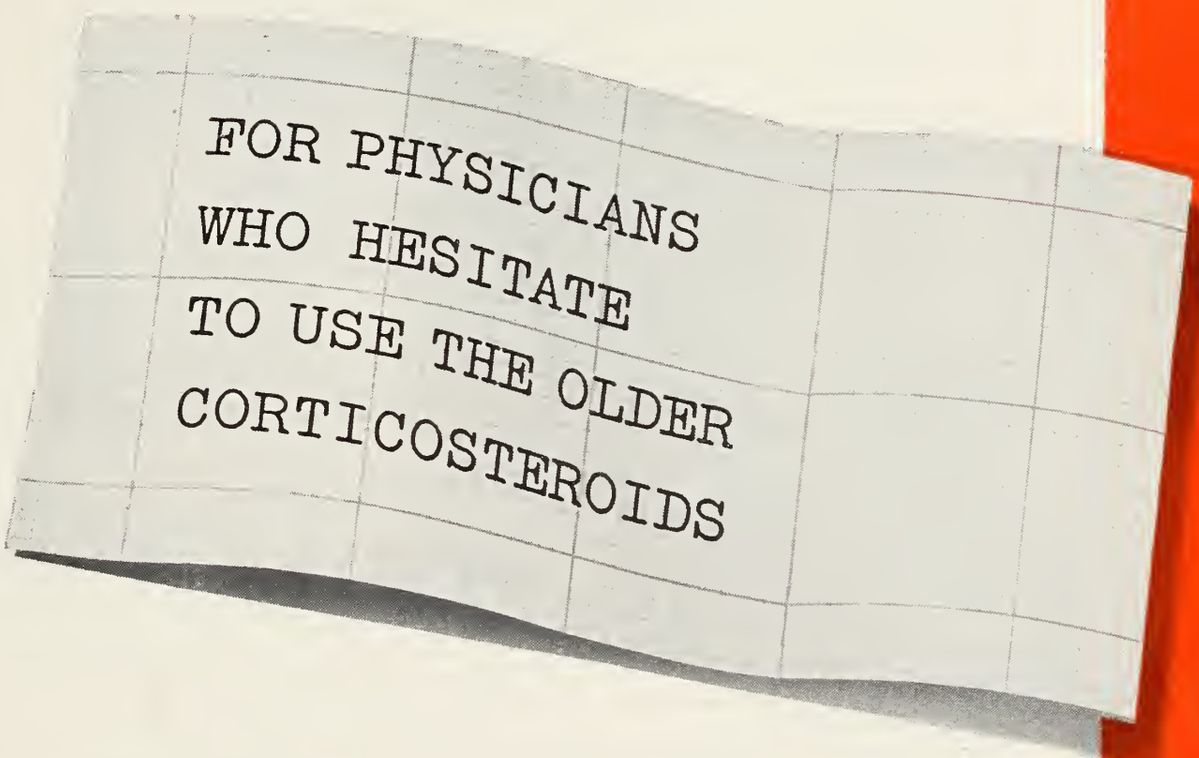
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a potent
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Orally and parenterally
effective, intra-arterially
as well as intramuscularly
and intravenously.
Of proved value in peripheral
ischemia and its sequelae:
pain, loss of function,
ulceration, gangrene, and other
trophic manifestations.

Comprehensive information on
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is available upon request
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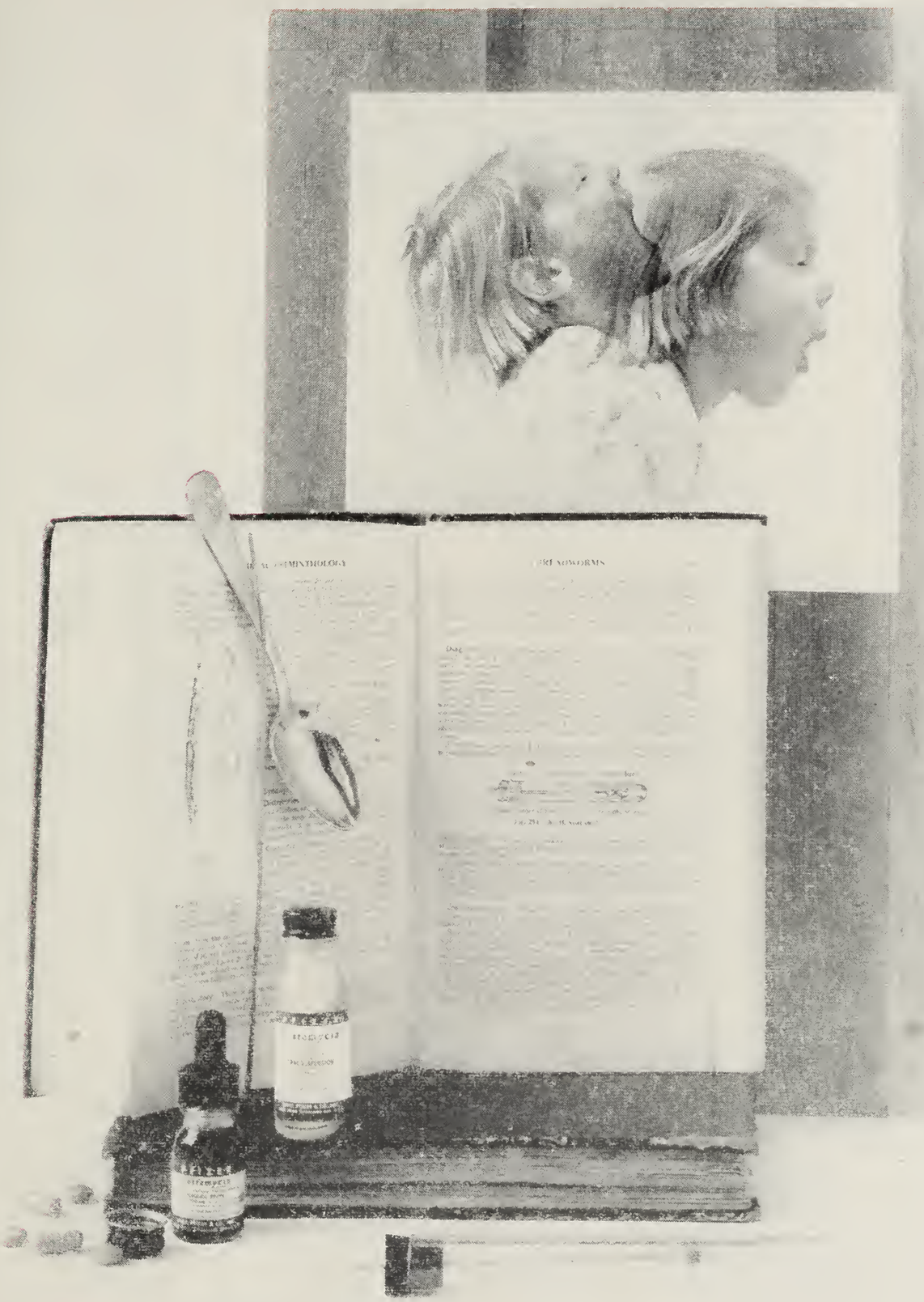
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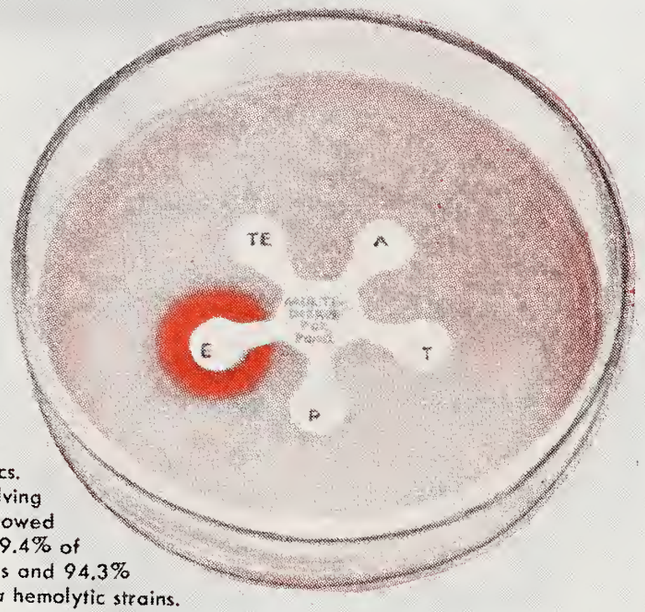
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This blood agar plate shows a strain of *beta* hemolytic enterococcus. Note extreme sensitivity of this organism to ERYTHROCIN—yet it easily resists the other antibiotics. Additional data: A study[1] involving 202 enterococcic strains showed sensitivity to erythromycin in 99.4% of *alpha* hemolytic strains and 94.3% of *beta* hemolytic strains.

specific against coccic infections

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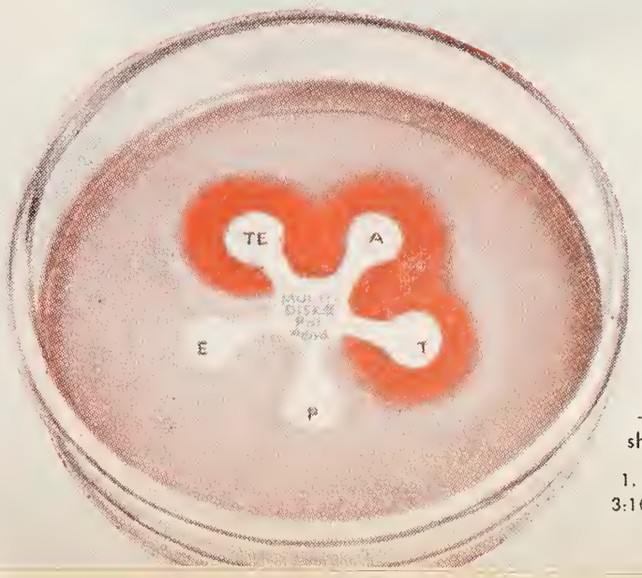
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1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

with little risk of serious side effects

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HIGHLIGHTS OF THE COUNCIL

(Continued from Page 1276)

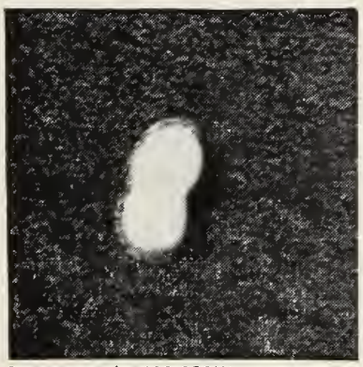
(paragraph ordered published in the Supplemental Report of The Council); (h) Rheumatic Fever Control Committee, September 14; (i) Program Committee for 1956 Michigan Clinical Institute, September 15; (j) Ubiquitous Hosts for 1955 Annual Session Speakers, September 20; (k) Awards Committee, September 25; and (1) Committee on Mediation, Ethics and Grievance, September 25.

- **Michigan Foremost Family Physician.** Three nominees were selected (J. W. Rigterink, M.D., Grand Rapids, Paul Van Riper, M.D., Champion, and Walter H. Winchester, M.D., Flint) and referred to the MSMS House of Delegates for final balloting.
- **House of Delegates Resolutions.** The Council recommended to the Speaker of the House of Delegates that all resolutions, regardless of content, be referred to a reference committee; this would include resolutions honoring individuals.
- **President's Report:** R. H. Baker, M.D., reported that R. L. Novy, M.D., Detroit, had resigned as President and as a member of the Board of Directors of Michigan Medical Service; the President recommended that MSMS recognize Dr. Novy's long years of service to Michigan medicine with a letter of appreciation and a suitable memento; the President's recommendations were adopted, the letter to be read on Officers Night, September 28, Grand Rapids, during the MSMS Annual Session.
- **President-Elect Jones** appointed I. A. LaCore, M.D., Pontiac, as Chairman of the Mental Health Committee.
- **Council Chairman's Report.** William Bromme, M.D., Detroit, presented several matters including a request from operating room supervisors for co-sponsorship of their Conference held coincident with the Michigan Clinical Institute (March 7-8, 1956); also that the new Liaison Committee with the State Executive Office already had been called upon by Governor G. Mennen Williams for advice in an important matter.
- **Appointments:** B. M. Harris, M.D., Ypsilanti, and R. W. Teed, M.D., Ann Arbor, were appointed MSMS representatives to attend the Michigan Council for UNESCO, October 7-8, Ann Arbor; M. A. Darling, M.D., Detroit, was selected as Moderator for Civil Defense Symposium, Detroit, November 16; R. W. Teed, M.D., was selected as official representative to the Indiana State Medical Association annual meeting, October 17-18-19; J. D. Miller, M.D., Grand Rapids, was elected official delegate and C. Allen Payne, M.D., Grand Rapids. was chosen as alternate delegate, to the AMA Disability Benefits Conference, Chicago, October 22; B. T. Masters, M.D., Fremont, was selected as MSMS representative to attend the National Conference on Health Councils, October 9, Chicago; W. S. Jones, M.D., Menominee, J. D. Miller, M.D., Grand Rapids, W. M. LeFevre, M.D., Muskegon, R. W. Shook, M.D., Kalamazoo, G. W. Slagle, M.D., Battle Creek, C. Allen Payne, M.D., Grand Rapids, L. Fernald Foster, M.D., Bay City, D. Bruce Wiley, M.D., Utica, and William Bromme, M.D., Detroit, were appointed as representatives at October 6 reception for Michigan Health Officers Association, Grand Rapids; Pres. W. S. Jones, M.D., was requested to represent MSMS at dedication of new building of the State Medical Society of Wisconsin.
- **A letter of commendation** to Executive Director William J. Burns on his contribution to the 1955 National Institute, as instructor in "Membership Problems," was received from A. C. Boyd, President of the National Institute, held annually at and under the co-sponsorship of Northwestern University.
- **Legal Counsel's Report.** Mr. J. Joseph Herbert presented opinions re examination of patients' charts by laymen; nurses administering anesthesia (request for this information coming from the Ohio State Medical Association); progress report on Kopprasch Case; Interprofessional Code of Wisconsin (referred to joint meeting of the Executive Committee of The Council with the Executive Committee, Board of Commissioners of the State Bar of Michigan, October 19 in Lansing.)
- **Public Relations Counsel's Report.** H. W. Brenneman stated that the MSMS exhibit, displayed co-operatively with the Michigan Diabetes Association, was a successful feature of the recent Michigan State Fair; he also reported on service club talks and radio and television presentations during the 90th Annual Session, including daily broadcasts from the Pantlind Hotel lobby over radio station WOOD, Grand Rapids; a request of Genesee County Medical Society for use of MSMS exhibit during Flint's "Career Carnival"—which request was granted by The Council.
- **The Supplemental Report of The Council** was read item by item, amended in five sections, and approved for reference to the House of Delegates.
- **Death of Carl M. Peterson, M.D.,** long-time Secretary of AMA Council on Industrial Health, was reported; an appropriate letter of condolence to the survivors and to the AMA was authorized.
- **1956 County Society Secretaries-Public Relations Seminar,** Detroit, January 27-28-29: the program was presented and approved.
- **Official** thanks to all who helped make the

(Continued on Page 1286)

The organisms commonly involved in

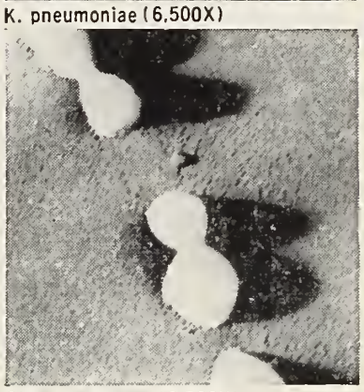
Pneumonia



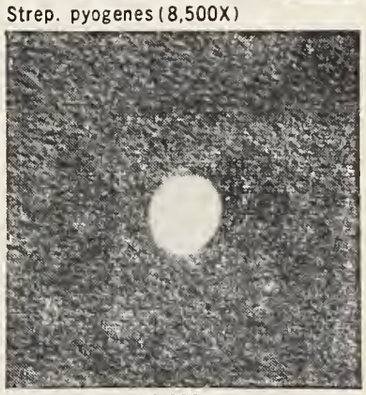
D. pneumoniae (10,000X)



K. pneumoniae (6,500X)



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HIGHLIGHTS OF THE COUNCIL

(Continued from Page 1284)

1955 Annual Session an outstanding success (record registration, for Grand Rapids, of 3,585) was placed on the minutes of The Council.

- **Governor G. Mennen Williams** was thanked for his attendance and his presentation on "Traffic Safety," Thursday morning, September 29, MSMS Assembly, Grand Rapids.
- **Condition of the medical profession** in the various Councilor Districts was reported by all Councilors.

REVENUE BUREAU SUMMARIZES MEDICAL EXPENSES UNDER TAX LAW

Deductible and non-deductible medical expenses for income tax purposes have been summarized by the Bureau of Internal Revenue in a series of rulings that combine new interpretations with a clarification of old rulings. Some examples:

Travel expenses to and from a location where daily visits to a medical clinic are required are deductible but (since 1954) cost of food and lodging are not, except as part of a hospital bill.

On education and training, special instruction in speech and lip reading for a deaf child are deductible expenses, but not a course of ordinary instruction. Psychiatric care and therapy at specially equipped treatment schools for alleviating mental illness are deductible items, but where cost of instruction at a psychiatric school doesn't represent medical care, it is not deductible.

On health and accident indemnity insurance, if a policy covers both injury indemnity and medical expense reimbursement, premium cost for latter is deductible but not for former.

On other points, ordinary exercise rubdown, air conditioner, oxygen equipment, iron lung, special bed board, all are deductible items when prescribed by a physician for an illness but not food for ulcer patient, maternity clothing, diaper service, wigs or toothpaste.

WHAT'S WRONG

The Association of American Physicians and Surgeons reports some "shocking results" revealed in a poll of high school seniors on their opinions of the free enterprise system. Eighty-six schools scattered across the nation were surveyed by the Opinion Research Corporation. Here are some of the results:

82% do not believe there is competition in business.
60% said owners get too much of the profits.
76% said owners get most of the gains from new machinery.
55% support the Communist theory "from each according to ability, to each according to needs."
61% reject the private incentive as a need to the survival of our economic system.
60% said a worker should not produce all he can.

—*Polk County* (Iowa) *Medical Society Bulletin,* August-September, 1955

MEDICAL MEETINGS AND CLINIC DAYS

A list of known medical meetings and clinic days, sponsored by county medical societies and other physician groups in Michigan, follows:

November 29	AMA Clinical Session	Boston
December 14	MSMS Executive Committee of The Council	Lansing
1956		
January 18-21	Michigan Rural Health Conference	Kalamazoo
January 25-27	Annual Meeting of the MSMS Council, Sheraton-Cadillac Hotel	Detroit
January 27-29	MSMS County Secretaries-Public Relations Seminar, Sheraton-Cadillac Hotel	Detroit
February 16	MSMS Executive Committee of The Council	Detroit
March 6	Michigan Chapter, American College of Surgeons	Detroit
March 7-9	Michigan Clinical Institute, Sheraton-Cadillac Hotel	Detroit
March 9	MSMS Executive Committee of The Council	Detroit
Spring	MSMS Postgraduate Extramural Courses	Statewide
April 11	Genesee County Medical Society's Eleventh Annual Cancer Day	Flint
April 18	MSMS Executive Committee of The Council	Lansing
May 8-9	Annual Clinic Day and Alumni Reunion, Wayne University College of Medicine	Detroit
May 16	MSMS Executive Committee of The Council	Detroit
May 3	Twenty-Eighth Annual May Clinic, Ingham County Medical Society	Lansing
June	Upper Peninsula Medical Society	———
June 11-15	Annual Session, American Medical Association	Chicago
June 4-7	American Cancer Society, Sheraton-Cadillac Hotel	Detroit
June 20	MSMS Executive Committee of The Council	Muskegon
July 19-21	Mid-summer Session of the MSMS Council	Mackinac Island

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1954 'Alflorone' | 1955 Deltra®

'Hydeltra' tablets

(PREDNISOLONE, MERCK)

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Indications: *Rheumatoid arthritis*
Bronchial asthma
Inflammatory skin conditions

ANNUAL CLINICAL CONFERENCE

Chicago Medical Society

February 28, 29, March 1 and 2, 1956

Palmer House, Chicago

DAILY HALF-HOUR LECTURES BY OUTSTANDING TEACHERS AND SPEAKERS on subjects of interest to both general practitioner and specialist

PANELS ON TIMELY TOPICS TEACHING DEMONSTRATIONS

SCIENTIFIC EXHIBITS worthy of real study and helpful and time-saving TECHNICAL EXHIBITS.

The CHICAGO MEDICAL SOCIETY ANNUAL CLINICAL CONFERENCE should be a MUST on the calendar of every physician. Plan now to attend and make your reservation at the Palmer House.



Heart Beats

HEART OF THE HOME CLASSES

Classes in work-simplification techniques designed to fill the doctor's prescription of "Take It Easy" by showing the homemaker with heart disease *how* to "Take It Easy" will continue to be offered throughout the State by the Michigan Heart Association. The Michigan State Medical Society has approved the program and Doctors of Medicine are urged to refer their women cardiac patients to the classes which are financed by the MHA, a Michigan United Fund Agency. *No medical advice, diagnosis, treatment or examination is given in the classes.* This service is adjuvant to private practice and not competitive with it. A complete schedule of the classes which are held in co-operation with Michigan State University extension service and Wayne University is as follows:

Michigan State University

December 6, 8, 13, 15—Ingham County
December 7, 9, 14, 16—Kent County
January 10, 12, 17, 19—Monroe County
January 11, 13, 18, 20—Washtenaw County
February 7, 14, 21, 28—Oakland County
February 8, 15, 22, 29—Eaton County
March 7, 14, 21, 28—Midland County
March 8, 15, 22, 29—Bay County
April 3, 5, 10, 12—Huron County
April 4, 6, 11, 13—Sanilac County
May 1, 3, 8, 10—Newaygo County
May 2, 4, 9, 11—Mecosta County
June 4, 11, 18, 25—Oceana County
June 5, 12, 19, 26—Mason County
June 6, 13, 20, 27—Alpena County

Wayne University

Contact Michigan Heart Association, Doctor's Building, 3919 John R, Detroit 1, Michigan (TEmple 1-8550) for full details.

Role of the P-A Film of the Chest in Cardiology

A new Medical Lecture Kit by William R. Christensen, M.D., Professor of Radiology, University of Utah College of Medicine, is the first of a series of "Cardiac Clinics" to be made available by the Michigan Heart Association on a free-loan basis. These audio-visual kits are designed to enable the Doctor of Medicine to continue his medical education at his convenience in the comfort of his home or office. They consist of a medical discussion recorded on two 12-inch long-playing records (33⅓) correlated with a set of thirty-nine slides (35 mm), a table top viewer for slides with extra light bulb, and a script of the actual discussion. The running time is approximately thirty-five minutes. The only equipment the physician needs to supply is a standard record player for 33⅓ RPM records. Although designed primarily for home or office use, they can be adapted for small meetings by the addition of projection and sound amplification equipment. Contact the Michigan Heart Association, Doctor's Building, 3919 John R, Detroit 1, Michigan, for complete details.

AHA Study Planned to Help Determine Relationship of Work to Heart Attacks

The relationship between work and exercise and heart disease and heart attacks, which has long troubled the medical profession as well as workers and employers, will be the subject of a study to be supported and supervised by the American Heart Association. The project will be directed by Sidney Weinberg, M.D., Assistant Medical Examiner of New York City. Dr. Weinberg has accepted assignment as responsible investigator. He will work with a team of clinical and laboratory scientists.

The project will be under the jurisdiction of a joint Committee on Strain and Trauma. A grant of $13,750 has been approved by the Association's Board of Directors to finance the effort.

Another aspect of the strain and trauma and heart disease question is also to come under study by the Association within the next few months. A project is being organized, which will have as its purpose the critical analysis of legal decisions concerning cardiovascular cases in relation to workmen's compensation.

(Continued on Page 1320)

Pork in the Dietary
During Pregnancy and Lactation

CERTAIN NUTRIENTS are required in greater than normal amounts during pregnancy and lactation. Pork meat, though its cost is low, supplies a remarkably high quantity of the nutrients required by the maternal organism in these periods of physiologic need.

During pregnancy the maternal organism may store 3.3 to 5.5 pounds of protein in excess of that contributed to fetal tissue.[1] Enough iron is stored to approximate the entire amount secreted in the milk during 9 months of lactation, in addition to the iron supplied to the fetus.[2]

The body of the newborn infant contains approximately 500 grams of protein, 14 grams of phosphorus, and 0.5 gram of iron.[3] It is estimated that the lactating mother, through breast milk, provides a 26 week old infant with about 12 grams of protein, 76 grams of lactose, and 1.2 mg. of iron each day.[2]

Pork meat, an excellent source of high quality protein, thiamine, niacin, and iron,[4] also supplies valuable amounts of other B vitamins, as well as phosphorus, magnesium, and potassium. The thiamine content of pork is particularly important, since there are few more valuable food sources of this vitamin.[4]

Pork and pork sausage—economical, good tasting—are valuable components of the dietary of the pregnant or lactating woman. Just how valuable, is shown in the table below.

1. Toverud, K.U.; Stearns, G., and Macy, I.G.: Maternal Nutrition and Child Health, an Interpretative Review, Washington, D.C., National Research Council, Bull. 123, 1950.

2. McLester, J.S., and Darby, W.J.: Nutrition and Diet in Health and Disease, ed. 6, Philadelphia, W.B. Saunders Company, 1952, p. 241.

3. Marrack, J.R.: Food and Planning, London, Victor Gollancz, Ltd., 1943, p. 67.

4. Wolgamot, I.H., and Fincher, L.J.: Pork Facts for Consumer Education, Washington, D.C., United States Department of Agriculture, AIB No. 109, 1954.

5. Watt, B.K., and Merrill, A.L.: Composition of Foods—Raw, Processed, Prepared, Washington, D.C., United States Department of Agriculture, Agricultural Handbook No. 8, 1950.

6. Bowes, A. deP., and Church, C.F.: Food Values of Portions Commonly Used, ed. 7, Philadelphia, Anna dePlanter Bowes, 1951.

Percentages of Recommended Daily Dietary Allowances* for Pregnant (3rd Trimester) and Lactating Women Provided by 3-Ounce Portions of Cooked Pork Meats and Pork Sausage

	Protein	Iron	Phosphorus	Thiamine	Riboflavin	Niacin	Calories
PREGNANCY (3rd trimester)							
Ham, without bone, 3 oz., cooked[5]	25.0%	17.3%	13.5%	30.0%	10.0%	26.7%	12.5%
Pork Chops, without bone, 3 oz., cooked[5]	25.0%	17.3%	13.3%	47.3%	10.0%	28.7%	10.5%
Pork Sausage, 3 oz., cooked[6]	17.3%	14.0%	9.2%	27.7%	10.1%	18.5%	14.7%
LACTATION							
Ham, without bone, 3 oz., cooked[5]	20.0%	17.3%	10.1%	30.0%	8.0%	26.7%	10.2%
Pork Chops, without bone, 3 oz., cooked[5]	20.0%	17.3%	10.0%	47.3%	8.0%	28.7%	8.6%
Pork Sausage, 3 oz., cooked[6]	13.8%	14.0%	6.9%	27.7%	8.1%	18.5%	12.0%

*Recommended Dietary Allowances, Washington, D. C., National Academy of Sciences—National Research Council, Publication 302, 1953

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute
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AMA Washington Letter

THE MONTH IN WASHINGTON

Within a few months, there will be under way the first comprehensive survey ever to be made of the nation's mental health problems. The study will attempt to measure the extent of mental illness, to judge the progress and lack of progress in research, and to estimate the additional hospitals and clinics and trained personnel needed before a start can be made toward a solution.

A newly formed Joint Commission on Mental Illness and Health already has begun preliminary work on the survey. The all-out effort will be initiated—possibly before the first of the year—after the Commission has received the formal approval of the National Mental Health Advisory Council of U. S. Public Health Service and the Surgeon General. Once this endorsement has been given, $250,000 in U. S. funds will be available to help with the first year's operations. Another million dollars is to be supplied over the following two years.

Originally, the Joint Commission was formed by the American Medical Association's Council on Mental Health and the American Psychiatric Association. Later other associations joined in, including the American Association of Psychiatric Social Workers, the American Hospital Association, the American Nurses Association, the National League of Nursing, the American Psychological Association and the National Education Association.

A nationwide survey has been the objective of these associations for more than a year. Substance was added to the idea this year when Congress approved the $1,250,000 fund, to be used over three years, for a comprehensive study. The law specifies that the investigation be conducted by nongovernmental bodies; to fully qualify, the Joint Commission has been legally incorporated.

At hearings before Congressional committees early this year psychiatrists and others outlined the complex problem they are facing.

The care of mental patients is one of the great financial burdens of the states; rate of cure and rehabilitation is so low that institutions are being filled as fast as they can be constructed; half the hospital beds are occupied by mental patients and their care costs more than a billion dollars a year in tax funds.

There are not enough psychiatrists trained to administer state programs or for even all the large hospitals; competition for the top men in this field has been compared to the proselyting of football players and coaches.

Many of the leading psychiatrists complain that too much attention is being paid to constructing hospitals and not enough to research, which might develop treatments that would keep many patients out of institutions, and bring about the rehabilitation of hundreds of thousands of others now hospitalized.

In testifying before a House committee early this year, Dr. Leo H. Bartemeier, representing the AMA, argued for federal help in conducting the survey. He told the Committee: "For several years we in the profession of psychiatry have been aware of the critical need for a survey and evaluation of our facilities and programs for the diagnosis, treatment and care of the mentally ill and retarded. While the problems of mental illness appear to grow in almost geometric proportion, we find ourselves without a comprehensive, up-to-date, integrated body of knowledge in spite of the fact that many worthwhile surveys and studies in this field have been made. It is only with such complete knowledge that our present and future direction and programs can be properly planned."

Notes

Before it prepares a report on the narcotic problem, the Senate subcommittee will have held hearings in most parts of the country. Many local addiction problems have been described. At the New York hearing, the subcommittee was urged to recommend a system of clinics, where the addict legally could obtain narcotics at reasonable cost, thereby defeating the rackets.

Although states either may take U. S. grants to buy Salk vaccine or the vaccine itself, most of them are taking the money.

Veterans Administration has set up a seventh area medical office in Columbus, Ohio, a move that it believes eventually will provide better service at less cost.

Almost nine million dollars will be spent next year on health work in North, South and Central America by international bodies, such as World Health Organization. One project is the starting in Mexico of a four-year malaria eradication program.

The Navy has set up a program for training Waves as nurses; they will be obligated for a year's active duty for each year of training.

Bureau of Internal Revenue has summarized deductible and non-deductible medical expenses for income tax purposes; the listings combine new interpretations with a clarification of old rulings.

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PR REPORT

THE MSMS 90TH ANNUAL SESSION was a tremendous success—the largest ever held in Grand Rapids. A full pictorial roundup is featured elsewhere in this issue, but there are a number of PR sidelights worthy of mention here. For example, traditional pride of the Upper Peninsula in its citizens was the occasion for special regional news service to UP newspapers with pictures and localized releases on the induction of William S. Jones, M.D., of Menominee, as MSMS President. Beyond that, the fact that Dr. Jones is a native of Georgia prompted another special news story to Atlanta dailies.

Flint's pride in the selection of Walter H. Winchester, M.D., as "Michigan's Foremost Family Physician for 1955" brought requests for exclusive photos and news copy. In addition, the MSMS PR staff produced a fifteen-minute on-the-spot interview with Dr. Winchester as he arrived in Grand Rapids for formal introduction to the House of Delegates. This tape recording was hand-delivered to a Flint radio station by a Genesee County Medical Society member, another example of the excellent behind-the-scenes co-operation which goes into the success of a meeting so complex as the MSMS Annual Session. Staff members from Michigan Health Council and Blue Shield also volunteered valuable service which were most valuable to the PR aspects of the meeting.

SPECIAL CITATIONS APPROVED by The Council during the 90th Annual Session will attract considerable comment in months to come, especially at the time the awards are formally presented at the Michigan Clinical Institute next March. Here is a quick rundown of the upcoming honors.

The top award—the MSMS Award for Excellence in Medical Reporting—was voted to *The Detroit Free Press,* with a special citation to Free Press Science Writer Jean Pearson for her continuously high standards in covering Michigan news in the fields of health and medical progress.

Distinguished Health Service awards were voted to: John Wurz, Editor of the *Grand Rapids Herald,* for many years of service and interest in Health and Medicine; the *Lansing State Journal* and the *Muskegon Chronicle* for co-sponsorship of community health forums with their local medical societies; WJBK and WJBK-TV, Detroit, and WPAG-TV, Ann Arbor, for co-operation and interest in broadcasting and telecasting medical affairs; WHFB, Benton Harbor, and WKZO, Kalamazoo, for eight years of continuous use of the MSMS radio series "Tell Me, Doctor" and to the Upjohn Company, Kalamazoo pharmaceutical manufacturer, for its support of the Michigan M.D. Placement Program.

A NEW IDEA FOR "CAREER DAY" was used October 26-28 by the Flint public schools, and the Genesee County Medical Society, with the co-operation of MSMS, took this opportunity to provide information and guidance to scores of students interested in a medical career. Instead of the customary talks before groups of young people seeking facts about a particular field, Flint schools invite professional groups, and representatives of many vocational fields, to set up exhibits in a large central auditorium. Competent counsellors are stationed at each booth, and students are encouraged to pay a visit to those booths which represent the careers in which they are most interested. Pupils are brought to the auditorium on a pre-arranged schedule with a peak load of some 500 per hour.

THE 1955 STATE FAIR EXHIBIT sponsored by MSMS jointly with the Michigan Diabetes Association proved quite a success. Eleven M.D.'s and two dietitians served as resource persons on duty at the booth during the 10 days of the Fair, adding to the value of the exhibit. Nearly 5,000 free home tests for diabetes were selectively distributed. In addition the Woman's Auxiliary to the Wayne County Medical Society aided in distributing 4,100 complimentary copies of *Today's Health* magazine to exhibit visitors. The 1955 State Fair attracted a total attendance of more than 750,000, the second largest in history.

PR POT-POURRI: The AMA has come up with two new television "scripts-with-film" designed so that a local physician may narrate while a film is thrown on the TV screen. These "package shows" make it easy to produce either two fifteen-minute shows, or a single half-hour program, dealing with the eye and the function of eyeglasses. The material is available free to medical societies, and may be obtained through the MSMS PR Department. . . . The need for closer inter-professional relations is becoming more apparent to MSMS leaders. Look for greater emphasis on stronger liaison with other professional societies to build greater respect and understanding for the "professional concept" as a basic factor in American freedom. . . . Neil Bertram, formerly PR Director of the Michigan Society of Architects, has taken over the position as Educational Director for the Michigan Epilepsy Center, replacing William Grimshaw, who resigned to become Assistant to the PR Director of The Burroughs Corporation.

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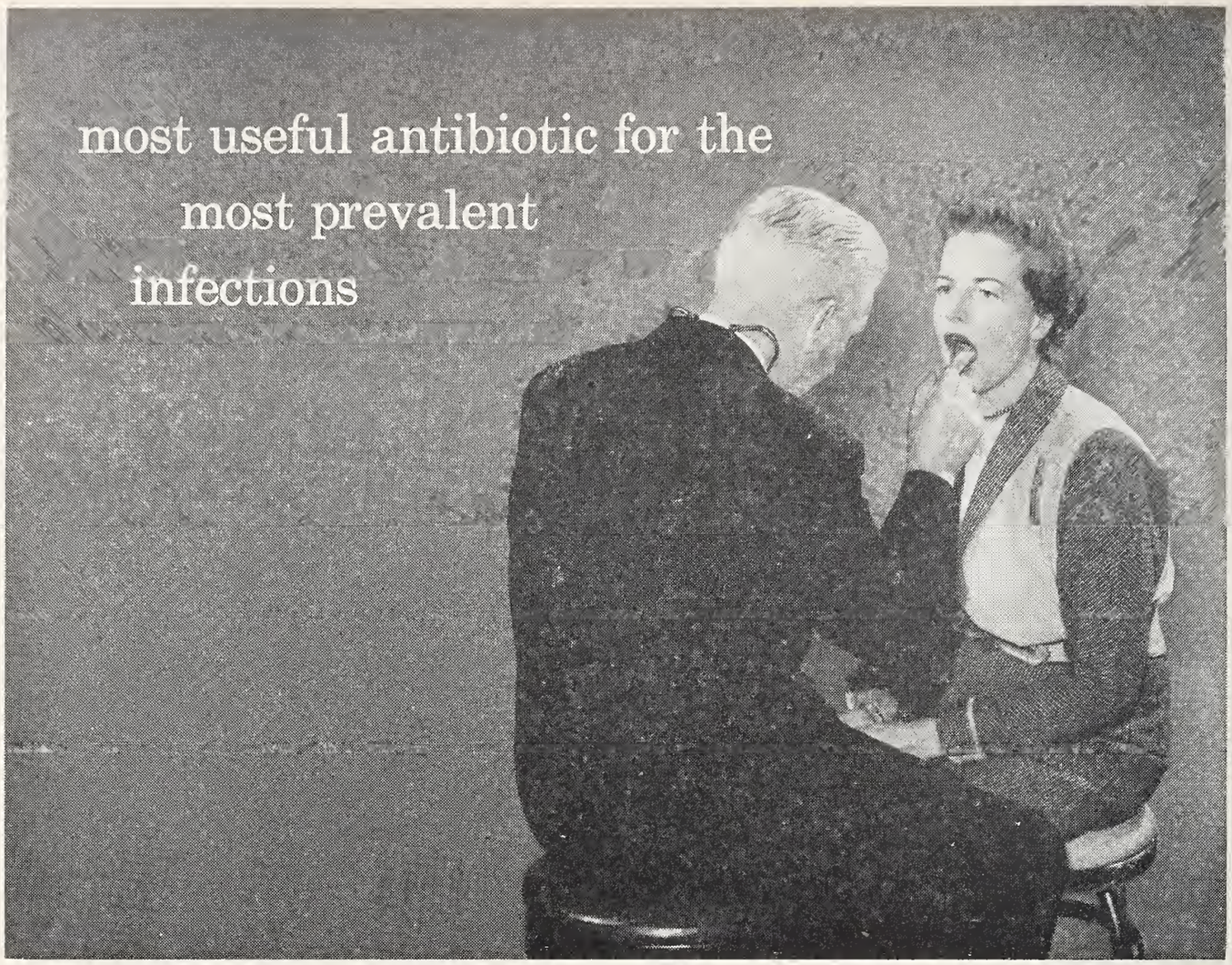
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Tuberculosis

By J. Burns Amberson, M.D.

New York, New York

BECAUSE of the ability of the tubercle bacillus to live indefinitely in the human body even though it may not cause perceptible ill effects, the prevention and control of tuberculosis depends largely on our understanding of the potentialities of the infection and our power to foresee these in the infected person. In this respect the problem is unique; considering the characteristics of the bacillus, the nature of the lesion which it produces and in which it survives, the failure of complete immunity to be established, the shortcomings of therapy and the tendency to chronicity and relapse, it is not duplicated by any other major health problem. It is far different, for instance, from pneumococcal pneumonia or syphilis which yield so completely and rapidly to antibiotic therapy. No way of dealing with tuberculosis in such a simple and decisive way has yet been found. This is not to say that tuberculosis cannot be dealt with but rather to emphasize that success hinges on the scientific intelligence which may be brought to bear on the problem, the confidence and support lent to responsible and competent physicians and health officers by the public (which cannot be expected to understand all the intricacies of the problem), and the maintenance on a stable and efficient basis of facilities and organization designed for humane and unhindered action in helping to meet the needs of patients, their families and their homes and for alertness to danger before it assumes great proportions.

The striking effects of chemotherapy in arresting effectively many cases of tuberculosis which, before the modern era, would soon have been fatal, the prolongation of life in many others even though relapses have occurred or threaten, and the early restoration of the feeling of well being to the patient receiving treatment have changed somewhat the general pattern of the disease in the community and have influenced deeply the attitude not only of patients but also of physicians. The meaning of these changes is clear in some respects but remains to be demonstrated in others. Most important is the obviously greater possibility now of gaining real control over tuberculosis, but it is just as obvious that this requires facing the facts, identifying adverse conditions and taking steps for their remedy.

Most patients arriving in hospitals for the treatment of pulmonary tuberculosis have the disease in an advanced stage. Judged accordingly, the frequency of diagnosis in an early phase when treatment is most effective has not improved as much as might be expected from our knowledge. The fault is not so much in the failure of diagnostic methods but rather in the inherent nature of the disease which at its inception does not often declare itself symptomatically. While chemotherapy and surgery have improved the lot of the patient with advanced tuberculosis and usually prolongs his life, the possibilities of lasting recovery and restoration to normal living are relatively small; often, at best, the disease is converted from an acute to a chronic state in which disability continues, transmission of infection to others may occur, and the frequency of relapse is great.

The frequent diagnosis of early tuberculosis and a maximum percentage of recovery can hardly be expected unless adequate examinations, especially of the lungs, are carried out widely among apparently healthy people and those suffering from

other and unrelated conditions. The expenditures of money and effort for such examinations and for treatment of the early case are a small fraction of the cost of the care of patients with advanced disease although the dividends from the former are infinitely greater. As the incidence of tuberculosis declines, the importance of promptly identifying new cases will grow if we are to avoid endemics and the sporadic transmission of infection between distant countries. For this reason the machinery of detection and control should be maintained and the responsibility of the practicing physician will become greater rather than less.

With the improving results of treatment and the longer survival of patients with the disease in a chronic form, the question arises whether the over-all number of relapses may be more frequent in the future, even though the time of occurrence in the individual patient may be delayed longer than formerly. It remains to be demonstrated, therefore, whether or not modern practice is adding to the reservoir of infection which may overflow from time to time into the general population. We know that the incidence of infection and disease has diminished strikingly among infants and children but that progressive primary disease may also occur in older age groups. The incidence of new cases of tuberculosis in the adult population has not diminished nearly so strikingly or rapidly as the death rate, and, among elderly men, neither the rate of morbidity nor of mortality has diminished very much at all. One of the last strongholds of the infection will probably be among the oldsters, particularly those who are homeless and unattached. Dislodging it will be a major task; meanwhile the significance for public health cannot easily be minimized.

While chemotherapy and surgery have been mainstays of treatment, most experienced clinicians still consider rest treatment to be important and usually essential. Chemotherapy may suppress the growth of bacteria but some of them are known to survive the best of treatment, and the likelihood of their causing later exacerbations of the disease seems to depend largely on the level of the patient's resistance. Rest treatment helps to improve this and its durability is promoted as the patient learns to regulate his habits of living under the intelligent guidance of the physician who understands the problem.

A moot question now is the optimum duration of hospital stay and the wisdom of allowing patients to return home at earlier dates than customary. One thing may be said parenthetically, namely, that the need of accessible and well equipped hospitals staffed by well trained physicians and other personnel is now more important than ever before in view of the many subtle distinctions of treatment and the fine judgment which goes far toward determining the eventual outcome of the case. It is to be expected that in the future hospitals and departments for the care of tuberculous patients will be fewer but better.

While most patients will benefit from an initial period of study and care in a hospital when the disease is active and requires every available means of treatment, the time comes in many cases when treatment may be continued satisfactorily at home. Judging from an organized study being conducted at Bellevue Hospital in New York City, treatment in the home and out-patient department is not always simple. The services ancillary to medical care are numerous and necessary and, in some instances at least, the cost closely approximates that of hospital treatment. It is not the answer to the treatment of the ignorant, recalcitrant and irresponsible patient. In many instances "home care" has seemed to serve adequately because of the continued suppression of the infection by chemotherapy but has been found to fall short of lasting effects because of the patient's poor resistance and the unsuitable environment in which he lives. Patients who could have been "cured" in the practical sense have been converted to chronics and remained disabled, a menace to their fellows and often a charge on the community.

While the pattern of the tuberculosis problem has changed in some respects it still challenges the best knowledge and skill of physicians and demands the continued awareness of the public and the support of governmental agencies if the efforts for control are not to end in a stalemate.

Tuberculosis Case-Finding in Ontario

By S. A. Holling, M.D.

Toronto, Ontario

THE tuberculosis situation has undergone marked changes over the past several years. A dramatic decline of 75 per cent in the death rate of tuberculosis in Ontario over the past ten years to an all time low of 6.1 per 100,000 population in 1954, the appearance of vacant beds in some of the sanatoria, and the recent reduced yield of active tuberculosis in mass x-ray surveys have given rise to widespread misconceptions regarding the seriousness of the problem. This has had unfortunate consequences inasmuch as the general public, including a sizable segment of the medical profession, is tending to develop a feeling of complacency and security regarding the tuberculosis problem.

The decline in the incidence of active tuberculosis is much less than that in the death rate. It is estimated that there has been a decrease of 15 per cent in the incidence over the past ten-year period. In view of this, the challenge at the present time is to develop all available case-finding procedures to the fullest. Fortunately both official and voluntary health agencies primarily concerned with the control of tuberculosis recognize the need for intensified case-finding and there has been maximum co-operation in promoting such an effort.

Adequate facilities for the examination of known cases of tuberculosis, their contacts and persons suspected of having tuberculosis, are basic to a well organized preventive program. They should be free to the public, easily accessible and held with sufficient frequency at regular intervals to meet the needs of the community. We are fortunate in Ontario in having a comprehensive service of this type covering all sections of the province.

There are now some 265 individual clinics conducted in 248 different centers throughout the province. In 181 of these clinics, local tuberculosis associations pay the cost of x-rays and medical supervision, and in twenty-nine, part of the cost. The Provincial Department of Health also provides a completely free traveling service in forty-three centers in addition to medical supervision for twenty-nine of the clinics sponsored by tuberculosis associations. This extensive program has been made possible through the active co-operation of the provincial and federal health authorities; the latter have provided considerable assistance through the Federal Health Grant to permit the expansion of clinic services in the province.

Unsuspected tuberculosis in the apparently healthy general population is the essential core of our problem. How best to find these cases early presents a task of great magnitude as the attack must be made from many angles. A variety of methods is required, of which the mass x-ray survey is a major effort. Its value both from the educational and case-finding standpoint remains undiminished.

The Provincial Department provides a free mass survey service which serves approximately three-fourths of the population in the province covering the territory approximately every four years. In the case of the larger centers more frequent visits are made for the purpose of serving employers in industry. County tuberculosis associations assume the responsibility for organizing surveys on the local level as well as the cost involved. In the area not covered by the provincial government, the National Sanatorium Association, Toronto, conducts free surveys, paying the cost out of Christmas Seal funds.

Tuberculosis in general hospitals has long been recognized as a serious public health problem. With a view to discovering unsuspected cases of tuberculosis among patients admitted to hospital, the Provincial Department of Health, through the use of Federal Health Grants, inaugurated a hospital admission chest x-ray program in 1948. Practically every general hospital in the province in addition to five private hospitals, a total of 167, are co-operating in this program. Funds out of the grant have been used to provide complete miniature film x-ray units in 130 of the larger hospitals, as well as to subsidize the work in small institutions where the volume of work did not warrant the installation of this expensive equipment. The results for the last quarter of 1954 showed that 88 per cent of hospitals reported a coverage of 70 per cent and over of patients who received a routine admission chest film. Fifty-four hospitals

From the Division of Tuberculosis Prevention, Ontario Department of Health.

achieved an enviable coverage record of 90 per cent and over.

The problem of tuberculosis as it affects in-patients also applies to out-patients. The department, therefore, has extended the admission program to include out-patients treated in the larger hospitals having an organized out-patient clinic service.

Recently a special Federal Health Grant project was approved to cover the cost of securing a routine chest film of all elderly persons at the time of admission to the eighty-four homes for the aged throughout the province. Local general hospital x-ray facilities will be utilized for this purpose.

A pre-employment chest x-ray program in industry has been actively promoted throughout the Province. The availability of special hospital miniature film x-ray facilities in all the larger centers has been of great help in securing the full co-operation of management. County tuberculosis associations have accepted the responsibility for organizing the program in their respective districts and have been most successful in their efforts.

Food handlers are an important group who are being x-rayed annually as a condition of employment in several of the larger centers, the largest being the City of Toronto. In some centers, dairy works and employes in hair dressing establishments also are included. It would be most beneficial if there was uniform application of this requirement throughout the province.

Surveys of all school board employes in the province, including teachers, secretarial help, janitors and bus drivers were conducted in 1943-44 and 1951-2. Many local boards of education now require an annual or bi-annual chest x-ray of all their employes. It is expected that the Provincial Department of Education in the near future will establish a policy by means of regulations requiring all school board employes to have a routine chest film at periodic intervals.

A case-finding program of special interest was recently introduced through the medium of the Federal Health Grants which provides for a routine chest film of all applicants for work on the St. Lawrence River Seaway and Power Developments in Ontario, together with their dependents. It is expected that a total of approximately 35,000 persons will be involved in this large construction project. An adequately staffed miniature film x-ray unit has been installed in the office of the National Employment Service, Cornwall, which acts as the central employment agency for the various project contractors.

Another group requiring special attention is that of prisoners in city and county jails. The problem of tuberculosis among such individuals is acute, as might be expected. Through the co-operation of the Provincial Department of Health, the Metropolitan Toronto Council, and the Gage Institute, Toronto, a program was introduced this year in the Don Jail, Toronto, to obtain a routine chest film of all prisoners at the time of commitment. This jail is the largest in the province, having approximately 17,000 commitments yearly—a third of all commitments to jails in Ontario. In the first three months of operation one case of active tuberculosis was reported for every 227 prisoners x-rayed. A proposal to extend this program to a number of the other larger jails in the province is now under consideration.

Tuberculin testing of students and x-raying the reactors is carried out on a wide scale in many localities. In some, the investigation goes still further as the close contacts of the children who react to the test are examined in the hope of finding the source of infection. While this has meant a great deal of extra work on the part of the local health authorities, the results demonstrate that this specialized type of case-finding has a place in a comprehensive diagnostic program.

The private physician, without question, is the single most important factor in the control of tuberculosis, and it is around him that all phases of the preventive program should be built. Private physicians either make or take some part in the diagnosis of over 50 per cent of new cases admitted to Ontario sanatoria.

There can be no doubt but that the office of the private physician offers great potentialities in an expanded tuberculosis case-finding program. If full use is to be made of this opportunity, miniature film x-ray facilities must be available to private physicians for routine chest films of their office patients. The logical course would be to explore the possibilities of utilizing the miniature film x-ray units which have been supplied to 130 general hospitals throughout the province by the Provincial Department of Health out of Federal Health Grant funds. In a number of centers,

(Continued on Page 1314)

Errors of Omission and Commission in Diagnosis and Treatment of Pulmonary Tuberculosis

By Nathan Levitt, M.D.

Detroit, Michigan

IT is a well-known fact that there has been an important change in the diagnosis and treatment of pulmonary tuberculosis in the last ten years. Nevertheless, tuberculosis of the lungs still ranks first among the diseases affecting the youth of our nation.

Many cases of tuberculosis have been discovered by mass chest x-ray surveys, and anti-tuberculosis campaigns. Nevertheless, the practice of routine chest x-ray examination of all hospital admissions has been one of the greatest factors in discovering many unsuspected cases of active pulmonary tuberculosis as well as non-tuberculous diseases of the lungs, such as cancer of the lung, bronchiectasis and heart disease, et cetera.

Although the above measures have proved effective, we still have a long way to go to eradicate tuberculosis from our midst, we must look to the family physician for help in detecting disease in its incipiency. It is to him that the patient turns at the first sign of ill health, whether the complaint be of a minor nature, or of a major illness, thus giving the attending physician an opportunity to detect the presence or absence of tuberculosis in his patient. Let me emphasize here and now that the physical examination of the chest alone is not enough to make a diagnosis of tuberculosis in a patient. It is mandatory that an x-ray of the chest be taken in every case before a diagnosis of pulmonary tuberculosis can be made.

A cough, expectoration, fever, hemoptysis, night sweats and loss of weight, any of these symptoms should alert the physician to the presence of tuberculosis in his patient. However, many cases of active tuberculosis are frequently found in apparently healthy individuals in the course of a routine checkup.

The danger of employing maids and baby sitters indiscriminately to take care of children unless they are known to be tuberculous free should be stressed by the family doctor. There is also the danger of leaving children with grandparents who are suffering from chronic bronchitis, asthma or "cigarette cough." In all the above cases a thorough study should be made to rule out the presence of pulmonary tuberculosis.

Tuberculosis has been called the great mimicker; it may mimic diseases such as hyperthyroidism, bronchiectasis, psychoneurosis, et cetera. To illustrate the value of a routine chest x-ray on admission to a hospital, let me present a case.

In July, 1954, Mrs. L. B., aged thirty-two, was brought to my office complaining of shortness of breath, swelling of the feet and ankles, and pains in the chest for the last three weeks. The patient was too ill to have a complete examination at the office; however, I did find the following:

Examination of the chest showed rales at both bases of the lungs, her heart was enlarged, there was two plus pitting edema of her ankles and feet. She was immediately hospitalized.

Examination at the hospital showed the above, plus the electrocardiogram finding of diffuse myocardial damage. The laboratory work was completely normal. Our impression was that the patient was suffering from congestive heart failure. But the big surprise to me was the x-ray findings of the chest. The following is the report of the x-ray:

There is an extremely large excavation which occupies virtually the entire right upper lobe which is contracted as evidence by elevation of the right horizontal interlobar fissure. The cavity measures approximately 7 cm. in its greatest diameter. There are soft exudative infiltrations in the upper halves of both lung fields at the level of the second and third interspaces. There appears to be a small area of rarefaction representing an excavation in the left upper lobe at the level of the first interspace anteriorly. It contains a small fluid level and measures approximately 2.5 cm. in diameter. The appearance is one of far advanced pulmonary tuberculosis.

Examination of her sputum showed numerous tubercle bacilli. She was sent to Herman Kiefer hospital.

Use and Abuse of Antibiotics

Not infrequently patients may complain of cough and frequent chest colds, pleurisy, et cetera, and without x-raying the chest, the attending physician may prescribe a course of penicillin injections, only to find out later that the patient was suffering from tuberculosis, thus causing not only a delay in the proper diagnosis but a delay in instituting proper treatment. To illustrate:

J. L., aged sixty, consulted me for the following complaints: frequent chest colds, and persistent cough. His history in brief was that he went to a neighborhood physician who gave him a course of penicillin injections for

From the Department of Internal Medicine, Harper Hospital.

the above complaints. While he felt improved for a while, his cough never left him. The physical examination of the chest was essentially negative, but after I x-rayed his chest, I found an advanced infiltrative lesion of both lungs. He was admitted to Herman Kiefer hospital.

The above case is not a rare instance as illustrated by Oatway[1] who reports, "twenty patients in a sanatorium of fifty beds have had appreciable delay in the diagnosis of tuberculous activity because of the use of chemotherapy and the lack of x-rays, bacterial studies, and clear thinking." He further states that "the newer antibiotics give a false sense of security because of their broad field of action. The drugs are efficient and attractive, but they must be aimed more precisely at specific and vulnerable infections."

Cortisone and Pulmonary Tuberculosis

The dangers of using (ACTH) and cortisone not only in patients with active tuberculosis but also in patients who have arrested tuberculosis has been brought to the attention of the medical profession by the National Tuberculosis Association[2] which published the following suggestions:

"Because the action of ACTH and cortisone upon factors of resistance to tuberculosis has been shown to be deleterious in at least three species of experimental animals (mice, guinea pigs, and rabbits), and there is strongly suggestive evidence along the same lines in human beings, it is recommended that these substances not be used in patients with active tuberculosis, and that they be used with extreme caution even in human beings with possibly latent tuberculosis infection, until such time as further investigative work has shown that such administration may be safe. The routine diagnostic examination for tuberculosis of patients under physicians' care is especially necessary for patients who are being considered for ACTH or cortisone therapy."

Many articles have appeared lately in the literature, all warning us of the potential dangers of using cortisone in patients with either active or arrested cases of pulmonary tuberculosis. King et al[3] report a fatal case of pulmonary tuberculosis following cortisone therapy for rheumatoid arthritis. Propp et al[5] report a case of an apparently arrested case of pulmonary tuberculosis that has been activated by administering cortisone for arthritis. Doerner et al[1] report a case of Weber-Christian disease with unsuspected tuberculosis in which cortisone was administered and was followed by tuberculous meningitis and death. In addition to the above cases, I wish to add my case, illustrating the dangers of using cortisone in a patient with arrested tuberculosis.

Report of a Case

M.G., a man, aged fifty-five complained of joint pains involving the ankles, knees and wrists; he was told by his physician that he suffered from rheumatoid arthritis and was given a course of cortisone: 100 mg. daily for twenty-eight days. At the end of this course of treatment he felt very much improved. However, about one month after the cessation of cortisone treatments he began to complain of cough and blood spitting. The patient then consulted me.

Physical examination revealed a fairly well developed man. His blood pressure was 150/70, his pulse was regular 76 per minute, heart examination was negative, examination of the chest showed rales scattered over both lungs. The rest of the physical examination was negative.

Laboratory findings showed C.B.C., Kahn, F.B.S., nonprotein-nitrogen and urine were all within normal limits.

X-ray of the chest showed bilateral infiltration of both upper lobes. Impression: Active tuberculosis.

Upon questioning the patient he told me that he had many x-rays of his chest taken at his place of employment, in fact one a year for the last ten years. I reviewed his last film taken about one year ago, and it showed an arrested lesion in his left apex. There was no question in my mind after reviewing this old film with the present ones that an apparent arrested case of tuberculosis had been activated by the use of cortisone for rheumatoid arthritis.

The above cases teach us many lessons. (1) Before instituting cortisone therapy, the patient should have a thorough physical examination including an x-ray of the chest to rule out active or inactive pulmonary tuberculosis. (2) Cortisone treatment may have a very deleterious effect upon a patient with either active or apparently arrested pulmonary tuberculosis. (3) In the presence of a well-healed arrested tuberculosis, if cortisone is contemplated, frequent x-ray checkup and sputum examination are mandatory because of the ever-present possibility of a flare up as was demonstrated in my patient. (4) Occasions may arise where it is absolutely necessary to treat a patient with cortisone in the presence of active tuberculosis. In these patients we should combine the use of streptomycin and Pas with cortisone.

Recently I saw such a case demonstrated, a young man with active tuberculosis and cavitation who also suffered from rheumatoid arthritis. Since all other measures failed to relieve him of the latter complaint, it was decided to give him a course of cortisone in combination with streptomycin and

(Continued on Page 1325)

Bullous Emphysema

Clinical Pathological Report

By C. J. Stringer, M.D., and
C. A. Burnett, M.D.

Lansing, Michigan

DECREASE of pulmonary efficiency by increasing distention of emphysematous areas and compression of relatively normal lung has always been a serious medical problem, producing severe and sometimes total disability and eventual death.

Efforts to improve the pulmonary efficiency of these patients have in the past been discouraging. However, the increasing frequency with which the problem has presented itself has prompted a more searching examination of the etiology and pathology, and possible application of corrective surgical procedures.

Etiology and Pathology

The loss of support of alveolar walls and intermittent partial bronchial obstruction account for various physiological and pathological pulmonary changes; some of these are self-limited. As an illustration, compensatory emphysema of a normal lobe resulting from atelectasis of another lobe is produced by an increase in the negativity of the intrapleural pressure, and a relative decrease in the support of the alveolar wall. Normal intrapleural pressures are regained by the compensatory emphysema and the process is arrested. Pneumonia in children is known to be followed by the development of bullae which result from necrosis of alveolar and bronchiolar walls and the increase of intrabronchial pressures, due to a mechanical obstruction of mucous plugs and the tendency of relatively flexible bronchial walls to approximate during expiration and especially during coughing, sneezing and straining. The fact that the emphysema spontaneously regresses after infection has subsided is an indication of the ability of the uninvolved parenchyma to obliterate the spaces by virtue of its inherent elasticity.[4] The paradoxical obstructive emphysema of a lobe due to a foreign body, a congenital web or mucosal folds may progress to the point of complete atelectasis of the remaining lobes and can be corrected by the removal of the foreign body or extirpation of the emphysematous lobe.[1]

In contrast to the preceding types, the emphysema resulting from factors which are practically inherent, that is, the degeneration of elastic tissue and bronchiolar spasm, is progressive. At best, conservative measures directed toward diminishing the volume of the thoracic cage and relieving bronchiolar obstruction due to spasm and mucous, can only diminish the rate of progression of this insidious disease. The distention of alveoli leads to the breakdown of the inner alveolar septa, and bullae are produced. With the formation of emphysematous bullae, new factors result and hasten the progression towards respiratory insufficiency. Neighboring alveoli, still capable of function, are compressed by the bullae and rendered atelectatic and subject to infection. The pulmonary structure offers little resistance to the expansion of emphysematous bullae. Any increase in pressure within the cavity over that in the bronchial communications immediately forces the atenuated parenchyma over them, thus frustrating any tendency to empty the bullae of air. Coughing and straining, which are prevalent especially during complicating respiratory infection, result in tremendous increases of intrabronchial pressure with further distention of the bullae. Thus, the vicious cycle of respiratory infection and enlarging bullae is superimposed upon the basic disease process.

Treatment

After consideration of these factors, it is reasonable that the evacuation of bullae with the preservation of parenchyma, functional or potentially capable of function, to allow expansion of the lung to fill the hemithorax with minimal contribution to emphysema, should be the aim of treatment. Resection, advocated in the past, is to be condemned. [2,5] The extirpation of lung units containing bullae not only sacrifices functioning alveolae and those capable of function within that unit, but also contributes to the forces of the basic disease process and results in further over-distention of the remaining alveolae.

The institution of Monaldi drainage in the treatment of emphysematous bullae is said to have been highly successful in other hands.[6] However, there are many objections to this method. Many patients having advanced emphysematous bullous disease also have spontaneous pneumothorax, and obviously cannot be treated by Monaldi drainage.

From Ingham Chest Hospital, Lansing, Michigan.

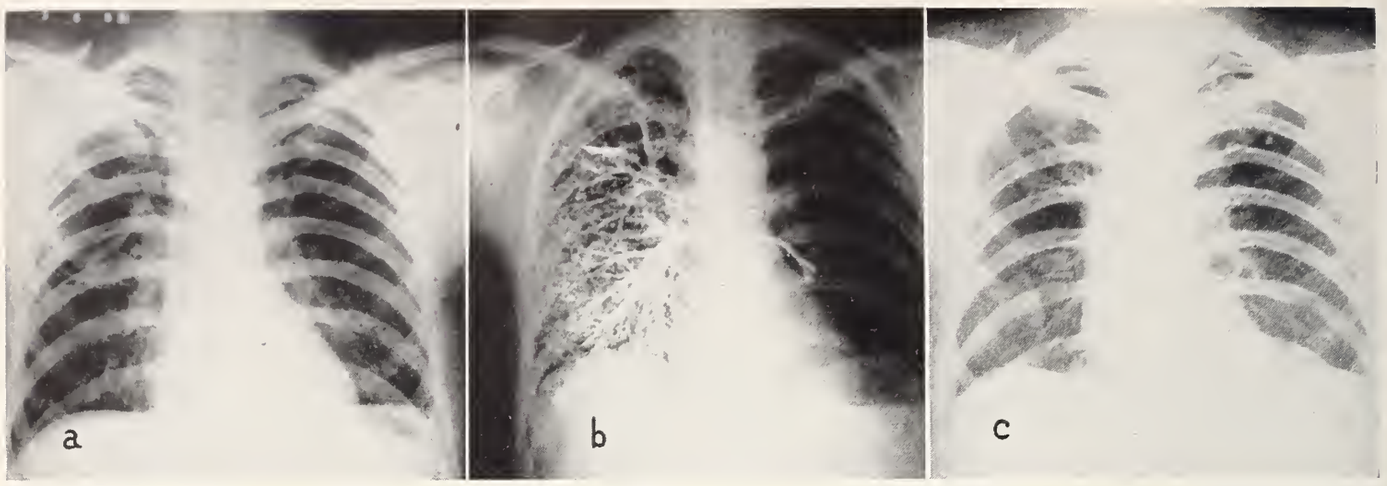


Fig. 1. Case 1. (a) September 6, 1951. (b) September 26, 1951. (c) July 31, 1953.

As a matter of fact, in our experience, the high percentage of failures to expand lungs collapsed by the spontaneous or traumatic rupture of emphysematous bullae by the institution of closed intercostal drainage, have indicated to us the futility of using Monaldi drainage. Other objections are the lack of adaptability to the treatment of multiple bullae, and the necessity of a preliminary procedure to obtain pleural symphysis, the necessity of thoracoscopic examination, with its dangers and limitations, for accurate diagnosis and the determination of suitability for treatment, and the prolonged period of treatment and hospital care.

It would appear that the only justification for the blind percutaneous introduction of instruments into pulmonary cysts and bullae for purposes of examination, aspiration and introduction of cauterizing agents is the fear of thoracotomy. Undoubtedly, thoracotomy in the past presented many dangers which are obviated with persent methods.

Our method of obtaining and maintaining obliteration of bullae consists of excision of the pleural roof and approximation of the parenchyma, which forms the wall, and the pleura, with a continuous suture of fine chromic catgut, each bite including a minimal depth of parenchyma. It is unnecessary to attempt the individual ligation of the many air leaks, unless a relatively large bronchial communication is encountered. These bullae lack a mucous membrane, and healing by first intention occurs.

Differential Diagnosis

This method of management of emphysematous bullae cannot be successfully applied to lesions of congenital cystic disease. Differentiation is therefore important. Congenital cystic bronchiectasis obviously demands the resection of the entire lung units involved. The mucous membrane of isolated congenital cysts is not conducive to healing even with apposition of the walls. The continued ability to form secretions favors recurrence and infection with or without ligation of bronchial communications. In some cases, the cyst is separated from the normal parenchyma by a layer of plera and can be enucleated. The treatment of the more deeply lying congenital cysts is lobectomy,[6] since the dissection of the wall from the underlying parenchyma entails difficult hemostasis and control of air leaks. Furthermore, the necessity for the preservation of parenchyma is not as vital as it is in the treatment of emphysematous bullous disease.

The following cases of congenital cystic disease demonstrate points of differential diagnosis and treatment.

Case 1.—This twenty-six-year-old white man was admitted January 28, 1952, complaining of a cough productive of one-half cup of sputum daily. Physical examination was not remarkable. An x-ray revealed a cyst in the right upper lung field (Fig. 1a). A bronchogram demonstrated entrance of dye into the cyst (Fig. 1b).

Thoracotomy was performed, and the cyst was identified in the right upper lobe lying sub-pleurally. It was considered unnecessary to remove the entire lobe, and too hazardous to dissect the mucous membrane from the underlying parenchyma. Therefore, the roof composed of pleura and cyst wall was excised and the bronchial communications ligated. With inflation of the lung, the mucous membrane of the base was everted. Postoperatively the patient made a good recovery, and repeated films have failed to show any sign of recurrence (Fig. 1c).

Case 2.—A sixty-two-year-old white man, a laborer, was admitted to the Ingham Chest Hospital in October, 1952, because of left chest pain and dyspnea. In 1945 a chest x-ray was taken because of complaint of chest

pain. The x-ray revealed a cyst in the left upper lung field (Fig. 2a). Following its discovery, periodic chest x-rays at this hospital had failed to reveal change. However, approximately ten days before admission he developed a rather severe cold with fever, and an increase in the chest pain and dyspnea.

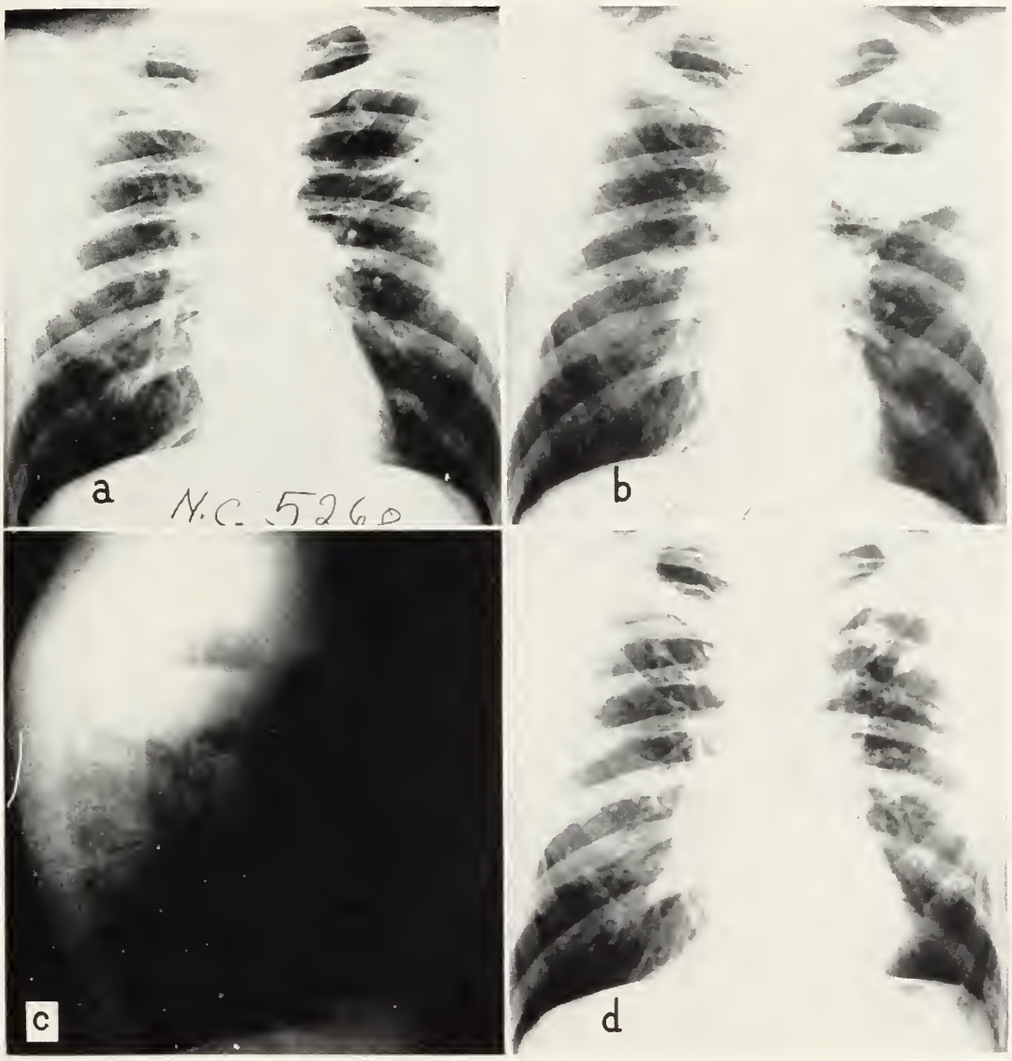


Fig. 2. Case 2. (a) June 26, 1947. (b) October 30, 1952. (c) October 31, 1952. (d) March 1, 1954.

Physical examination was not remarkable except for a temperature elevation to 100°, slight dyspnea at rest, cyanosis and absent breath sounds over the left upper lung field. A standard chest x-ray revealed a single cyst occupying the upper one-third of the left lung with a fluid level (Fig. 2b and 2c).

Penicillin therapy was instituted, and, after the subsidence of the signs of acute infection, a left thoracotomy was performed. The cyst and left upper lobe were delivered by dissection in the extra-pleural plane. A line of cleavage between the cyst and the left upper lobe was found and the cyst enucleated with the ligation of one bronchial communication. He made an uneventful recovery, and returned to work in one month (Fig. 2d).

Comment.—The cyst measured 11 by 9 by 6 cm., had a thick leathery wall, and, upon sectioning, revealed a definite membrane. This case represents a type which is separated from the normal lung by a layer of pleura, and can be removed by enucleation.

The differentiation between emphysematous bullous disease and congenital cystic disease is not only important from the standpoint of the selection of the proper procedure at the time of thoracotomy, but also because consideration of thoracotomy is reserved for those cases of emphysematous bullous disease in which respiratory insufficiency is present or imminent, whereas, the extirpation of congenital cysts is also indicated for the eradication of a source of infection, hemorrhage and malignant degeneration, and in those cases where the exclusion of other pulmonary disease, including malignancy, cannot be certain.

The history of those patients with emphysematous bullous disease is related to the fundamental cause, and is characterized by attacks of bronchitis and asthma occurring over a period of years. In some, symptoms do not precede the onset of respiratory insufficiency or spontaneous pneumothorax. These cases probably represent emphysema with bullae formation, resulting not from

bronchial disease but from degeneration of elastic tissue. The typical changes of emphysema are found on physical examination and chest x-rays, in which the bullae are recognized by the absence of lung markings and definite walls with fine discreet filaments traversing the space at angles to the usual lung markings. These bullae are usually bilateral and often present in all lobes. However, fluid formation and infection do not occur in these spaces due to the absence of a secreting mucous membrane and the filtration of air before entrance to the spaces through the bronchiolar communications. Congenital cysts, on the other hand, when air is present within them, usually have a discreet outline with definite walls, and are usually limited to a lobe or at least a definite lung area. These cysts are often discovered on routine chest x-ray, although often they may present with a clinical history and picture of an acute infection, in which case a fluid level is often seen in the cyst.

Spontaneous pneumothorax is a frequent complication of emphysema with bullae and bleb formation.[7] Forty-three per cent of our cases, ultimately requiring thoracotomy, presented with spontaneous pneumothorax. The thin, pleural roof without a mucous membrane lining and the absence of adhesions and collateral circulation are probably the important factors contributing to this complication. There would appear to be no correlation between the degree of physical activity and the onset of pneumothorax. Seventy per cent of our cases of spontaneous pneumothorax occurred at rest in bed, or even during sleep. This would indicate that the air leak occurs at a point of necrosis of the pleural roof.

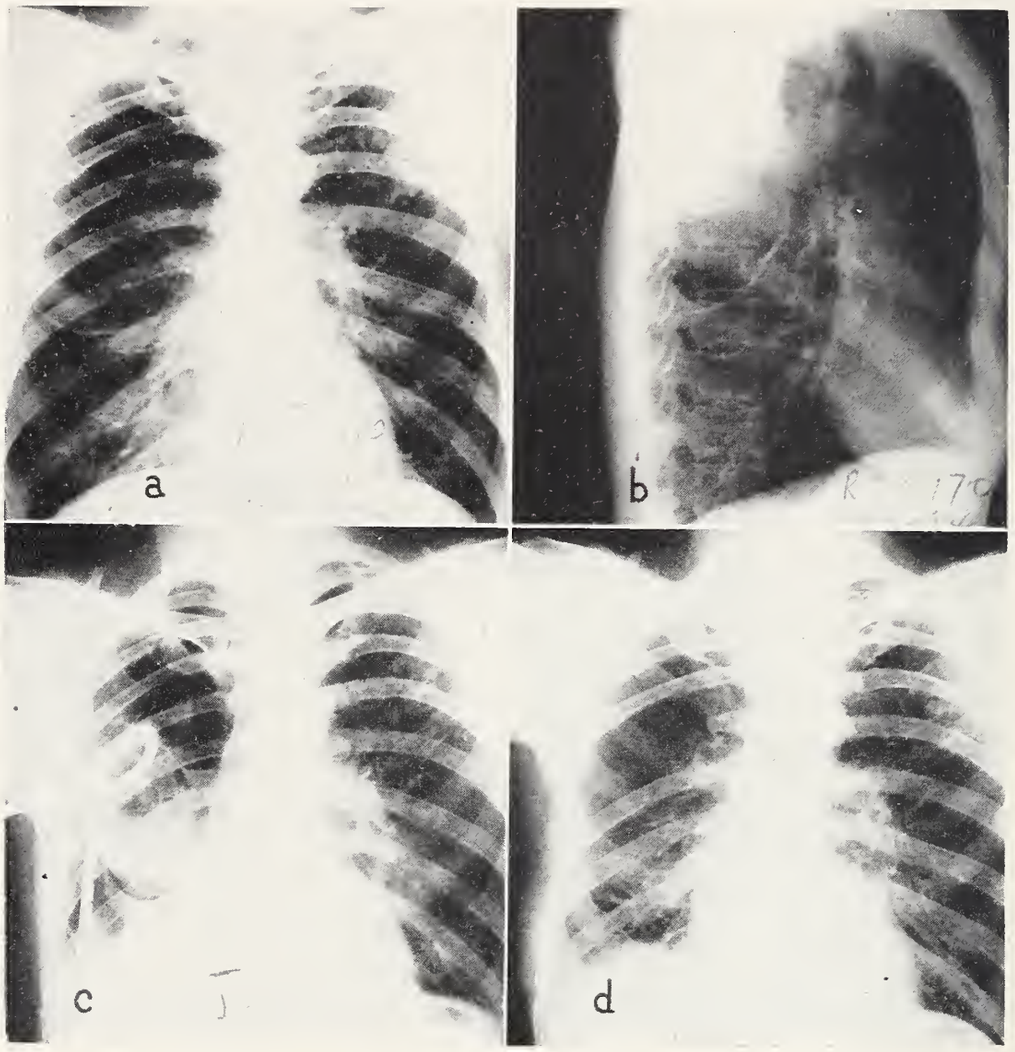


Fig. 3. Case 3. (a and b) July 30, 1954. (c) September 13, 1954. (d) October 16, 1954.

Pneumothorax is rarely, if ever, a complication of congenital cystic disease. The thickness of the walls which have a definite lining and the frequency with which pleural adhesions are observed in these cases at thoracotomy support the opinion expressed above regarding the etiology of spontaneous pneumothorax.

Bronchography is often helpful in determining the extent of involvement in congenital cystic disease, especially in cases of bronchiectasis. The viscosity of the contrast medium prevents its entrance into the emphysematous bullae through the bronchiolar communications, however, bronchography does serve to indicate the degree of bronchial distortion and the size of the spaces.

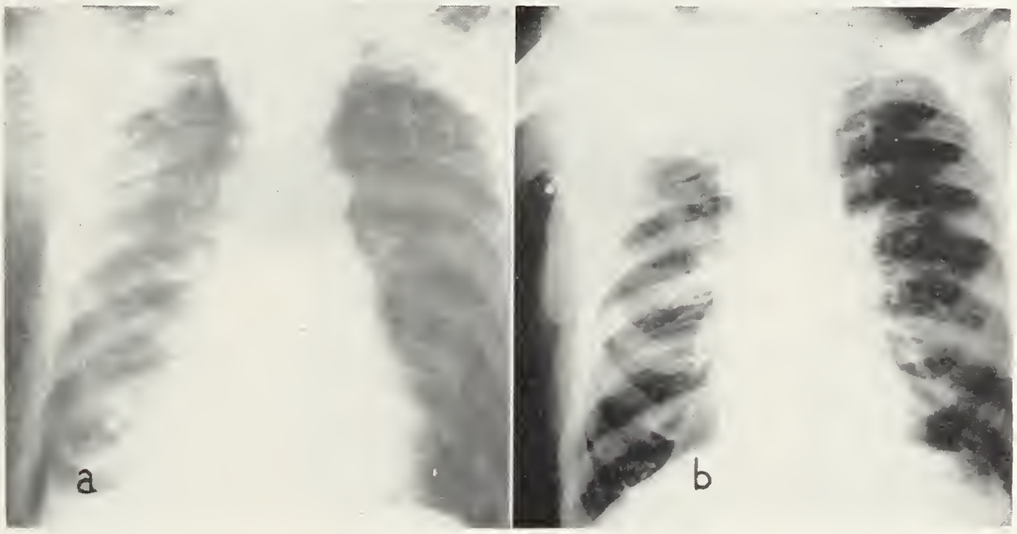


Fig. 4. Case 4. (a) November 16, 1954. (b) January 6, 1955.

The following are representative cases of emphysematous bullous disease. All of these patients were unable to take part in standard pulmonary function tests because of the severity of dyspnea:

Case 3.—This forty-three-year-old married white bus driver was admitted to the Ingham Chest Hospital July 30, 1954, for study of an area of infiltration in the left upper lung field. He had had attacks of asthma beginning in 1945 for which he was discharged from the Army Air Corps. He had also had a cough, productive of two or three tablespoonsful of mucous over the ten years previous to admission.

Physical examination revealed an increased anterior-posterior diameter of the chest, high pitched rhonchi throughout both lung fields and prolongation of the expiratory phase of the breath sounds. Routine x-rays revealed large emphysematous bullae occupying the upper one-third of the right lung, and there were infiltrations at the second and third anterior intercostal spaces on the left (Fig. 3a and 3b).

Approximately five weeks after his admission for observation and study to rule out tuberculosis, he experienced the sudden onset of epigastric and right chest pain which awakened him from sleep, and was followed by shortness of breath. Examination revealed hyperresonance and absent breath sounds on the right side, and fluoroscopy revealed a complete pneumothorax. Under water seal drainage and suction were immediately instituted with relief of dyspnea and pain. Continuous suction was maintained for six days without evidence of sealing of the air leak or expansion of the lung to fill the hemothorax (Fig. 3c).

Thoracotomy was performed with unroofing and obliteration of the emphysematous bullae which occupied most of the upper and middle lobes and the superior segment of the lower lobe. The thoracotomy tube was removed on the fourth postoperative day, and expansion of the lung was maintained (Fig. 3d).

Case 4.—This sixty-five-year-old milkman sustained injuries to the chest when his car was struck by a train. When the patient arrived at the emergency room his condition appeared hopeless. There was tremndous subcutaneous emphysema of the face, neck, chest, abdomen and thighs, with marked cyanosis and labored grunting respirations. Breath sounds were absent over the right chest. Closed intercostal tube drainage and suction were instituted and a tracheotomy performed. Transfusions were given to combat shock, and his condition improved.

Chest x-ray revealed a 20 per cent collapse of the right lung, fractures of the third, fourth, fifth, sixth and seventh right posterior ribs, the film having been taken while suction was maintained. There were no signs of sealing of the air leaks and expansion of the right lung to fill the hemithorax. The aspiration of large amounts of air through the intercostal tube continued unabated (Fig. 4.)

Thoracotomy was elected in view of the strong possibility of a ruptured bronchus. At thoracotomy, an emphysematous lung with a large emphysematous bulla in the right upper lobe was encountered. There was a puncture of its flaccid pleural roof with an active air leak even without application of positive pressure to the tracheotomy tube. In the corresponding portion of the anterior chest wall there was a rib fracture with a protruding spicule of bone. The bulla was unroofed by excising the excess pleura, and the space with a base of attenuated denuded pulmonary parenchyma was obliterated. The patient made an excellent postoperative recovery. The leakage of air through the thoracotomy tube ceased on the second postoperative day, and the thoracotomy tube was removed on the third postoperative day. The tracheotomy tube was removed ten days

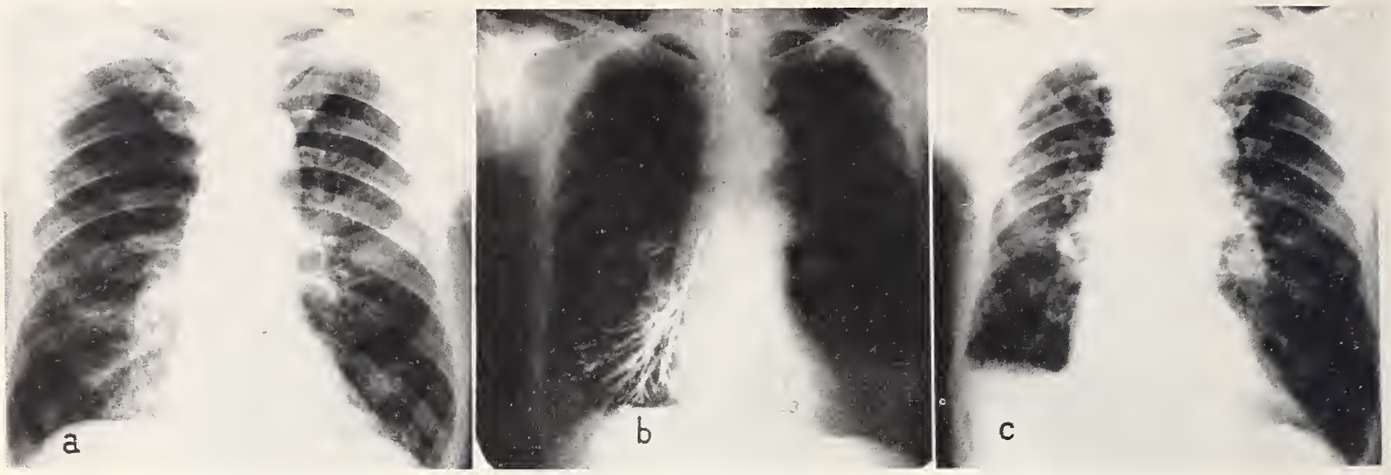


Fig. 5. Case 5. (a) June 20, 1951. (b) May 28, 1953. (c) October 20, 1954.

later, and an achrominoclavicular separation, also sustained in the accident, was repaired under general anesthesia three weeks later (Fig. 4b).

Case 5.—This sixty-year-old white carpenter was admitted to the Ingham Chest Hospital May 31, 1953, because of marked dyspnea which began four years previous to his admission, and had become progressively worse so that he was unable to work. There had been a weight loss of 20 pounds in the two years previous to admission. Standard chest films showed a large air containing bulla occupying the right hemithorax and accounting for 40 per cent collapse of the right lung and emphysema of the left lung (Fig. 5a). Bronchographic studies revealed a marked distortion of the bronchi on the right side, and confirmed the previous estimate of the size of the bulla (Fig. 5b).

Right thoracotomy was performed six days following admission. A large bulla with flaccid pleural roof was encountered in the right upper lobe which along with the middle and lower lobes were markedly compressed by the bulla. The pleural roof was removed revealing a base of denuded parenchyma with multiple air leaks. The space was obliterated with a continuous suture. The postoperative recovery was unremarkable except that the thoracotomy tube had to be maintained in place with suction for a period of sixteen days after operation to obtain expansion of the lung (Fig. 5c). He was discharged one month after operation, with marked improvement of his dyspnea, and was able to return to work one month later.

Case 6.—This forty-six-year-old white unemployed man was admitted to the Ingham Chest Hospital September 18, 1953, because of respiratory invalidism. He had had episodes of asthma during the thirty-eight years previous to admission. Dyspnea had been present for four years before admission, becoming progressively more severe (Fig. 6a). He gave up all employment one year before admission. The patient first refused surgery, and was discharged on October 16, 1953. Finally, when he was unable to walk, he was readmitted on April 30, 1954, and willingly accepted the recommended treatment. Standard chest films revealed an 80 per cent collapse of the right lung and 60 per cent collapse of the left lung (Fig. 6b).

Three days after admission, during which time he was maintained on antibiotic treatment with relief of some of the dyspnea, a right thoracotomy was performed and a large bulla typical of the emphysematous type encountered. This was unroofed, and the space closed with a running suture, and it was possible to expand the collapsed lung and maintain expansion postoperatively. He was discharged from the hospital on the twenty-fifth postoperative day with his condition much improved and able to walk slowly without dyspnea.

Following his discharge, improvement continued, and in January, 1954, he began to work three hours a day driving a truck (Fig. 6c). However, in April, 1954, there was evidence that the bulla in the left lung was increasing in size and herniating into the right hemithorax (Fig. 6d). Therefore, he was admitted on April 30, 1954, and four days later a left thoracotomy with unroofing and obliteration of the bullous space on the left was performed. He made an uneventful recovery, and was discharged fifteen days postoperatively. In October, 1954, he was able to walk six blocks and up two flights of stairs without dyspnea (Fig. 6e).

The pulmonary function test was as follows: walking ventilation 15 L/M; maximum breathing effort 49 L/M; ratio 34 per cent. He was free of asthmatic attacks, and able to work eight hours a day. He weighed 171 pounds, representing a 50 pound weight gain over his admission weight.

Discussion

The results have been gratifying. Pulmonary function tests done from six months to four years after surgery reveal an excellent pulmonary reserve considering the extent of emphysema present. The fact that these men have returned to work, some as laborers, speaks for itself.

There has been no mortality. In one case of spontaneous pneumothorax, due to rupture of an emphysematous bulla, failure to maintain complete expansion after thorocotomy necessitated a thoracoplasty. The clinical result obtained in this case was considered to be good. Two cases (Nos.

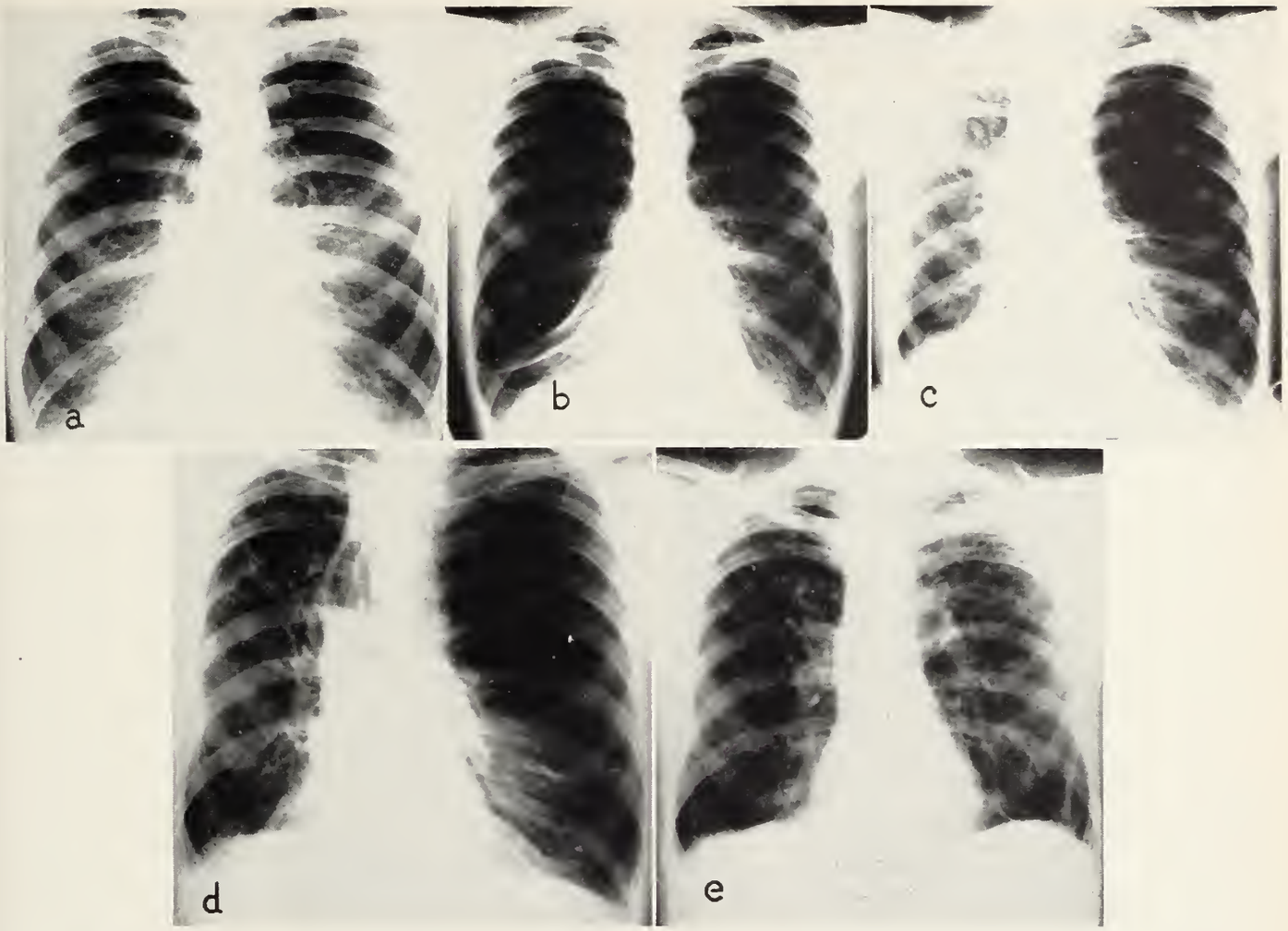


Fig. 6. Case 6, (a) March 22, 1951. (b) September 9, 1953. (c) October 9, 1953. (d) May 1, 1954. (e) October 20, 1954.

3 and 4) required intercostal suction for two weeks postoperatively.

The improvement in the cardio-respiratory reserve at the time of surgery, the absence of mortality, the low morbidity and the clinical results justify the contention that thoracotomy and obliteration of bullae by this method should not be denied these respiratory cripples.

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DEPENDENT GROUPS INCREASING

Dependent groups will grow faster than the labor force during the next twenty-five years, according to the Census Bureau's projections. The dependent groups are defined as including persons over sixty-five and under fifteen years of age. At the present time, about 8 per cent of the population are sixty-five and over, and about 30 per cent are fourteen and under. A two-thirds gain in the sixty-five-and-over age group is forecast due to improved nutrition and medical care. In computing the potential labor force, the Census Bureau includes everyone between the ages of fourteen and sixty-five. There are now about 102 million in this category. The actual labor force now includes about 66 per cent of the potential labor force.—Research Council for Economic Security.

Lower Lobe Tuberculosis

By John William Fries, M.D.

Webster Groves, Missouri

THIS subject is discussed because many times it is not considered in chronic disease of the lower lobes. The medical profession usually thinks of pulmonary tuberculosis as being only upper lung field disease or as a widely disseminated process, and therefore eliminating tuberculosis from any persistent lower lobe infiltration. The historical aspects of lower lobe pulmonary tuberculosis are clearly recorded and discussed by Chambers.[4] Kidd[11] as far past as 1886 noted that the lower lobe apex may be involved. During the nineteenth century and early twentieth century little significance was placed on this observation.

In the 1920's observers found that not all tuberculosis was in the apices of the upper lobes.[5,6] The reports were not in abundance and the commonly accepted pathogenesis was that the tuberculous lesions started in upper lung fields, usually in the infraclavicular regions, and then spread downward. Basal lesions were considered rare.

In 1927 Dunham and Norton[6] presented 60 cases of basilar tuberculosis, of which nineteen were autopsied. Their post-mortem results revealed that in these cases tuberculous lesions were found elsewhere throughout the body. On analysis, twelve had either pleural involvement or adentitis. This finding would be in keeping with a terminal or far advanced phase of tuberculosis, as were the remaining seven cases which had gastrointestinal, genitourinary, and osseous involvement. Pancoast discussed their work and believed that basal tuberculosis was an atypical form of miliary tuberculosis in view of the fact the disease was extrapulmonary in all of the post mortem follow ups.

From 1928[5,9,14,20] the literature becomes more informative on basal tuberculosis with a viewpoint that changes. With the use of the posterior-anterior and lateral roentgenograms we can be more specific as to terminology. Basilar tuberculosis refers to the disease in the lower portions of the lung fields, i. e., below the hilar shadows. The lower lobes comprise the greatest volume of the lower lung fields; however, the middle lobe and lingula are also in the basilar portions. The apex of the lower lobe is above the hilar shadows and therefore would not be included in lesions that were "basilar" in type. There is no anatomical division except an imaginary line dividing the lung fields in half, thus making the term basilar one of poor nomenclature. The older literature is therefore not always too informative in reference to lower lobe tuberculosis since the authors consider indefinite areas of the lung involved rather than lobes and pulmonary segments. Some authors as late as 1946 use the term "basal tuberculosis."[18]

The significance of the established fact that pulmonary tuberculosis may begin in the lower lobes is still many times forgotten. To establish the diagnosis of lower lobe tuberculosis may be difficult since routine sputa examinations may be negative. Sputum concentrates, gastric washings with guinea pig innoculation, and examination of the bronchoscopic material may be needed before the tubercle bacilli can be isolated. Other diseases more commonly affect the lower lobes than tuberculosis, and therefore demonstration of the acid fast organism is needed to establish the diagnosis. Usual conditions considered in persistent lower lobe infiltration are bacterial or viral pneumonias that are slow in resolution, bronchiectasis, lung abscess and bronchogenic carcinoma. The main difficulty is that lower lobe tuberculosis is not considered in a differential diagnosis. Valuable time may be lost by not considering tuberculosis, and in the interim the disease may spread to the upper lobe or the opposite lung field.

Incidence

The reported occurrence of lower lobe infection without disease in the middle or upper lung field varies from below 1 per cent[14] to over 5 per cent.[18] The average falls in the neighborhood of 3 per cent. This means to the radiologist and to the clinician that one out of thirty cases of pulmonary tuberculosis will be in the lower lobes. This point cannot be over stressed. Ross[16] has brought to our attention that nurses may be prone to involvement in the hilar or basilar regions, suggesting the lower lobe to be involved. In his series there were nineteen cases out of sixty. From this work, and others[4,14,15] there is a prediliction

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for women and in an age group from ten to forty years.[4] The involvement of lower lobe tuberculosis is more common on the right, which is a repetitious finding throughout the literature.[1,3,12,13] The concurrence of diabetes mellitus has also been associated with tuberculosis of the lower lobes.[1,17]

Pathogenesis

At present there is not unanimous acceptance of one theory as to the pathogenesis of lower lobe tuberculosis. Of the many proposed mechanisms, one or more may adequately explain each individual case.

Frequently authors[1] mention that rupture of a tracheobronchial lymph node is the most logical explanation of conception of the disease. The contents are discharged into the bronchial tree and descend to a terminal bronchiole where an alveolar infection, bronchopneumonic in type, can follow. In this type we find reinfection or adult type of tuberculosis. A tuberculous lymph node may rupture into any adjacent structure.[2] Since the apex of the lower lobe is in close proximity to the hilus, this seems to be a logical method of instituting a parenchymal infection. Halle and Blitz[8] point out that the caseous lymph node of the primary complex may erode into lung structure with subsequent healing, and later reactivate. When calcific hilar lymph nodes rupture or erode, tuberculosis is not the only sequellae. Expectoration of calcific deposits, lung abscess, hemorrhage, and bronchopleural fistula have been reported by Head and Moen.[10] Although calcific hilar nodes can contain active tubercle bacilli, they are evidently less prone to cause pulmonary tuberculosis, when and if they erode nearby pulmonary structures, than is a caseous node having an abundance of acid fast organisms.

Ossen[12] explains a method of pathogenesis of lower lobe tuberculosis in patients that have evidence of apparently inactive tuberculosis in the upper lobes manifested by nodular or fibrotic infiltration. He believes these foci at times will set acid fast organisms free, and they in turn will drain into the lower lobe bronchi to establish a new infection in the vulnerable apex of the lower lobe. This he designates as metastatic lower lobe disease.

Large tuberculous lymph nodes at the lung roots may transmit their disease to the apex of the lower lobes by means of retrograde lymphatic flow.[8]

Another important consideration in the evolution of the lower lobe tuberculosis is the degree of aeration of various portions of the lung. The posterior paravertebral volume of lung structure has less motion than the remaining portion of the lung. Within this region we find the posterior subapical area of the upper lobe and the apical segment of the lower lobe. This posterior gutter of lung is more stationary in women because their breathing is mainly costal in action. In contrast, the male main breathing mechanism is diaphragmatic. In addition, the right hemidiaphragm with the underlying liver has less excursion than the left. This results in the right paravertebral area being the most fertile ground for beginning infection. The vulnerability of this area is manifest in theory and in practice by the right lower lobe, especially the apex, being the most common area of involvement, with the incidence predominantly in females. By this method, the tubercle bacilli may gain entrance to the pulmonary structures by means of inhalation.

No specific pathogenesis has been proposed whereby other portions of the lower lobes, except the apex, may be the initial site of involvement. The literature is only informative as to why the apical segment is most commonly the site of onset.

Roentgen Findings

The roentgen examination requires posterior-anterior and left or right lateral views. Examination in both planes can clearly localize areas of infiltration limited to the lower lobes. Single posterior-anterior examinations cannot rule out middle lobe or lingular disease, since they overshadow the lower lobes. The inferior portion of the upper lobes are also obscured by the lower lobe apices on the posterior-anterior film. The cardiac silhouette can also obscure lesions in the left base that a lateral view will demonstrate. The costophrenic sinus posteriorly cannot be seen on the conventional posterior-anterior views, and demonstration of this area is of value in view of the fact that lower lobe tuberculosis has been known to simulate subphrenic abscess. In this type of unusual process the lung fields may be initially clear,[7] and an extensive pleural reaction with an elevated diaphragm may be the only findings.

Ostrum and Serber[13] best discussed the early roentgen aspects of lower lobe tuberculosis and divided tuberculous lesions into two groups. The

first type shows small areas of infiltration, just perceptible, above and below the hilar regions appearing as transverse or beaded lines. These infiltrates are often lateral to the hilar shadows.

The presence of large pleural effusion, emphysema, and atelectasis is seldom found in the literature in relationship to lower lobe tuberculosis. These findings would lead one to think the under-

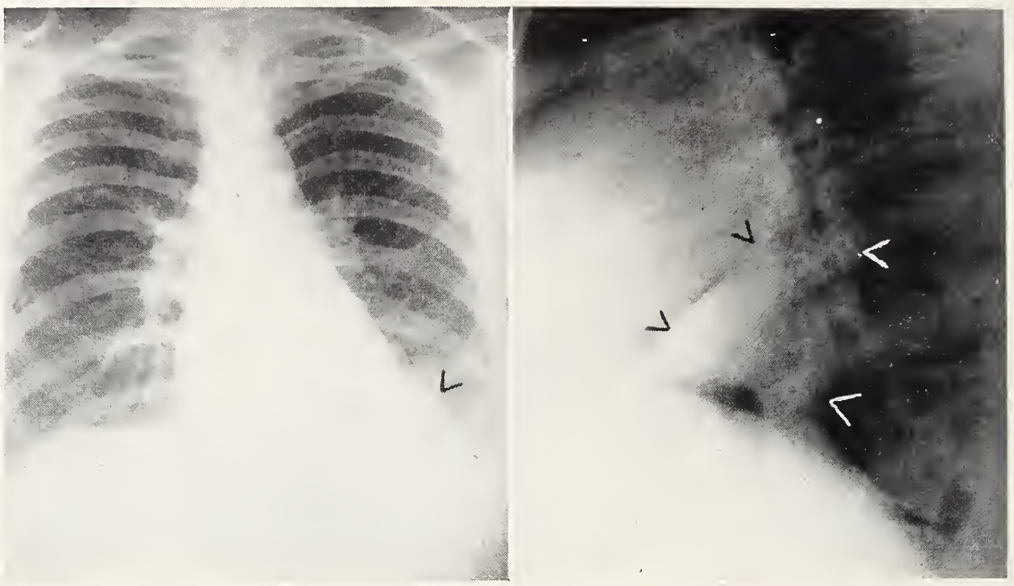


Fig. 1. (a) Posterior-anterior view of a thirty-two-year-old white woman, a nurse. The arrow is adjacent to a small ill-defined infiltrate to the left of the cardiac silhouette.

(b) Left lateral view of (a). The arrows localize the infiltration which is retrocardiac and limited to the antero-medical basal segment. The apical segment of the left lower lobe was not involved. This case was proven to be pulmonary tuberculosis and limited to the antero-medial basal segment.

In the lateral view visualization of these infiltrates are sometimes difficult to see since the apex of the lower lobe overshadows the thoracic spine. The second type consists of larger areas of infiltration which appear as areas of consolidation. Cavity formation is often seen, and more of the lower lobe than just the apex may be involved. This is a farther advanced process than the first type. Sokoloff[17] has demonstrated that cavitation which occurs may show little inflammatory change in the surrounding lung, and this is important in the differentiation from a lung abscess. The cavities may be multiple, irregular in shape, and they frequently have no fluid level. Cavitation has been known to occur with a high frequency. Andosca and Foley[1] found 78 per cent of their patients to have cavities upon admission.

The infiltration may extend from the hilus toward the diaphragmatic surface, and this suggests bronchiectasis. It will persist on several roentgen examinations with little if any change. In this type the x-ray examination may be misleading since the clinical findings may also be compatible with bronchiectasis. Only through demonstration of tubercle bacilli can the diagnosis be established.

lying diseased process is a pathological entity other than tuberculosis.

At this point mention should be made of pulmonary tuberculoma. This form of tuberculosis is in many ways different from the infiltrative or alveolar type which is being presently discussed. Tuberculomas are circumscribed and appear as a rule as nodules in the lung field. Although they are more common in the upper lobe, seven out of twenty-six cases in Wang's series[19] occurred in the lower lobes with the superior and subsuperior areas being affected. It is also interesting to note that six of the seven cases were on the right side. Firm encapsulation tuberculomas is not always the rule. Tubercle bacilli can be demonstrated in the bronchial washings and tuberculomas can undergo cavitation. Further spread of the disease may follow, and for this reason attention should be paid to these lesions. The roentgen features consist of dense rounded lesions, usually sharply defined. They vary from 1 cm. to over 7 cm. in size and the calcium may be irregularly distributed throughout the center or periphery of the lesion. The greater majority are near a pleural surface and in many cases there

is x-ray evidence of healed or inactive tuberculosis elsewhere in the chest. The form of the disease presenting cavities may give a roentgen appearance of a "doughnut" shadow.

later the sputum smear was positive for tubercle bacilli. The patient had a left lower lobectomy and has been asymptomatic for over two years. This patient demonstrates the necessity of having a lateral view since the greater portion of the infiltration was obscured by the

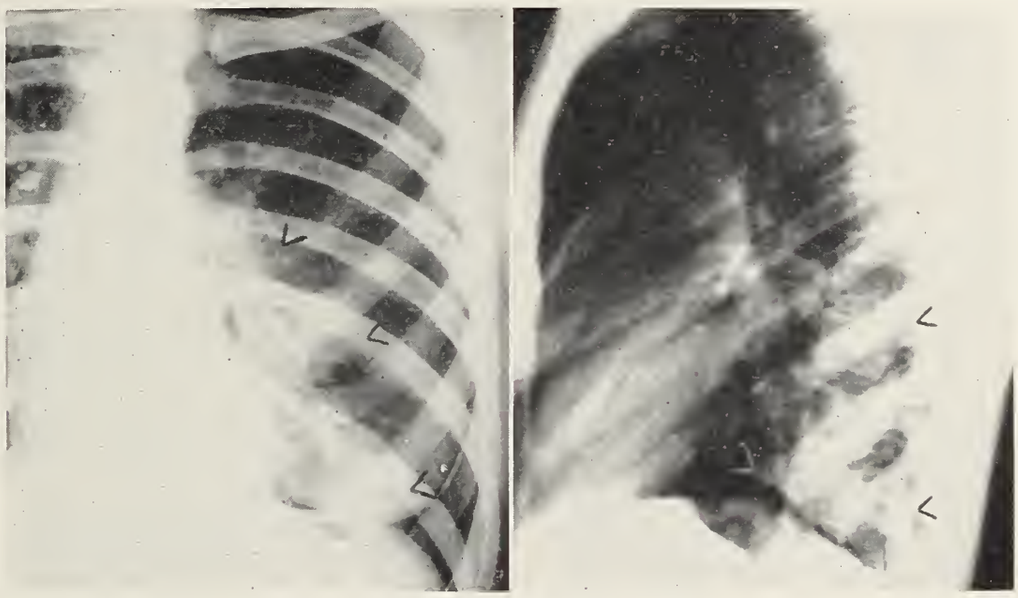


Fig. 2 (a). Posterior-anterior view of a twenty-one-year-old colored woman. An infiltrative process is noted in the left lower lung field (arrows).

(b) Left lateral view of (a). The infiltration is located posteriorly (arrows) in the lateral and posterior basilar segments of the left lower lobe. The apical segment was not involved. This case was proven to be pulmonary tuberculosis and responded to left lower lobectomy.

In reference to involvement of specific lower lobe segments other than the apical segment, the literature again presents a paucity of reports. The two cases to be presented show quite clearly involvement of lower segments, with the lower lobe apex being clear. Although these cases do not present x-ray findings that are characteristic of lower lobe tuberculosis, they do add to the armamentarium of the protean manifestations of this disease. Therefore, with persistent segmental infiltration of the lower lobes other than the superior segment, tuberculosis must be considered as being an etiological factor.

Figure 1a is a posterior-anterior view of a thirty-two-year-old white woman, a nurse. A small ill-defined infiltrate was observed just to the left of the cardiac silhouette. This could very easily have been overlooked. Figure 1b is a left lateral view and the infiltration is clearly defined in the anterior inferior portion of the left lower lobe in the antero-medial basal segment. A diagnosis of atypical pneumonia without resolution was made since the infiltrate persisted for several months. There was no response to penicillin and later to aureomycin. An afternoon fever and weight loss continued. Numerous sputa smears were negative; however, months

cardiac silhouette. This apical segment was free of involvement, and the only site of involvement was in the antero-medial basal segment.

Figures 2a and 2b are posterior-anterior and left lateral views respectively of a twenty-one-year-old colored woman who had lower lobe tuberculosis. She was poorly controlled by pneumothorax but responded well to left lower lobectomy. The patient had a very small amount of sputum that was repeatedly negative, thus delaying the diagnosis. This case demonstrates the primary involvement to be in the posterior and lateral basilar segments of the left lower lobe, and the apical segment showed no evidence of the disease.

Conclusion

Lower lobe tuberculosis is to many an unknown disease, and as a result a diagnosis is made after the disease has been present a considerable length of time. Since the apices and infraclavicular regions are radiographically clear, the initial suspicion of tuberculosis from the clinical symptoms is forgotten. Female patients usually have small amounts of sputa, and two or three direct smears may fail to reveal the tubercle bacilli. Repeated examinations, especially gastric washings with

guinea pig innoculation, may be necessary to establish the diagnosis.

There is a predilection for the apical segment of the lower lobe. Diminished aeration of this volume of lung structure may be the reason for the higher incidence than in other portions of the lower lobes. Rupture of a tracheobronchial lymph node, old healed foci in the upper lobes, large hilar adenopathy with retrograde lymphatic flow, and inhalation are the mechanisms by which the tubercle bacilli reach the lower lobe.

The roentgen examination reveals a persistent infiltration in the lower lobes with the apical portion usually being involved. Thin walled cavities are the rule. Tuberculomas may occur in the lower lobes and may be a source of further pulmonary tuberculosis, since they may cavitate and discharge the acid fast organisms.

Whenever a pneumonitis or infiltration is persistent in a young person, and it involves the lower lobes, and does not resolve or respond to antibiotics used in the therapy of acute pneumonias, a definite search must be made to rule out tuberculosis or to isolate the acid fast organisms.

The two cases presented show that lower lobe tuberculosis may have as its initial site of onset lower lobe segments other than the apical segment. This finding has not previously been stressed in the literature.

Acknowledgment

The author wishes to express his appreciation to Dr. B. Friedman for the demonstration of Figures 1a and 1b.

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TUBERCULOSIS CASE-FINDING IN ONTARIO

(Continued from Page 1300)

general hospitals already have introduced such a program with the active co-operation of local physicians.

Until such time as some means is discovered in preventing tuberculosis which is as effective as the vaccine for small pox, our main weapon in the fight against tuberculosis, as far as case-finding is concerned, remains the x-ray. Over one million people in Ontario were examined last year in connection with the preventive program. The goal to which we must strive is the acceptance by the public of the need for an annual chest x-ray and the provision of adequate facilities for this purpose. We should realize, however, that it is the thoroughness by which our programs are conducted, not necessarily the volume, which will best reward our efforts in the future.

Management of Tuberculosis in Children

By Edna M. Jones, M.D., and
W. Leonard Howard, M.D.

Northville, Michigan

SINCE December, 1921, Maybury Sanatorium has maintained 90 to 160 beds for tuberculous children and in these thirty-three years has treated approximately 3,000 children from the Detroit area. The effect of antimicrobial therapy (AMT) on the death rate of children at Maybury Sanatorium has been striking. Even from the beginning of our experience with streptomycin there has been ample evidence that it favorably influenced the course of tuberculosis in children. During the six-year period from January, 1941, to January, 1947, there were 780 patients at the Children's Unit with seventy-seven deaths—a rate of 9.8 per cent. During the period from April, 1947, when streptomycin first became available, to April, 1955, there were 791 patients at the unit with thirteen deaths—a rate of 1.6 per cent. The effect of streptomycin (SM) and para-aminosalicylic acid (PAS) was seen not only in the reduction of deaths but also in a reduction in the number of primary lesions progressing to fatal forms. Prior to 1952 meningitis occasionally developed in a patient with miliary disease even after he had been placed on adequate streptomycin; since 1952 in patients treated with isonicotinic acid hydrozide (INH) this has never occurred. A true measure of the effectiveness of present-day, long-term chemotherapy is indicated in Table I, which compares the experience in the period immediately preceding the advent of any antimicrobials with that following the introduction of INH.

Another important advantage in these past three or four years has been long term, continuous, combined, antimicrobial therapy. Hence it is apparent this period presents a marked change of attitude toward the treatment of tuberculous children.

Among Maybury children 10 per cent developed tuberculosis before they reached six months, 20 per cent before one year, 40 per cent before three years, and 75 per cent before five years of age.

From the Wms. H. Maybury Sanatorium, Northville, Michigan.

TABLE I. MORTALITY

	All Patients			Meningitis Cases		
	No.	Deaths	%	No.	Deaths	%
Without AMT 1944-46	200	30	15	10	10	100
With FULL AMT 1952-55	392	1	0.25	32	1	3.1

TABLE II. IN-SANATORIUM CHILDREN
(APRIL 18, 1952 TO MARCH 18, 1955)

Total No. (Including Patients c Multiple Lesions)		Cases Classified According to Major Lesion		Deaths	
		No.	%	No.	%
Group I					
Meningitis	32	32	8.2	1	3.1
Miliary	43	27	6.9	0	0
Pericarditis	1	1	0.2	0	0
Group II					
Reinfection (pulm.)	10	10	2.5	0	0
Bone and Joint	29	21	5.4	0	0
Genitourinary	2	1	0.2	0	0
Peritonitis	4	4	1.0	0	0
Pleuritis	36	18	4.6	0	0
Primary (PBC)*	128	106	27.1	0	0
Group III					
Primary (simple)	192	156	39.8	0	0
Nodes (superficial)	26	16	4.1	0	0
EENT	6	0	0	0	0
Total		392	100.0	1	0.25

NON-SANATORIUM CHILDREN

Group IV
Recent tuberculin converters.
Heavily exposed babies and sick children.

*See description in paper.

Approximately two-thirds of Maybury children are colored. Children with all types of tuberculosis are admitted, and many have more than one organ system involved. Table II reveals pertinent data on 392 in-sanatorium patients who had the advantages of the modern use of anti-tuberculosis drugs.

Table II and also the Table III showing dosage regimens are arranged according to the relative time the various groups would be likely to need bed rest and hospital observation rather than as to the total length of drug therapy.

Aside from the three in-sanatorium groups which have been treated at Maybury, a fourth non-sanatorium group might advisably be treated.

Antituberculosis drugs are given in combination and continuously beyond apparent stabilization of the lesions. They are prescribed individually for each child on the basis of mg. per pound per day (INH, SM and PAS are dispensed in metric system units; the children are weighed in pounds). *High, Medium* and *Basic* dosage levels are used for SM and INH but only the *Basic* dosage level for PAS.

TABLE III. PRESENT AMT OF CHILDREN AT MAYBURY

Regimen	I (INH)	S(SM)	P(PAS)
HIGH	**I 4.5-3.5 mg./lb./day**	**S 25 mg./lb./day**	**P 90-45 mg./lb./day**
MEDIUM	I 3-2.5 mg./lb./day	S 9-6.5 mg./lb./day	P 90-45 mg./lb./day
BASIC	*I 2-1.5 mg./lb./day*	*S 9-6.5 mg./lb./3xwk.*	*P 90-45 mg./lb./day*
Class	Duration of High	Duration of Medium	Duration of Basic
Group I Men (early) Miliary Pericard.	**I 10 da—S2w-P** **I 10 da—S2w-P** DRASTIC REGIMEN	I 4-6m—S6-9m plus P I 3-6N—S2-4m plus P	*I-P 24-36m total* *& S 9-15m total* *I-P 18-24m total* *& S 3- 6m total*
Group II Reinfection	USUAL REGIMEN	P & I 10 days or S 2 wk.	*P 18-24m total* *& I 18-24m total* *or S 18-24m total*
Bone and G.U.		I 10 days & S 2 wk. or P	*I 24-36m total* *& S 24-36m total* *or P 24-36m total*
Peritonitis		Same	*Same 12-24m total*
Pleurisy		Same	*Same 9-18m total*
Primary Group III		Same	*Same 9-18m total*
Lymph nodes (superficial)		Same	*Same 12-24m total*

In a given disease classification the highest dosage is given first when the disease is most active. The growth and weight gain of the child usually take care of the reduction of dosage but if not the dosages are adjusted. Even in the same classification there are degrees of extensiveness of the disease and also of symptoms. For instance, a severely ill child with extensive primary disease would be started on the upper limit of the *Medium* dosage of 3 mg. of INH with either 9 mg. of SM or 90 mg. of PAS per pound per day. On the other hand an asymptomatic child with a smaller primary lesion would be started with 2.5 mg. of INH and either 6.5 mg. of SM or 45 mg. of PAS per pound per day. INH-SM seems somewhat superior as a two-drug combination but INH-PAS is less burdensome to the child. As of July 15, 1955, the 100 children in Maybury were receiving AMT as shown below:

Drug Combination	*No. of Patients*
INH-PAS	81
INH-SM-PAS	14
INH-SM	1
INH alone	2
SM-PAS	1
None	1
	100

Group I

In Group I are cases of meningitis, miliary disease and pericarditis where the *drastic* regimen of antituberculosis therapy is used to obtain the maximum effect before irreparable damage occurs.[17] In pericarditis and miliary tuberculosis there is a routine reduction of INH in ten days and SM in two weeks. Likewise in an early and favorably responding meningitis it may be feasible to reduce the INH in ten days to lessen the risk of toxic hepatitis and neuritis and to reduce SM at two weeks to prevent the vestibular damage (as detected by the caloric test) which almost invariably occurs when *High* dosage is continued for more than three weeks. However, in more severe and less responsive cases of meningitis the benefit of longer high dosage INH-SM outweighs the risk of toxicity. Intrathecal SM is no longer used but frequent spinal taps are necessary to relieve pressure symptoms until the meningitis starts to subside. Older children, although not complaining of headache, often remark that they feel better after the spinal tap and they are obviously less irritable. If the patient becomes comatose, massage and passive motion of all joints will help to minimize muscle contractures and ankylosis.[16] Spinal punctures are done routinely on newly admitted patients with miliary tuberculosis and then repeated once or twice within the month and occasionally during therapy. Increasing experience with INH in combination with other drugs has reduced the number of spinal fluid examinations needed. Children in this group require maintenance of high-protein, high-calorie, high-vitamin diet and electrolyte balance when vomiting is excessive and they must receive INH parenterally if there is vomiting from any cause whether it be due to increased intracranial pressure, emetic cough, gastric upset due to PAS, food allergy, et cetera. The importance of INH in meningitis and miliary tuberculosis is stressed by authoritative reports.[2,11,12]

Group II

In Group II are reinfection, bone and joint, genitourinary, peritoneal, pleural, and the more severe primary forms of tuberculosis which unquestionably require many months of bed rest usually in a sanatorium. In these classifications the *usual* regimen is prescribed for varying lengths of time. INH is routinely used in the combination for at least the first year of drug therapy in all children except possibly those with reinfection tuberculosis. In cavitary reinfection, or cavitary primary disease, where drug resistance more read-

ily develops PAS is included in the combination until there is sputum conversion. If the course is very stormy, SM-INH-PAS may all be given for a while to such children. After sputum conversion there is no contraindication to changing back and forth between INH-PAS and INH-SM, or after one year, to SM-PAS but there is definite contraindication to allowing breaks in treatment or discontinuing the whole course too soon.

In reinfection tuberculosis collapse therapy is not used. Resection may be indicated as in adult patients for persistent cavity, unresolved caseous focus, et cetera.

In tuberculosis of the spine, pelvis and hip, rest on a frame is used to prevent weight bearing for eighteen months or possibly two years after which time ambulation with a brace may be allowed. Depending on the amount of destruction which has occurred before the initiation of treatment, fusion may be necessary if and when the child is old enough. Fusion is most often needed in lesions of the lumbar spine where a brace may not give adequate support. For involvement of the knee, ankle, and foot, sitting in bed is allowed. After one or two years the patient may ambulate with crutches. In lesions of the upper extremity the child on bed rest is relied on to voluntarily avoid use of the involved part until healing is well under way. Casts are seldom used and the results seem better without such complete immobilization.

Genitourinary tuberculosis is treated with the *usual* regimen. All three drugs are advisable.[13,15] Prolonged bed rest is necessary.

The *usual* regimen is used for peritonitis. Bed rest is maintained for at least nine months. Paracentesis is done for diagnosis or to relieve pressure.

The treatment of pleurisy is as indicated for peritonitis but in most cases with a shorter period of drug therapy since the pleural shadow clears, rarely leaving any x-ray residual, and it is easier to evaluate the underlying or associated condition than is the case in peritonitis.

Primary tuberculosis is included in Group II, Group III and Group IV since the amount of clinical and x-ray manifestations vary so widely. Furthermore, these cases comprise the largest classification of in-sanatorium patients and observations on the rate of culture conversion and x-ray clearing are statistically more significant. In Group II are included all primary cases which have: (1) stormy symptoms regardless of the size of the x-ray lesion, and (2) those with extensive x-ray findings regardless of the paucity of symptoms. Among the latter group are those designated at Maybury as Primary with Bronchial Complication (PBC). Since the 1930s when collapse therapy was sometimes advised for a progressive consolidation, especially if cavitation were present, investigation by x-ray, physical findings, bronchoscopy and bronchography[8-10] revealed the following characteristics of these so-called PBC lesions: On x-ray the segment, or lobe, which is the site of the primary parenchymal lesion becomes dense and the tracheobronchial nodes may be obscured. Mediastinal shift is uncommon but may be present when the whole lung is involved. The size of the lobe is decreased in 50 per cent and increased in 5 per cent of the cases. Fever and cough are not in keeping with the long x-ray course. Wheezing, the most common symptom, is not constant, and rales are rarely heard. Resonance and breath sounds are almost invariably decreased. On bronchoscopic examination 74 per cent of these children have one or more of the following abnormalities: extrinsic pressure, thick secretions, tuberculoma, ulcer, or a lymphnode draining into the bronchus. When adequate contrast media mapping could be obtained, 70 per cent of cases had bronchiectasis in the originally involved parenchymal segment, extending from the root to the periphery. Before AMT was available positive cultures sometimes persisted for five years even with progressive x-ray and clinical improvement. All segmental lesions[1] admittedly do not fall into this category but since without time and serial x-rays the differentiation cannot always be made, the term PBC has been used for the whole group for simplification. Recent reports indicate the role played by nodes perforating the bronchus in adult patients.[5,6]

Such children receive water vapor inhalations and the crib mattress is tilted to facilitate drainage of either the upper or lower lobes. In babies, particularly good nursing care is required with emphasis on keeping the trachea relatively free of secretions and assuring the retention of regular feedings. If the baby has such profuse bronchial secretions that change in position results in emetic cough, the routine should be arranged so that change in position and coughing are completed and some rest obtained before feeding or oral medication (thirty to forty minutes).

Under the present therapeutic regimen (see

TABLE IV. INITIAL CULTURE STATUS VS EXTENT OF PRIMARY LESION (CASES)

	Nodes	Par+	Par++	Par+++	Total
No. Cases	36	153	62	30	281
Pos. Cultures	16%	25%	34%	40%	27%

TABLE V. CULTURE CONVERSION (CASES)

	Initial	3 Mos.	6 Mos.	9 Mos.	12 Mos.
AMT	28%	3%	0	0.8%	0
Control	25%	20%	15%	12%	19%

TABLE VI. CULTURE CONVERSION (SPECIMENS) TOTAL SUBSEQUENT CULTURES

	Per Cent Negative	Per Cent Contaminated	Per Cent Positive
AMT	92	5.3	2.7
Control	63.6	0.6	35.8

above) resection is rarely required because of persistent positive cultures. This contrasts with the 1947-1952 period when only SM and PAS in short courses were used. During this period nine children required pulmonary resection for persistent positive cultures or residual bronchial pathology.

Incidence of positive tubercle cultures among 281 children having primary tuberculosis evidenced by either nodes only or nodes associated with parenchymal lesions one, two, or three plus in extent is shown in Table IV.

The conversion rate for these 281 cases is shown in Table V for (1) AMT group and (2) Control group.

When in this same group of 281 children a study of all cultures taken subsequent to one month of admission is made, the striking effect of AMT on culture conversion is again evident (Table VI).

Among the AMT group, of the positive cultures in which regrowth was obtained for resistance studies (twelve initial and seven subsequent cultures) the SM resistance (S/R) was interesting if not statistically significant especially because of the small number of positive subsequent cultures. Among the AMT group it was found that of the cases which remained positive, 29 per cent showed tubercle bacilli resistant to SM. However resistance studies done on the initial sputums showed that 26 per cent of the positive cases were already resistant to SM. These findings show the proportion of children which may be expected to be infected with SM resistant tubercle bacilli and indicate a need for doing resistance studies on all sputum positive children.

Although AMT has lessened the proportion of seriously extended primary lesions, caused more complete resolution and reduced the number and size of calcifying residuals, it has not prevented an increase in the parenchymal lesions in certain cases.[7] These x-ray worsenings, occurring mainly in recent lesions, apparently take place in spite of a reduced population of tubercle bacilli since negative cultures almost invariably were obtained coincident with the x-ray increase. With continuation of AMT these x-ray increases usually clear readily but not so rapidly as would a nontuberculous pneumonia.

Group III

The asymptomatic simple primary and superficial lymphnode cases are placed in Group III since they may require relatively little hospitalization and bed rest compared with the duration of AMT.

When compared with the PBC type of primary case, a much smaller proportion of the total simple primary cases being seen in the clinic are admitted to Maybury. Those admitted receive the *usual* regimen of drugs and, for at least a few weeks, modified bed rest. The same management is indicated for those who remain at home.

Tuberculin positive older children with x-ray evidence of apparently arrested primary and babies with BCG positive tuberculin reactions who develop acute or subacute pulmonary episodes which do not respond promptly to broad spectrum antibiotics should receive the *usual* regimen of AMT at least until atypical pneumonia is ruled out or until reports from serial cultures of the sputum or gastric washings are available.

In children with tuberculous involvement of the superficial lymph nodes on admission to the sanatorium, modified bed rest is enforced until all constitutional symptoms have disappeared and until any sinus drainage has become indolent. The development of serious forms of tuberculosis and the tendency to exacerbation in these children make early management and prolonged AMT mandatory. The longer use of AMT, with INH in combination, has resulted in a decreased number in which surgical intervention was indicated. Any child having nodes, suspected of being tuberculous,

should be protected by AMT before aspiration or surgical incision. We have placed Streptokinase jelly in large sinuses leading to caseous nodes with good effect.[4]

Group IV

Children in this preclinical group have not to date been admitted to Maybury but, in the light of reports and discussions at recent national conventions, the possible need of AMT for them should be considered. The following two types of cases fall in Group IV: (1) a child of any age in whom there is a recent (within three months) conversion of the tuberculin test but x-ray is still apparently normal; (2) an apparently healthy baby who has had a recent, heavy exposure to tuberculosis but x-ray and tuberculin are still negative.

In the judgment of the writers, children of type (1) should be treated with INH, 2 mg./pound/day, and PAS, 45 mg./pound/day, for at least nine months. Children in type (2) should receive INH, 2 mg./pound/day, for at least four months.

In the heavy exposure cases there may sometimes be a hesitance in starting therapy before the tuberculin test becomes positive. If so, the child should be examined frequently, the tuberculin test and chest x-ray (PA and lateral) repeated biweekly and a daily record of his temperature and symptoms kept. Basic INH and PAS should be started at once (1) if the tuberculin converts, (2) if the x-ray shows evidence of developing lesions, or (3) if any signs or symptoms of illness develop even if the tuberculin test and x-ray are still negative. The tuberculin test may remain negative because of overwhelming disease or because of a prolonged latent period; a definitive chest x-ray in a child is very often difficult to obtain. If the child becomes ill, the *usual* regimen of AMT should be used; if miliary or meningeal tuberculosis become apparent or even suspected, the *drastic* regimen is indicated.

It is known that the most hazardous period for a tuberculous child is the first six months following conversion of the tuberculin test. Treating this type of child should prevent the development of serious tuberculosis. Among those children who have been infected with tubercle bacilli the percentage rate which develop serious tuberculosis is low but in each individual child who develops serious tuberculosis the rate is 100 per cent.

Discussion

The very effectiveness of present day therapy of tuberculosis introduces a problem in family relations. Even the most critically ill children usually show rapid improvement under AMT. Because their child looks so relatively healthy the parents may insist on taking him home prematurely, or, after discharge has been approved, may be less faithful in carrying thru their part of the outpatient program than they would be with a very well child. Thus, one of the problems of the physician is a careful evaluation of the child's home conditions (possibly disrupted anyway because of tuberculosis) to determine the degree of stability, patience, and understanding which will make for successful post-sanatorium treatment. The latter must include, in addition to the regular chemotherapy, attention to the child's general health, with prevention of fatigue, and providing an adequate diet. Polyvitamins are indicated, especially vitamin B_6 for the patients on *High* and *Medium* dosage of INH.

Most drug intolerance occurs in the early months of treatment and there have been few serious reactions among the children at Maybury. Even so, the family must be on the alert for possible drug reactions as long as the child is receiving AMT.

There is fairly general agreement regarding the treatment of demonstrable tuberculous lesions. More variation of opinion is found concerning those children with unproved (or less definite) lesions—the Group IV described above. Myers[14] and Waring[18] have stressed the wider use of the tuberculin test in early detection of tuberculosis. Waring states that it "would reveal recent converters (ideal for chemotherapy) and therefore those most likely to manifest signs and symptoms within a short period of time." He recommends routine chemotherapy for recent converters among highly exposed groups. Debre[3] found that after the tuberculin conversion in childhood the risk of tuberculous meningitis is 0.33 per cent; of tuberculous pleurisy, 3 per cent; and of pulmonary tuberculosis at the age of fifteen to twenty is 5 per cent.

All physicians responsible for children should (1) make tuberculin testing a part of the well-baby checkup, (2) consider tuberculosis early and more often in the differential diagnosis of sick children, (3) carefully evaluate all children with contact, (4) watch known tuberculin reactors even more carefully as they approach puberty, and (5) treat early and adequately all active tuberculosis.

Summary

Antimicrobial therapy (AMT) in children at Maybury Sanatorium has reduced the general death rate from 15 to 0.25 per cent and the meningeal death rate from 100 to 3.1 per cent. A positive gastric culture is rarely obtained after two months of combined drug therapy. The AMT regimens used in the past three years have permitted the earlier discharge of many children to complete their treatment as outpatients. This more rapid turnover of patients has eliminated the admission waiting list and allowed treatment of a greater proportion of earlier lesions resulting in more complete resolution. Treating recent converters and recently heavily exposed babies should further reduce the residual pathology and also prevent such tragic illnesses as meningeal and bone tuberculosis.

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HEART OF THE HOME CLASSES

(Continued from Page 1288)

Booklet Describes AHA Services to Physician

"The American Heart Association Serves the Physician," a booklet listing and describing the professional services of the Association, is now available.

The booklet summarizes the research support program of the Heart Association. It gives pertinent information on the availability of professional education aids prepared by the Association, including films, audio-visual presentations, medical literature, heart models and charts. It also describes the periodical publications published by and for the Association.

Copies of "The American Heart Association Serves the Physician" may be obtained from the Michigan Heart Association at the address listed above.

Thoracic Injuries

Analysis of 1,309 Cases

By Richard L. Rapport, M.D.
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IN recent years there has been a notable increase in the number of thoracic injuries occuring in civilian life. During the year 1947 only 70 injuries of the chest were seen at Hurley Hospital. During 1954 over 300 patients with chest injuries were seen.

Since the beginning of World War II great advances have been made in the management of injuries to the chest, and many fundamental principles of treatment and prevention of complications have been established.

Material

During the years 1947 to 1954, inclusive, 1,309 patients with thoracic injuries were seen at Hurley Hospital. There were 918 inpatients (70 per cent) and 391 outpatients (30 per cent) (Table I). One hundred four were open injuries, all of which were admitted to the hospital.

Associated Injuries

Four hundred thirteen (45 per cent of those admitted to the hospital) suffered a total of 569 associated injuries (Table II). Most are significant as regards morbidity and mortality. Special mention should be made of craniocerebral injuries, since coma with resultant loss of cough reflex, leading to retained secretions, atelectasis and pneumonitis tends to complicate the appraisal of a primary thoracic injury. Many associated injuries restrict the examiner in his evaluation of the chest because of limitations in positioning the patient. In all patients with trauma the individual must be considered as a whole and no one injury neglected for another.

Injuries to the Chest Wall

Injuries to the chest wall include rib fractures, subcutaneous emphysema, fractured sternum and flail chest. There were 994 such injuries (Table III).

TABLE I. THORACIC TRAUMA (1947-1954).
TOTAL THORACIC INJURIES, 1,309.

	Outpatients		Inpatients	
	No.	%	No.	%
Closed	391	30	814	62
Open	0	0	104	8
Total	391	30	918	70

TABLE II. ASSOCIATED INJURIES

Other Fractures	363
Craniocerebral	160
Abdominal	37
Total (Injuries in 413 patients)	560

TABLE III. INJURIES TO THE CHEST WALL

Rib Fractures	819
Subcutaneous Emphysema	106
Fractured Sternum	42
Flail Chest	27
	994

Eight hundred and nineteen patients had fractured ribs. As recently as 1940 Hinton and Steiner stated, "the paucity of the literature of fractures of the ribs in the past 10 years is readily explained by the frequency of the fracture and relative infrequency of complications."[13] We agree with O'Rourke and Cameron, however, who state that the fracture of a single rib may result in any of the complications which are common in severe chest injuries.[21] Because of the proximity of the bony rib cage to vital underlying organs complications tend to be serious. This is substantiated by a review of the literature.[4,7,8,11,12,13,25,34] We recently reported 730 patients with fractured ribs and found complications in 41 per cent of those admitted to the hospital (28 per cent of the entire group).[23] Of inpatients 4.9 per cent died with the thoracic injury the sole or a decisively contributing factor to death. We concluded that the fractured rib is frequently associated with other chest injuries which are responsible for a formidable list of complications and associated with a relatively high mortality rate.

Management of fractured ribs should be directed toward the prevention of complications. Immobilization of the chest by adhesive strapping is ineffective. Narcotics, likewise, are mentioned only to be condemned. Therapy should be directed towards increasing respiratory movement and promoting cough. This objective is best attained by judicious use of intercostal or paravertebral nerve blocks and the use of expectorants.

From the Section for the Surgery of Trauma (Thoracic Surgery), Hurley Hospital, Flint, Michigan.

TABLE IV. INJURIES TO THE PLEURA

Hemothorax	143
Pneumothorax	123
Pleural Effusion	24
Chylothorax	0
	290

Such a program relieves pain without decreasing the cough reflex and decreases the viscosity of the secretions so that cough maintains the desirable toilet of the tracheobronchial tree. Frequently, one intercostal block will be sufficient. Because of the overlapping nerve supply one nerve above and one below the fracture site should be injected. This should be repeated if necessary. For expectorants, we use sodium iodide intravenously (1 Gram twice daily) or syrup of hydriodic acid by mouth (drams 1 four times daily). If cough is impossible or ineffective, nasotracheal catheter aspiration or bronchoscopy may be necessary. Sampson and Brewer have given an excellent discussion of the indications for each.[26] Tracheotomy may be advisable,[3,31] and we are encouraging this procedure more frequently.

Subcutaneous emphysema reported in 106 patients appears alarming when extensive but is seldom serious.[2,7] Specific treatment is unnecessary since a patent airway is always present.[33]

Paradoxical respirations occur as a result of multiple rib fractures with a flail or "stove in" chest. Twenty-seven of our patients had such an injury. Paradoxical motion results in a serious inhibition of effective respiration and treatment must be initiated immediately. The pain from a flail chest will respond dramatically to intercostal nerve block and paradoxical motion improve following this procedure. Positioning with the involved side down, adhesive strapping or sand bagging may be used as emergency treatment. If these prove inadequate, skeletal traction or internal fixation may be necessary. Tracheotomy is frequently done to reduce the dead air space, decrease resistance to respiration and provide easy access for removal of secretions.

Forty-two patients had fractures of the sternum. Sternal fractures, if severe, may lead to paradoxical motion. Skeletal traction should be applied. Most sternal fractures, however, do not result in significant flail chest and should be treated by injection of the fracture site with 1 per cent procaine. Internal fixation by intramedullary plates, subcutaneous plates or wire suture may be considered but is seldom necessary.

Intercostal neuralgia, osteomyelitis, and intercostal aneurysms were not found in this series.

Injuries to the Pleura

Injuries to the pleura consist of hemothorax pneumothorax, pleurisy with effusion and chylothorax (Table IV). Two-hundred and ninety of our cases had such injuries or complications. Others have found significant incidence of pleural complications.[2,7,10,29,30]

Hemothorax—One hundred twenty-four of our cases had blood in the pleural space. Hemorrhage may occur from parenchymal, intercostal, internal mammary or great vessels. It is generally agreed that early and complete aspiration of the pleural space should be accomplished.[3,5,7,10,12,14,20,27,29,30,32] Thoracentesis should be done "early, often, and diligently and without air replacement to reduce the incidence of chronic clotted hemothorax, empyema and atelectasis, resulting in pulmonary suppuration, altered pulmonary function, and permanent disability."[20] Enzymatic débridement may be used to liquefy the clot but we agree with Valle[30] that resultant pain, febrile reactions and failure to show improvement by x-ray makes this procedure of doubtful value. If hemorrhage is progressive, despite thoracentesis, early thoracotomy with evacuation of clots and control of hemorrhage is indicated. Indeed, McEachern employs this as a primary procedure if over one-third of the lung is encased by hemothorax.[19] Organizing hemothorax may occur despite treatment. If loculations should prevent effective thoracentesis or if fibrothorax results, decortication is performed between the third and fifth week.[10,14]

Pneumothorax.—Air in the pleural space was demonstrated by roentgenograms in 123 patients. Pneumothorax may result from either open or closed injuries. Open wounds with chest wall defects (sucking wounds) should be converted immediately into closed wounds by occlusive pressure dressings and the pneumothorax then treated appropriately. There is general agreement as to the management of tension pneumothorax which may constitute a true surgical emergency. Air should be withdrawn by thoracentesis at once. Small, uncomplicated, closed pneumothoraces likewise present no controversy. If the collapse is less than 20 to 25 per cent, no specific treatment is required. It should be emphasized, how-

ever, that the degree of collapse is often underestimated on roentgenograms. Moreover, what initially is an insignificant amount of collapse may progress so that repeated observations are essential. One of us (RLR) recently discussed the management of spontaneous pneumothorax and concluded that closed catheter drainage should be instituted if collapse is greater than 25 per cent.[24] This applies equally to traumatic pneumothorax. Indwelling catheter in the second anterior intercostal space with water seal drainage has been recommended by many.[2,3,7,9,14,18,27,30,32] The advantages of closed catheter drainage are manifold. Complete, early re-expansion of the lung is desirable for prevention of pleural effusion, persistent bronchopleural fistula, and empyema. Most effective closure of the parenchymal tear is by re-expansion of the lung so that visceral and parietal pleura come into contact with sealing of the fistula by adhesion of the pleural surfaces at the site of rupture.

Pleural Effusion.—This is an infrequent sequella and was seen in only twenty-four of our patients. Management should consist of persistent thoracentesis.

Chylothorax.—This is a rare complication which was not seen in our series. Baldridge and Lewis[1] collected 59 cases in 1947.

Pulmonary Injuries

Pulmonary injuries and complications consist of pulmonary contusion and/or laceration, tracheobronchitis, atelectasis, pneumonia, pulmonary edema and pulmonary abscess (Table V).

Pulmonary injuries were seen in 344 patients. These are inter-related, and two or more frequently were present in the same patient. The term traumatic wet lung has been given to various combinations of these complications.[6,7,12,28] We approve of this terminology since it implies the sequence of events: retained secretions, tracheobronchitis, atelectasis and pneumonia.

The first consideration in treatment must be for an unobstructed airway and evacuation of the tracheobronchial tree. Intercostal or paravertebral nerve block is most important and should be done early. When pain is relieved, the patient coughs and clears his own secretions dramatically. Nasotracheal catheter aspiration, bronchoscopy or tracheotomy may be necessary. Expectorants as well as detergents by aerosol may be used with good effect.

TABLE V. PULMONARY INJURIES

Contusion and/or Laceration	159
Tracheobronchitis	80
Pneumonitis	55
Atelectasis	47
Pulmonary Edema	2
Pulmonary Abscess	1
	344

TABLE VI. MEDIASTINAL INJURIES

Pneumomediastinum	7
Cardiac Injuries	6
Hemomediastinum	4
Lacerated Aorta	2
Traumatic Asphyxia	1
	20

Acute pulmonary edema was seen in two patients and pulmonary abscess in only one. The danger of pulmonary abscess, however, is ever present, considering the potential for infection provided by areas of hemorrhage into pulmonary parenchyma together with the ready source of infection from traumatized and contaminated bronchioles and bronchopleural fistulae. If the lung abscess fails to respond to conservative measures, early thoracotomy with decortication or resection is indicated.

Mediastinal Injuries

Mediastinal injuries are relatively rare in injured persons who reach the hospital. There were twenty instances of pneumomediastinum, hemomediastinum, cardiac injuries, lacerations of the great vessels and traumatic asphyxia (Table VI).

Pneumomediastinum was seen in only seven patients and was not a serious situation in any. Cardiac injuries were seen in only six patients and injuries to the great vessels in only two. Others have reported an incidence of from 2½ to 16 per cent.[8,12,15,16,17,22] Early thoracotomy with exploration of the heart should be considered in all patients with a diagnosis of cardiac injury. Cardiac tamponade may be treated either by thoracotomy or by pericardiocentesis.

Traumatic asphyxia refers to that situation where there is a dusky cyanosis of the upper part of the body following a compression injury to the chest. This results from momentary reversal of superior vena caval blood flow into its valveless tributaries with distention and rupture of small venules and capillaries. If the patient survives the first hours, the prognosis is good.

TABLE VII. ABDOMINAL INJURIES

Abdominal Organs		45
Liver	15	
Kidney	12	
Spleen	11	
Small Intestine	4	
Stomach	2	
Adrenal	1	
Ileus		33
Lacerated Diaphragm		9
		87

TABLE VIII. MORTALITY

Due to Thoracic Injury	20
Due to Associated Injury	23
Due to Both	17
	60

Thoracic injury contributed to death in 37 patients: 4 per cent of 918 admitted to the hospital; 3 per cent of all 1,309 patients.

Abdominal Complications

Certain abdominal injuries are so frequently related to thoracic trauma that we consider them complications rather than associated injuries. These include injuries to the liver, kidney, spleen, small intestine, stomach and adrenal (Table VII). Acute gastric dilatation, ileus and lacerated diaphragm are also considered here.

Eighty-seven patients developed pathology at or immediately below the diaphragm. The problem is amplified when one considers how often signs and symptoms of chest injury are referred to the abdomen in the absence of intra-abdominal pathology. Differential diagnosis between true abdominal trauma and referred pain is often difficult and requires frequent examinations, including evaluation of the abdomen after appropriate blocks of intercostal nerves. Details of management are not in the realm of this discussion.

Lacerated diaphragm was found in ten patients. Some degree of pleural effusion and hemothorax was always present; consequently, the diagnosis was difficult to establish by physical examination and standard roentgenograms. One should always be suspicious if x-ray reveals elevated diaphragm on the involved side. Diagnostic pneumoperitoneum is frequently helpful in establishing the diagnosis. Surgical exploration should be done early in all patients whose condition permits. Delayed repair may be done in severely injured patients who survive.

Acute gastric dilatation and/or ileus was present in thirty-three cases in which there were no intra-abdominal injuries or fractures of spine or pelvis. Treatment is by intestinal intubation and careful observation for causes which may require active intervention.

Mortality

Autopsy was performed in thirty-seven (61 per cent) of the sixty patients who died (Table VIII). It is sometimes difficult, even with autopsy, to evaluate the role thoracic injury played in these deaths. Twenty-three of the sixty patients who died had thoracic injuries too minor to have contributed to death. Twenty patients had associated injuries lacking or insignificant, so that death was attributed to the thoracic injury. In a third group of seventeen patients, serious injuries of the thorax existed concommitantly with associated injuries so the cause of death could not be established. In thirty-seven patients the thoracic injury was either the sole or decisively contributing factor to death. Thus, we have established a mortality rate of 4 per cent for the 918 patients admitted to the hospital or 3 per cent for the total group of 1,309. This compares with a mortality rate variously reported ranging from 4.1 to 24.5 per cent.[4,7,8,11,12,13,23,25].

Summary

We have presented a series of 1,309 patients with thoracic injuries. These included injuries of the chest wall, pleura, pulmonary parenchyma, mediastinum and diaphragm. Abdominal complications related to thoracic trauma were briefly discussed. Principles in management were outlined and mortality statistics analyzed.

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ERRORS OF OMISSION AND COMMISSION IN DIAGNOSIS AND TREATMENT OF PULMONARY TUBERCULOSIS

(Continued from Page 1302)

Pas. He showed a remarkable clearing up not only of his arthritis but of his tuberculosis as well. However, such cases are best treated in an institution where frequent x-rays and sputum studies are available.

Summary

The importance of a routine x-ray examination of the chest has been stressed with every complete checkup of a patient.

The necessity of x-raying every patient before a long course of antibiotic therapy is begun for symptoms such as, frequent chest colds, pleurisy, et cetera.

The dangers of using cortisone for rheumatoid arthritis in the presence of either active or arrested cases of tuberculosis is discussed.

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Some Medical Aspects of Exophthalmos

By Richard M. McKean, M.D., and Robert H. Hamburg, M.D.

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THE INTERNIST commonly regards exophthalmos as an ophthalmic manifestation or complication of a process that is essentially a medical disease. In the study of patients with exophthalmos, over the past decade, we have found ourselves faced with a recurring quandary as to the basic etiology, the precise presenting clinical status and the beginning and end of this disorder.

Dictionaries define exophthalmos as a "protrusion of the eyeball," and proptosis in essentially the same terms. Uncomplicated proptosis may be found as a simple hereditary predilection, like the Hapsburg chin or the Wellington nose. This type of exophthalmos will be characterized by the early notice it brings from juvenile contemporaries, by the lack of any progression through the years and by its occurrence in a certain number of the siblings. This tendency needs no further attention than appropriate recognition.

Exophthalmos may be due to an encroachment on the orbital space by cellulitis due to invasion from paranasal sinuses, by neoplasm, or vascular anomalies such as hemangiomata, arteriovenous aneurysm, or cavernous sinus thrombosis. This type of exophthalmos is almost always unilateral and associated symptoms and signs usually initiate appropriate searches for the etiologic factor.

A pronounced bilateral form of exophthalmos is often found in a relatively rare type of lipodystrophy—Schüller-Christian-Hand disease. This process occurs in children and is associated with characteristic bony defects due to fatty infiltrations, and diabetes insipidus.

The most common endocrinologic disorder linked with exophthalmos has been a "dysthyroid" state—either primary, as in thyrotoxicosis, or intermediary, as in the so-called "thyrotrophic type." In this latter group, the anterior lobe of the pituitary, through its thyrotrophic hormone or through a more recently reported exophthalmic factor, probably plays a significant role in some cases of exophthalmos. Various disturbances in adrenal cortical and gonadal function have also been suggested as factors playing some part, probably in the role of trigger or accessory mechanisms, in the production of exophthalmos.

A widely varied clinical picture can be noted in this type of endocrine exophthalmos. It may present with a definite assymetry in individual eye prominence but usually the process is bilateral and equal in the two eyes. There may be only widening of the palpebral fissures (Dalrymple's sign) with upper and/or lower lid retraction due to sympatheticotonia and with little or no measurable proptosis (false exophthalmos). There may be marked proptosis with lid retraction, with weakness of one or several of the extraoccular muscles, with conjunctival edema (chemosis) and periorbital swelling. As the proptosis continues, exposure leads to infection and pressure produces optic nerve damage. As would be expected, then, the subjective complaints range from a completely assymptomatic state through tearing, burning, photophobia, blurred vision and diplopia to marked reduction of visual acuity and even blindness.

Graves, in 1835,[1] described the occurrence of exophthalmos in one of three patients with evident thyrotoxicosis, and principally from that report the term exophthalmic goiter has prevailed since. Peculiarly enough the approximately one-in-three occurrence rate of exophthalmos in thyrotoxicosis in this brief series has followed throughout the vast reports of recent decades. In these latter series with surgical treatment of the thyrotoxicosis, the exophthalmos has receded in most cases, has remained stationary in others and, in a significant minority, has progressed to become the progressive or malignant exophthalmos.

Exophthalmos may occur without evident hyperthyroidism and, indeed, has been reported in apparently true Gull's myxedema with recession in some occurring coincident with the administration of thyroid extract in corrective dosage. We have wondered from our own experience whether the periorbital edema commonly present

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This article was prepared to be used conjointly with the article by A. D. Ruedemann, M.D., entitled "Glandular Type Exophthalmos" which was published in the September issue of THE JOURNAL of the Michigan State Medical Society. We regret there was not sufficient space to use the articles together as they were intended. Dr. Ruedemann's publication depends in part on the above presentation, and the two articles should be read together.

in the myxedematous state may have been responsible in part at least for the foregoing impression.

For the past several years, we have been interested in the type of exophthalmos frequently reported as occurring in the so-called "euthyroid" patient. With a careful history these patients are often found to show manifestations of both hypothyroidism and hyperthyroidism. The laboratory studies ordinarily used in thyroid function, e.g., basal metabolic rate, serum cholesterol and protein bound iodine levels, are in such cases within essentially normal limits, or, at the most, equivocal results are obtained. Hence these people are usually termed euthyroid and attention is directed away from the thyroid gland as a consideration for further remedial measures for correction of the existing exophthalmos.

However, when a precise surface scanning technique is employed in the I^{131} tracer studies (as used in the Radiological Research Division at Harper Hospital for the past eight years or more and as described by Drs. Corrigan and Hayden elsewhere,[2] the thyroid gland is found to show a peculiarly spotty type of radioactive iodine uptake, characterized by a low level accumulation of the labeled iodine over much of the gland, particularly over its lateral and superior aspects, but with a rapid and sustained uptake in one area or several areas, usually in the central thyroid zone.

Serial detailed *small aperture* studies taken with a *1 cm. aperture cap* essentially in direct contact with the skin over the prethyroid area, at short intervals over a thirty-four to fifty-hour period, reveal: (1) that these areas maintain iodine retention throughout the study; (2) that they concentrate the labeled iodine in counts at least twice as great as the surrounding gland and (3) can be clearly demarcated from the surrounding gland. These results have indicated to our colleagues in the Radioisotope Laboratories and to ourselves that these toxic foci may well be toxic adenomata in most instances.

It was of interest to us that, in all but a few patients so studied, the single twenty-four-hour post I^{131} fixed distance count generally employed (presumably registering an aliquot of gamma emanation from the thyroid area) has been within 20 to 45 per cent, ordinarily accepted as the normal range. A condition similar to the above has been observed to occur in segmental toxic recurrence in the residual of the gland following thyroidectomy.

In this group of what we have termed "mixed gland dysthyroidism" we are confronted with potentially confusing and misleading laboratory findings and clinical symptoms and signs—a picture fraught with controversy. Yet on the basis of clinical and I^{131} tracer findings as noted above we have approached the problem of therapy in an increasing number of this group (twenty-five) through the therapeutic use of radioactive iodine (I^{131}). It is usually necessary to follow with an appropriate dosage of thyroid extract to maintain the patient in a normo-metabolic state as measured by serum protein bound iodine level, cholesterol level and symptomatic response.

Two examples of this group, which will be discussed in detail at another time, are presented to emphasize some of the points previously noted. The first of these was of apparent spontaneous development; the second was incident to a toxic recurrence after previous thyroidectomy. We had the opportuinty of studying these cases presented and the remainder of the series on a number of occasions in the Metabolic Unit at Harper Hospital.

Case 1.—As a rather striking example of exophthalmos occurring in a patient with what we have considered "false euthyroidism," the following case is presented in some detail. B. F., a fifty-four-year-old, white married school teacher, was referred to Dr. A. D. Ruedeman in the autumn of 1952 because of six to seven months of failing vision which seriously interfered with her career. It was accompanied by a sharply progressive exophthalmos—equal and bilateral. There was a complete inability to move her eyes, laterally, chronic eye discomfort and tearing. An ophthalmic diagnosis of glaucoma had been made by an examiner in her community. She had been carefully studied by a competent internist who had found her to have a repeatedly normal basal metabolic rate (BMR) and blood cholesterol levels, with a clinical impression of "euthyroidism" plus a relatively long-standing vascular hypertension. Her metabolic history in the usual sense was not remarkable but on closer questioning the following facts were felt to be significant: there had been a recent change from her usual former pattern of a slow morning start over the years to a more propulsive alertness—from scant sweating to an almost continuous warm moisture of hands and feet. There was no heat or cold sensitivity, although a fine rhythmic tremor of outstretched fingers was present. She had difficulty maintaining her weight (5 feet 4 inches—114 to 117 pounds) in spite of what she considered a normal food intake. Dry skin and scalp with some brittleness of the nails were noted. Hence clinically there was

neither marked hyperthyroidism nor definite hypothyroidism, but a mixture of symptoms and signs of each.

Physical examination revealed a blood pressure elevation to 200/100; a frankly multinodular indurated thyroid gland was noted. Eye findings were as follows: (1) a rather marked widening of the inter-palpebral fissures in part due to levator spasm; (2) a definite proptosis with Hertel readings of 23 bilaterally; (3) marked conjunctival injection and chemosis; (4) complete inability to move the eyes to the left, with very limited movements to the right; (5) pronounced convergence and insufficiency, and (6) marked lid-lag bilaterally.

The routine laboratory procedures—urinalysis, blood count, blood nitrogen and sugar, Kahn test, et cetera—were normal. Metabolic studies included a BMR of plus 3, cholesterol 290 mg. per cent I^{131} tracer study revealed a definite area of frankly increased and sustained uptake over the center of the gland, although total twenty-four hour uptake by the fixed distance counter and urinary excretion were percentagewise normal.

On October 8, 1952, 6 MC of I^{131} were given P.O. in an attempt to control her suspected dysthyroidism. She was restudied in December, 1952. Her eyes objectively were better and she felt that her vision had improved somewhat. BMR was minus 11, PBI 2.8 and cholesterol 375 mg. per cent. The tracer again demonstrated a significant, though definitely lessened, persistence of the previously noted toxic area and she was given another 6 MC of I^{131}. Thereafter, she gradually lapsed into rather marked hypothyroidism, if not frank myxedema.* (While we had formerly more or less used the development of myxedema as an end point of treatment, as experience with this mode of therapy has been gained, we now feel that the development of post I^{131} myxedema may usually be predicted and prevented by the starting of thyroid replacement treatment between the fourth and sixth weeks.)

In February, 1953, thyroid was started at gr. ¼ per day. BMR was minus 11, PBI 2.8. By April her BMR was minus 5, PBI 3.7, cholesterol 215 mg. per cent. The thyroid extract was gradually increased to gr. 1¼, but in spite of this by September, 1953, she exhibited a "metabolic sag." Her present status shows a rather remarkable improvement. Hertel measurements: OD 21, OS 20. BMR plus 7, PBI 4.4 and cholesterol 300. Her last note in mid-December, 1954—"Feeling very well with maintenance of normal weight of 128 pounds, with good tolerance of day's activities and vision essentially normal even without glasses." The only residuals from her former eye abnormalities were a slight soft subortibal puffiness with essentially normal extraocular movements throughout and a minimal lid lag.

Case 2.—C. L., the second patient, is a slender, thirty-one year old, white woman, who had been found to have classical symptoms of diffuse hyperthyroidism with exophthalmos and was treated by subtotal thyroidectomy in 1949. This procedure led to a remission of all symptoms except the exophthalmos which, though it remained, was frankly lessened in degree.

Nine months prior to her first admission to Harper Hospital in October, 1952, she became conscious of an increasing irritability, palpitation, insomnia and an increasing prominence of the eyes. Paradoxically, there was also noted scant perspiration, dryness of the skin and scalp and a frank morning inertia—ordinarily clinical evidences of a hypothyroidism.

On physical examination the following was notable: (1) resting pulse 72-84/min.; (2) recurrent nodular enlargement in region of the thyroid isthmus; (3) fine tremor of the fingers; (4) marked bilaterally equal exophthalmos, with proptosis, chemosis, an inability of the eyes to converge, and with extraocular muscle movements diffusely impaired, with impairment in various directions; (5) weight 106.

Laboratory: blood counts, urinalysis and Kahn test were normal. BMR was minus 1, PBI 6.2, cholesterol 245 mg. per cent. Tracer study showed 3½ times normal initial rate of concentration of I^{131} in the central and right anterior thyroid area with main concentration being noted in a focus about 4 cm. in diameter just to the right of the mid-line. The radioactive material was well retained in this area over a fifty-hour observation period. Only 31 per cent of the tracer was excreted in the urine over a fifty-hour study.

Treatment: On October 23, 1952, 10 MC of I^{131} were given. She was next seen January, 1953, at which time BMR was minus 26, PBI 2.6, cholesterol 460 and weight 124 pounds. Tracer showed soft tissue and liver retention of the I^{131} with very little functioning tissue in the thyroid area. Fifty-two per cent of the tracer was excreted in thirty-eight hours. Her clinical appearance was typically myxedematous. Thyroid extract was started and increased slowly from ½ gr. to ¾ gr. When seen in August, 1953, muscle cramps which had been complained on in January, 1953, had been completely relieved with the administration of thyroid extract. Skin normal. Scalp dry. BMR minus 20. PBI 4.2 cholesterol 320. I^{131} tracer studies showed almost complete depression of "pick up" in the area previously described. Desiccated thyroid was increased to gr. ii daily without adverse symptoms. She was away from Detroit and not seen again by us for sixteen months. In May, 1954, cortisone 50 mg. (p.c.) was prescribed by another physician, gradually decreasing to 12½ mg.; cortisone then discontinued because results did not justify possible undesirable side effects. Again on December 16, 1954, she reported she had been "quite good" in general, though a moderate photophobia persisted. There was little periorbital edema, and only a slight stare; extraocular movements were good throughout excepting a mild convergence insufficiency and an exceedingly slight lid lag; no conjunctival injection; nodularity was evident in thyroid area, and general physical examination was without note in other particulars. BMR was minus 9, PBI 4.4, cholesterol 320 mg. per cent, weight 111. Because of the incomplete replacement indicated by these latter her thyroid dosage was

(Continued on Page 1351)

*This is a probably undesirable but not unusual consequence of even moderate dose radioactive therapy in this type of dysthyroid patient.

Brachial Plexus Block Anesthesia

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THE usefulness of brachial plexus block has been adequately demonstrated in clinical practice for surgery of the upper extremities. It offers to the patient, the surgeon, and the anesthesiologist distinct advantages which are not possible with general anesthesia. Brachial plexus block produces anesthesia only in that limited region where anesthesia is required and with no untoward disturbance of physiology of the individual. The patient may be ambulatory and, barring untoward complications, may be treated on an outpatient basis. It affords excellent anesthesia for surgery of the upper extremity where other forms of anesthesia are contraindicated. Brachial plexus block, as well as other forms of conduction anesthesia, is a particular boon to the surgeon in a rural or small community where the services of an anesthesiologist are not readily available. Certainly it is advantageous in the surgery of trauma in the patient who enters the operating theater with a full stomach.

It is the purpose of this article to review the complications of brachial plexus anesthesia which were encountered in a large city hospital and where many of the blocks were administered for surgical repair of injuries resulting from trauma. The anesthetic procedures were performed by physicians with varying degrees of skill and experience, ranging from staff physicians to interns. Most of the procedures were done by resident physicians in anesthesiology.

The hazards and complications of brachial plexus block have been documented by many authors.[3-7,10-12] In a period of two calendar years (1952-53), 432 brachial plexus blocks were performed in our institution. While these cases may furnish no valid statistical material, they are interesting examples of some of the previously described hazards of this procedure.

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The patients on whom the blocks were performed were followed when possible during their hospital course for possible complications. These patients were also requested to return for examination by the Social Service Department of the hospital to enable us to follow any possible neurological sequelae which might arise from the anesthetic procedure. All but seventy-three of the patients were contacted either personally or by telephone conversation and those in whom potential sequelae were suspected were returned to the hospital for follow-up examination.

The complications in this series may be divided into the following categories:

	Number	*Percentage*
1. Pneumothorax	7	1.62%
2. Subarachnoid injection	2	.46
3. Drug reaction	6	1.38
(a) Vasomotor collapse (4)		
(b) Disorientation (2)		
4. Nerve injury	6	1.38
Total	21	4.8 %

Pneumothorax

Pneumothorax, perhaps the most frequent complication of brachial plexus block, was seen in seven of our cases. Moore[10] in his recent discussion on this subject found a 1 per cent incidence of pneumothorax in his clinic and cites other articles showing the incidence to vary from 2 to 0.66 per cent. In his article Moore also questions the occurrence of so-called "silent" pneumothorax following brachial plexus block.

The pneumothorax developed immediately or in several hours. Two of the cases were distinguished by accompanying vasomotor depression, one moderate in degree, the other severe. Both responded to intravenous fluid therapy and the administration of a vasopressor drug (methoxamine).

Where the pneumothorax was of such severity as to require treatment, this was accomplished either by syringe aspiration of the chest or insertion of a thoracotomy tube, and was successful in every case. No further sequelae were encountered.

Subarachnoid Injection

In two patients, the local anesthetic was inadvertently injected into the subarachnoid space during attempted brachial plexus block. Both patients recovered uneventfully from this complication.

Case 1.—D.D., a ten-year-old white boy, was admitted to the hospital with fractures of the distal end of the radius and ulna. The patient had breakfast about four hours prior to the contemplated procedure, and for this reason and because of the patient's fear of general anesthesia, brachial plexus block analgesia was chosen. Some difficulty was encountered in eliciting paresthesias utilizing the supraclavicular approach, so the block was supplemented, using the paravertebral approach described by Labat.[7] After the injection of 10 cc. of Lidocain Xylocaine 1 per cent at the paravertebral route, the patient suddenly experienced difficulty in breathing. Within a short time respirations ceased and the patient lost consciousness. The patient was apneic for a period of eighty minutes. During this period, he was given artificial respiration and maintained a satisfactory blood pressure and appearance. Three minutes thereafter, the patient became conscious and complained that he "felt numb all over." The patient made an uneventful recovery and was discharged the next day with the fracture in good position.

Case 2.—T.H., a forty-six-year-old colored man, was admitted with a stab wound of the right arm. He was inebriated and unco-operative. In an effort to reinforce his brachial block, the anesthesiologist directed his needle to the paravertebral site. During the time of injection, the patient lurched and shortly thereafter became unresponsive. The patient's blood pressure became unobtainable and respiration ceased. The administration of vasopressors brought a satisfactory increase in blood pressure, and artificial respiration was given with success. Spontaneous breathing returned in about sixty-five minutes and consciousness in ninety minutes. At this time, general anesthesia was induced with cyclopropane and ether so that the operative procedure could be completed. The patient made an uneventful recovery and was discharged from the hospital.

These two cases, which had been executed using Labat's technique, caused doubts as to the advisability of the paravertebral injection to supplement the supraclavicular. Bonica,[2] however, points out that the paravertebral site should be cephalad to the supraclavicular. This variation takes advantage of the caudad slope of the cervical transverse processes and lessens the possibility of subarachnoid injection.

Drug Reaction

Six patients exhibited what were apparently untoward reactions to the local anesthetic. It is perhaps significant to note that in none of the blocks performed in this series was epinephrine added to the local anesthetic mixture. This is not to be misconstrued that we do not favor the addition of epinephrine to the mixture, but the drug was purposely omitted for other studies. In two of these six patients, the fall in blood pressure occurred immediately upon injection of the local anesthetic but was of moderate degree and responded rapidly and well to intravenous fluid therapy. In one other case, hypotension ensued some fifty minutes after initiation of the block. The fall in blood pressure was severe but responded quickly to intravenous fluids and a vasopressor drug. A fourth patient was given a brachial plexus block with 25 cc. of Pontocaine 0.15 per cent solution. Almost immediately his bood pressure fell from 120/80 mm. Hg to 80/60 mm. Hg, and he became apneic. The hypotensive state responded readily to fluid therapy. However, the patient remained apneic. During this time, for some reason, he was given Pentothal (600 mg.) and the apnea continued for eighty minutes. It is difficult to assess the cause of the prolongation of apnea but we might well assume that the administration of pentothal in this relatively large dose contributed more than a little in his complication. Two of these six patients displayed rather severe excitement and disorientation following the injection of the local anesthetic. In these instances supplementation with Surital and nitrous oxide-oxygen was carried out and both patients responded well and made an uneventful recovery.

Nerve Injuries

The assessment of damage of the nerves of the brachial plexus is a difficult procedure since many factors are involved. Among these are the effect of preoperative trauma to the nerves, the effect of the surgery and its accompanying trauma, the irritating property of some local anesthetics, the concentration of the drug employed, whether or not tourniquets were applied during the operative procedure, and the effects of position and immobilization of the part for long periods of time. Since paresthesias are consistently sought for and elicited prior to the injection of the local anesthetic in the technique employed in our clinic, the question arises, as it has before: does this probing of the nerve trunk predispose to injury? Bonica[1] advances the opinion that such is not the case. Nerve injury and paralysis from the use of a tourniquet may mask or coincide with nerve injury resulting from brachial block or may in itself be totally responsible for the sequelae.[8]

Six cases of apparent nerve injury, three of which are presented below, were observed in this

series. Any definite conclusion as to their real etiology is questionable but at least one may have been due to the anesthetic procedure alone.

Case 3.—D.J., a twenty-four-year-old colored woman, was admitted on June 21, 1953, to the Detroit Receiving Hospital for a Z-plasty of the hand. She had suffered a bullet wound of the hand on May 2 and sustained a flexion contracture as a result. Xylocaine 1 per cent 25 cc. and Pontocaine 0.15 per cent 25 cc. were used to establish brachial plexus analgesia. There was nothing unusual about the anesthetic procedure and it was carried out in the routine manner. No tourniquet was used. The operation lasted fifty minutes. Postoperatively the patient complained of chest pain and shoulder pain but otherwise nothing unusual was noted. On August 1 the patient was seen in the clinic and it was definitely decided that she was suffering from motor and sensory impairment in the distribution of the ulnar nerve. She had flexion weakness of the fifth finger and hypesthesia in the fifth finger and ulnar aspect of the forearm. No improvement was noted either on September 15 or 22, 1953. The patient was then lost to the clinic. Telephone coversation during April of 1954 failed to reveal any improvement in the condition of the patient.

Case 4.—R.Y., a thirty-two-year-old colored man, lacerated his right index and third fingers while changing a tire. For tenorrhaphy, he had brachial block anesthesia with Cyclaine 1 per cent 25 cc. on May 27, 1953. A blood pressure type cuff was used for hemostasis, remaining in place almost four hours. There is no record of periodic deflations of the cuff. It was noted on August 8 that the patient had limited flexion of all fingers on the involved hand. He had, as well, paresthesias down his arm in the distribution of the ulnar nerve. On October 27 he was seen again in the clinic, where it was felt that ulnar sensation and flexion had improved. The patient was re-admitted December 21 for re-evaluation and possible surgical exploration of the brachial plexus. Physical examination at that time showed continued hypesthesia in the ulnar cutaneous distribution plus weakness of flexion of all fingers. Surgery was deferred at this time. It has been impossible again to interview the patient in person. Telephone conversation reveals an essentially static condition. He complains especially of paresthesias which emanate from the supraclavicular site and radiate down the ulnar aspect of his arm.

Case 5.—J. O., a thirty-two-year-old white man, had an exploration of an old ulnar nerve injury on September 30, 1953. There was some difficulty in induction of anesthesia because of the problem of eliciting paresthesias. Anesthesia was finally induced with Xylocaine 2 per cent 20 cc. and Pontocaine 0.15 per cent 10 cc. A pneumatic type tourniquet was applied and left inflated for one and one-half hours. Following operation, the patient was found to have a complete injury of the brachial plexus nerves in addition to his pre-existing ulnar defect. Radial and median loss were never complete but were quite disabling. The patient was given physiotherapy with a slow but definite return of all but ulnar function. On his discharge on March 15, 1954, he was considered to have only his original ulnar lesion. Some controversy arose regarding the role of the tourniquet in this lesion. It seemed impossible, however, to clarify the issue.

Summary

The brachial plexus block analgesia offers many advantages to the patient, surgeon and anesthesiologist in the management of surgery of the upper extremity. As do all anesthetic and surgical procedures, it is accompanied by certain hazards. We have attempted to cite the complications that have arisen in 432 cases in our clinic. Obviously we have not discussed all the complications that might arise but as we continue to do and teach the use of brachial plexus block, we expect that these too will become part of our statistics. Phrenic nerve block with consequent paralysis of the diaphragm, cervicothoracic (stellate ganglion) sympathetic block, puncture of the subclavian artery are other complications that might arise following attempted block of the brachial plexus.[3]

It is our experience that as one gains experience with this technique, the incidence of the complications certainly decreases. Many of the blocks in this series were done by residents in anesthesiology in the relatively early stages of their training, and this undoubtedly accounts for some of the experiences we have had. We feel that the technique is of inestimable value in emergency surgery where the hazard of regurgitation and aspiration under general anesthesia is ever present.

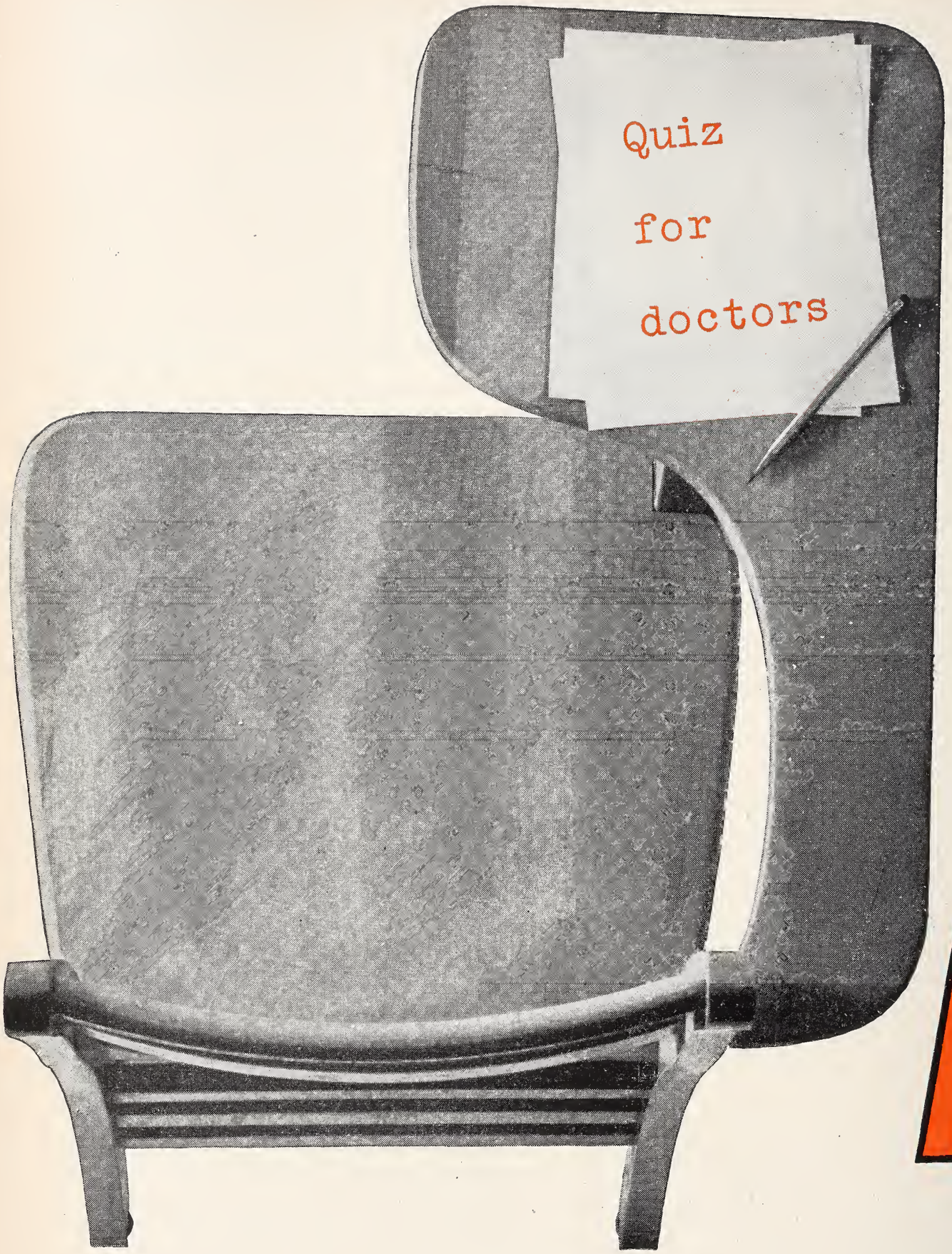
Acknowledgment

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AC

(you probably know every answer!)

Q. Which is today's most widely prescribed broad-spectrum antibiotic?

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Q. What are some of the advantages of ACHROMYCIN?

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Q. In what way are ACHROMYCIN Capsules advantageous?

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Advances in Dermatologic Therapy

By Francis E. Senear, M.D.

Chicago, Illinois

PERHAPS in no other medical field have the steroid preparations been used in a wider group of disorders than in the case of dermatoses. It can be likewise said that they have been used all too indiscriminately in this field by a large proportion of practitioners. Following the initial period of optimism as to their effect in dermatological conditions, we are gradually acquiring an experience and knowledge which permits us at the present time to offer a reasonable evaluation of their usefulness.

First of all it should be appreciated that these agents do not effect many cures, and that in general they act only through the suppression of or the minimizing of symptoms and signs of disease. As serious consequences may follow the use of the steroids, they should be used only in those cases where there is definite indication for their employment, particularly if they are to be used for long periods.

Due to limitation of space, the side effects, both cutaneous and systemic, following the use of the steroids, will not be reviewed, but I will limit this discussion to a grouping of the types of disorders in which their use is indicated and mention some specific disease and their response to this type of treatment.

Group I.—There is general agreement that the steroids have a very definite place in the treatment of a number of acute disorders which are generally speaking not serious *per se,* although at times productive of severe distress and temporary incapacitation. Included in this group are cases of contact dermatitis, including those due to exposure to poison ivy; dermatitis medicamentosa, especially when due to penicillin or other antibiotics, the sulfa group or gold, and anyphylactoid or serum sickness types of reaction from penicillin or tetanus antitoxin; the severe type of erythema multiforme, as the Stevens-Johnson syndrome, and generalized eczematous dermatitis resulting from acute autosensitization. In this group of disorders the dosage does not need to be very high, the response on the part of the eruption and its symptoms is commonly rapid and the drug does not have to be used for more than a few days to a week, so the consideration of side efforts is not so important here. It should be recognized, however, that even in this group the steroids should be used only in severe and incapacitating cases, and in patients who present no contraindications to their use.

Group II.—Certain diseases which are chronic, but usually and frequently fatal, and in which there is a favorable response to the use of ACTH or cortisone. Pemphigus and the acute disseminated cases of lupus erythematosus, together with some cases of exfoliative dermatitis, are included here.

Group III.—Certain chronic diseases in which temporary improvement is secured in a varying proportion of cases. This includes neurodermatitis disseminata or atopic dermatitis, dermatitis herpetiformis, psoriasis, et cetera.

There is little disagreement with regard to the usefulness and indication for the use of the steroids in the cases included in the first two groups, but there is no unanimity as to their use in those diseases in the third group. In attempting to determine whether or not steroids should be used in this group, certain basic things should be kept in mind.

1. The clinical effect of the steroids is almost exclusively the reduction of the acute inflammatory process.

2. The effect of the drugs is palliative and temporary, with no effect upon the underlying disease process.

3. Relapse or the "rebound phenomenon" occurs usually as soon as the treatment is discontinued, and frequently the disorder is then more severe than it was before treatment was instituted. Likewise, the disease may not respond at all or as well upon reinstitution of the same therapy. It has also been observed frequently that during such relapses the eruption appears to be more resistant to the other methods of control than was previously the case.

4. That in these chronic cases maintenance therapy may be required for months or years, thus increasing the possibility of the occurrence of undesirable sequelae.

5. Flare-ups may occur during treatment as a result of a variety of factors—and the dosage of the drug may have to be increased even to a point above the original dosage used.

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Therefore, in cases in this group and notably in the cases of atopic eczema, steroid therapy should be instituted only in those instances where the eruption is so severe as to be intolerable for the patients and where relief through the use of these agents seems imperative.

In cases of lesser intensity in this group, one must carefully weigh the therapeutic possibilities against the danger of undesirable side effects.

In considering individually some of the disorders to be treated with the steroids, those in Group I probably deserve first consideration.

In the systemic type of lupus erythematosus there is a dramatic effect on the fever, pulse rate, debility, arthralgia, pericardial and pleural effusions, while the cutaneous manifestations fade more slowly. The characteristic laboratory findings are not usually changed, although Curtis found that the lupus erythematosus cell disappeared in one-third to one-half of the cases. In this disorder the initial dose required may be high, up to 1,000 mg. of cortisone a day. As a rule the good effects of treatment are only temporary, continued administration with individually calculated dosage being required, and side effects frequently develop. With most patients with the acute type there is eventually a break through and they succumb to the disorder in spite of the continued treatment. Haserick does not believe that patients with mild systemic involvement should be treated with steroids unless the disease becomes progressively worse, hospitalization and supportive treatment only being indicated here. Curtis does not recommend the use of cortisone unless the white blood cell count is less than 5,000.

In pemphigus, the response is likewise striking in a large percentage of cases, pemphigus vulgaris responding better than the vegetative or foliaceous types. Many patients, however, do not respond at all, or after early response relapse and go steadily on to a fatal outcome. Among those who do respond favorably, the remissions are only temporary in a sizable proportion of cases, but the prognosis is much better than it is with lupus erythematosus. Lever reported on the treatment of thirteen cases with steroids, and all of these were alive at the time of reporting and eight of them free of lesions. Here again, maintenance treatment is usually required for months to years. With relapse following too rapid reduction in dosage or discontinuance of treatment, the condition is apt to be more severe and more resistant to further treatment. In some instances possible cures are obtained, since freedom from lesions with treatment have been reported for periods of over three years. Conrad found that cortisone by mouth seemed as effective as when administered parenterally, but felt that larger doses were required when the oral route was used. We have felt that we obtained our best results when the initial therapy was the use of ACTH by intravenous drip.

In exfoliative dermatitis the results of treatment are less consistent and steroids should be used only when older methods of treatment have failed. In the primary or Wilson-Brocq type of exfoliative dermatitis cortisone is indicated only if the course is steadily downhill, since the rebound reaction is great when treatment is discontinued. In the secondary types, due to the local or internal use of drugs, or due to the extension of other dermatoses when spread has been stimulated by various treatment measures, standard methods of treatment should be tried first.

All observers agree that in atopic eczema there is a favorable response in practically all cases if the dose is large enough and if the drug is given for a sufficiently long time. As stated earlier, the patient is never cured and the intensity and resistance in relapses, together with the severe depression often engendered in such patients, make it imperative to attempt treatment only in the most severe cases and only when all other methods of treatment have failed.

The response in cases of Sulzberger-Garb disease parallels those of atopic eczema.

Among other diseases in the collagenous group, there is considerable diversity of opinion as to their usefulness. In dermatomyositis O'Leary found the results unsatisfactory, and Kierland reported improvement in only one of four cases. Lever treated eleven acute cases, four of the patients dying, while five were in remission, one following a year without treatment. Hopkins placed dermatomyositis in the group of disorders unlikely to respond to steroid therapy, but Russo, Ferguson, Suzman and others have more recently reported good results. The response is best when the patient is treated early in the course of the disease.

Periarteritis nodosa has shown striking improvement according to Baggenstein and Goldman and others, but death may result from vascular damage produced prior to institution of steroid treatment. The results in scleroderma are inconsistent but all

agree that the basic process is not influenced and life is not prolonged. In some instances treatment of this type seems to produce a rapid deterioration in patients with scleroderma, and we have had two deaths occurring as a result of the production of a fulminating course of the disease. O'Leary felt that acrosclerosis was a contraindication, as in six cases of this disorder occurring in young women death from cerebrovascular accidents occurred within three to four months after the institution of cortisone therapy.

Treatment of psoriasis vulgaris with these agents is not recommended as the lesions do not often clear with such treatment, and relapse in more severe form often follows in those cases where improvement is obtained. In the arthropathic form and in the pustular type affecting the hands, good results are more constant but again only temporary.

Sclerema neonatorum, a disorder previously fatal in about 75 per cent of cases, has responded strikingly according to reports by several different writers, as complete recovery has occurred in several reported instances.

In herpes zoster the results are inconsistent but dramatic relief from pain has been reported a number of times. The steroids should be used in zoster only in the older age groups with severe involvement and in those failing to respond to conventional methods.

In lichen planus the effect of the steroids is also variable. Kristjansen and Reymann report that four of six patients were apparently cured after a short course of treatment, while two others showed no response. Sulzberger found that among nine patients, three responded promptly, while the itching was controlled in the others.

Among three cases of benign familial pemphigus (Hailey and Hailey disease) three patients were freed of eruption with relapse in only one.

In many instances the lesions of sarcoid of the skin, lungs, and eye have shown rapid clearing, but again with early relapse on cessation of treatment. Local injections of the cutaneous lesions with cortisone and hydrocortisone have produced rapid resolution of temporary nature.

In Reiter's syndrome likewise prompt relief was secured in three cases. Relapse occurred in all, but two of the three ultimately cleared completely.

With the malignant lymphomas relief of itching, when present, and temporary improvement of lesions may occur.

Local Use of Hydrocortone

It was to be expected that the local use of various steroid preparations would be tried, and at the present time it is felt that there is a distinct field for usefulness for hydrocortisone in this manner. A number of reports have indicated a high proportion of good results from the use of 1 per cent or 2.5 per cent hydrocortone in ointment form. The best effects have been secured in atopic dermatitis, in localized neurodermatitis and nummular eczema. The very high cost of the ointment prohibits its use in many cases of widespread dermatitis. Different observers disagree as to the value of the 1 per cent as opposed to the 2.5 per cent preparation, some feeling that the lower and less expensive concentration is usually as effective as the higher, while others feel that many patients who do not respond to the 1 per cent strength obtain favorable results with the stronger preparations. Nuchal eczema of the lichen simplex chronicus type and pruritus ani seem to respond particularly well. Alexander and Henderson reported that only three of twenty-nine patients with severe and intractable pruritus ani failed to obtain lasting relief. It has also been noted that the results appear to be better in certain areas than in others, response being good on the eyelids, ears, breast and pelvic regions in contrast with the neck, abdomen and extremities. Baer and Litt have found that ear drops containing hydrocortone, especially if reinforced with an antibiotic, such as neomycin, give better results than do ointments with the same make-up. Kendall has found that 2 per cent of hydrocortisone mixed with aerosporin solution was effective in otitis externa. Schoch feels, however, that there is danger in the use of such mixtures, in that in instances where the hormonal effect is marked and the bactericidal effect less, the condition might be made worse as a result of the increased infection. A number of patients with poison ivy dermatitis have been treated with hydrocortone locally and the results have been generally disappointing.

Personally, I am somewhat less enthusiastic about the local use of this preparation than are some of my colleagues, for, while in many instances the results are strikingly good, I have obtained good results in a smaller proportion of cases than some reports would lead you to expect, and in some of the cases where the early response was most favorable relapses have occurred even while the use of the ointment was being continued.

Acne Group

In recent years interest in the ever-present problem of the treatment of acne vulgaris has centered on two aspects of this disorder which had not previously received much attention: (1) the influence of hyperkeratinization of the follicular orifices in the production of lesions, and (2) the influence of the disturbance of the androgenestrogen ratio. Since the report by Frazier and Hu in 1936 of the tendency to follicular hyperkeratinization with a lack of vitamin A suggested the possibility that vitamin A might be of use in the treatment of acne, the past decade has produced a number of papers dealing with this method of treatment, and the earlier use of vitamin D has practically been abandoned. While there is no unanimity with regard to the effectiveness of vitamin A in acne, a number of writers have reported good results, but it is pointed out that the dosage of the vitamin must be large, with a minimum daily dosage of 100,000 units; that, while improvement may begin within a few weeks, treatment must be continued for some months, and that recurrences commonly take place with cessation of the treatment. This type of vitamin therapy is particularly indicated in those cases where the eruption is of the milder type, with comedos and papules, rather than in those cases where the deep pustular type of lesion exists. Recently, Morris has reported that the use of vitamin C, a deficiency of which may also cause hyperkeratinization, has produced improvement in forty-three of fifty-three patients who received an 8 oz. glass of citrus fruit juice and 3 gm. of ascorbic acid daily.

While there is no unanimity with regard to the manner in which sex hormones act in the production of acne, studies have shown that in patients with acne the level of androgens is raised, while that of the estrogens is normal or a little lowered, and a number of writers have postulated that the disturbed relationship in the ratio of androgen and estrogen levels is the important factor. Consequently, the most commonly used therapy in the hormonal field is the administration of estrogens, although progesterone has been used alone or in combination with estrogen.

With the use of estrogens, various treatment schedules have been advised. Becker uses diethylstilbestrol in a dosage of 0.25 to 0.5 mg. daily during a period which begins seven days after completion of the menses and continues until the onset of the next period. Others advocate the use of the drug for from fifteen to eighteen days per month, with treatment beginning immediately after cessation of the period, whereas others advocate that the estrogens be used during the last half of the ovulatory cycle.

Space does not permit an extended discussion of this phase of the treatment of acne, but the following statements may be made.

1. The hormonal treatment of acne is of use in many cases of acne, but the lack of uniform success and the possible undesirable side effects of such treatment suggest that its use should be reserved for those cases which do not respond to other measures.

2. The best results are obtained with those patients in the older age groups and in whom the acne is of a pustular or cystic type, particularly when the lesions are confined to or chiefly upon the lower cheeks and chin.

3. Results are much better with females than with males.

4. Results are best where there is a tendency to flares of the acne at the time of the menstrual cycle.

Lastly, in discussion of the treatment of acne it should be pointed out that in recent years it has been recognized that in those patients with the pustular, indurated or cystic type of lesion a valuable adjunct is the use of antibiotics or the sulfa drugs, particularly the newer preparations such as Elkosin and Gantrisin. While this type of therapy is not curative it is most effective in controlling these destructive lesions and lessens materially the possibility of scarring.

In a very recent study of this phase of acne therapy, Noojin et al found among the antibiotics penicillin the most effective agent in this field, with oxytetracycline (Terramycin), chlortetracycline (Aureomycin) and chloramphenicol (Chloromycetin), in that order, found to be next in effectiveness. Robinson, however, felt that penicillin by injection was of no value in the treatment of acne, and found terramycin, aureomycin and erythromycin to be most effective.

The antibiotics are used here in a dosage of 250 mg. three to six times a day until a good response is obtained, the dosage then being reduced gradually. Treatment may have to be continued in this field for many months.

Antibiotic Therapy in Dermatology

The introduction of the antibiotics has led to a complete change in the treatment of superficial pyogenic infections of the skin. With the introduction of penicillin, it was found that its local use was

rapidly effective in curing such infections as impetigo, but as it was productive of sensitization reactions even more frequently than the previously used mercurials, its use for these cases was abandoned as soon as other antibiotics became available. At present a number of antibiotic agents suitable for such local treatment are available. Aureomycin, chloromycetin and terramycin were soon tried out in this field and found to be eminently satisfactory agents. Streptomycin, bacitracin and gramicidin were also used. The use of streptomycin here was soon abandoned because of its strong tendency to produce sensitization reactions and because the organisms soon developed resistance. More recently neomycin, polymixin B and erythromycin have been introduced, together with combinations such as neomycin and bacitracin, polymixin B and bacitracin.

At the present time neomycin seems to have the widest acceptance because of its broad spectrum, its stability in aqueous solution and ointment bases, its low sensitizing index, and because it is seldom used internally; however, erythromycin, while not as yet as well evaluated as neomycin, has a firm position. Livingood has found erythromycin to be effective against staphylococcus aureus and beta hemolytic streptococcus, but not effective against the Gram-negative organism. He also felt that it appeared to be less well tolerated on denuded and eczematous skin than some of the other antibiotics. The combination of bacitracin, effective against a wide variety of Gram-positive organisms and neomycin, effective against a wide variety of both Gram-negative and Gram-positive organisms, is a very effective agent.

The superficial pyodermas such as impetigo and infectious eczematoid dermatitis respond much more rapidly than do the deep infections, such as sycosis barbae and folliculitis, but the latter type will clear with longer treatment in the vast majority of cases. When sycosis barbae does not respond, the quinolor compound of Squibb should be used.

Likewise, in the deeper types, including acne and hidradenitis suppurative, furuncles and carbuncles, parenteral antibiotic therapy should be employed. Furuncles and carbuncles respond particularly well to penicillin, although terramycin, aureomycin and erythromycin may be employed when there is intolerance for penicillin. It is, of course, desirable to test the causative organisms for sensitivity to the various antibiotics, but as this is not practical in private practice, good results may be expected in most cases with one or another of the available preparations.

Since these antibiotics do not appear to be effective against pseudomonas infection, presently regarded as responsible for many cases of otitis externa, a combination of polymixin B and bacitracin is usually used for the treatment of this disorder, and recently commercial preparations containing polymyxin, bacitracin and neomycin have been available.

Various reports indicate that with these newer antibiotics, impetigo vulgaris is cleared in an average of five days, folliculitis in seven and one-half days, and the secondary pyogenic infection in eczema, et cetera, in eight days.

Quinacrine (Atabrine) and Chloroquine (Aralen)

Since the report by Page in 1951 that in a large proportion of cases the chronic discoid type of lupus erythematosus responded to treatment with atabrine, many dermatologists have reported their results with the use of this drug, and in 1953 Goldman suggested the use of chloroquine, because of its lesser toxicity and because it did not produce the yellow discoloration so often caused by atabrine. Previously, the standard treatment for this disorder in its chronic phase had been the use of gold or bismuth salts, with sodium paba a more recent addition, but the proportion of good results was comparatively small and the course of treatment usually prolonged. At present the use of atabrine or chloroquine is the preferred method among dermatologists, and chloroquine is more widely used than is atabrine. The proportion of good results measured by striking improvements is high; although complete clearing occurs in only 20 to 25 per cent of cases, and relapse may occur with cessation of treatment. Kierland, Brunsting, and O'Leary state that the best results occur in patients with few lesions on exposed parts of the body.

At the present time, although evaluation is incomplete, it is felt that great caution should be used in the treatment of the subacute and the acute disseminated types of lupus erythematosus with these drugs. While Goldman reported striking improvement of cases of the subacute type treated with chloroquine, Brunsting stated that in three cases of this type treated with quinacrine the patients developed leukopenia, purpura and fever.

With quinacrine some authors use a dosage of

0.1 mg. three times daily for one month, 0.1 gm. twice daily for the next month, and then 0.1 gm. daily till the cessation of treatment. Others recommend the use of 0.1 gm. twice daily for two weeks, then 0.1 gm. daily for up to one year if needed. Chloroquine is usually used in a dosage of 0.25 gm. once daily, although some use this dosage twice daily for one to two weeks, following with a dosage of one 0.25 gm. tablet daily.

These drugs have also been found to be of use in some other diseases. Black, Rogers and Finn, Woodburn et al, and Knox et al have all reported that the use of these drugs has been helpful in the treatment of various dermatoses due to sensitivity to light, and Rogers found chloroquine to be more effective than quinacrine.

Cormia and Noun found that both pustular psoriasis and pustular bacterids responded to treatment with quinacrine in three to four weeks, and that the more common type of psoriatic lesions present with the cases showing pustular involvement, might show marked resolution at the same time.

In a paper presented at the June meeting of the AMA, Ayers presented a preliminary report indicating that chloroquine might be useful in the treatment of several other dermatoses, namely, lichen planus, verruca vulgaris, and verruca plana juvenilis, though they found it useless in the treatment of psoriasis.

Toxic symptoms from the use of these drugs include pruritus, nausea, anorexia, diarrhea, headaches, blurred vision and weight loss, and dermatoses of the lichenoid, pityriasis rosea type, seborrheic or dysidrotic types. Leukopenia, aplastic anemia, and liver damage have been reported, and so it is important that regular blood counts and urinalyses be made while these drugs are being used.

Stilbene in Blastomycosis

Curtis and Harrell, Jr., in 1952 employed stilbamidine and diethylstilbestrol in the treatment of blastomycosis, treating a patient with each of these drugs, and found that the two patients with cutaneous blastomycosis, treated with 3 mg. of diethylstilbestrol daily showed complete disappearance of their lesions in three to four months. The two patients with systemic blastomycosis showed rapid improvement after 3.0 gm. and 7.2 gm., respectively, the drug being diluted to a volume of 250 cc. or more and given by slow intravenous drip. The dosage is begun with 50 mg. a day, and with daily increase in increments of 50 mg. each. Callaway, likewise, obtained a good response in four cases treated with intravenous injections of stilbamidine, in doses of 150 mg. given daily by the intravenous route. Fink et al reported a case of cutaneous blastomycosis cured by two courses of stilbamidine of 1.8 gm. and 1.35 gm. respectively and Parisier et al treated a patient with systemic and cutaneous blastomycosis with stilbamidine for twenty-nine days with apparent cure. They point out that, while it is difficult to assume that the cure is permanent in a disease with a notable tendency to recurrence, stilbamidine produced a more effective remission in this case than any other method of treatment. Curtis, in a recent review of this treatment, stated that stilbamidine and hydroxystilbamidine have been used by various writers in a total of fifty-one cases of blastomycosis, seventeen of these being of the cutaneous type and thirty-four of the systemic variety, and that in this group only 17.6 per cent of relapses occurred. Curtis feels that this figure is too low, since from the standpoint of relapse he had three failures in five cases.

There are certain side reactions, notably a delayed trigeminal neuropathy and a tendency to the production of leukopenia. Fossey and Jackson (1953) reported a case of toxic psychosis following the use of stilbamidine in the treatment of blastomycosis and they felt that the drug was, at least in part, responsible for the development of the toxic state. If the drug is given too rapidly, and not by a slow drip method with great dilution, immediate nitritoid-like reactions, with tachycardia, breathlessness, dizziness, nausea and vomiting, fainting and sweating usually occur. The trigeminal neuropathy may occur from one to thirteen months after cessation of treatment, and is characterized by sensory disturbance, anesthesia, and various paresthesias, and these may extend downward to involve the neck and arms. This reaction has not occurred in the patients treated with hydroxystilbamidine, but takes place in about 60 per cent of the patients treated with stilbamidine. The treatment with stilbestrol, while effective, requires a dosage which commonly produces gynecomastia and even testicular atrophy.

Vitamin B_{12}

In 1953, Goldblatt reported complete healing in seven of ten patients with discoid lupus erythema-

tosus treated with vitamin B_{12}, while in five patients with subacute disseminated lupus erythematosus, complete resolution occurred in three, and the other two showed more than 75 per cent regression. His limited experience with this agent in the acute disseminated type suggested that it might be a useful agent here. The vitamin was given intramuscularly, and doses of 100 mg. seemed most effective. Daily administration of smaller doses appeared to be more effective than larger doses given once a week. Kopler in 1953 reported that large doses of 1,000 mg. given intramuscularly twice weekly had caused regrowth of hair in patches of alopecia of the scalp due to lupus erythematosus, and Schoch noted improvement in one case of subacute lupus erythematosus treated with 500 mg. intramuscularly three times a week in a patient who showed no improvement with 50 mg. three times a week. Marcus et al, however, found response to this type of therapy inconsistent, and only three of seventeen cases showed very favorable response, and results at the New York Skin and Cancer Hospital have likewise been unsatisfactory.

At the present time, therefore, it would seem that the use of vitamin B_{12} for the treatment of the various phases of lupus erythematosus should be restricted to those cases in which other standard methods have failed.

Reudemann recently reported excellent results in the treatment of psoriasis with large doses of vitamin B_{12}—1,000 γ (gamma) per cm.—intramuscularly once a day for fifteen to twenty days or longer, with maintenance doses once or twice weekly to follow.

Cutaneous Tuberculosis

While the various forms of cutaneous tuberculosis are not met with as frequently in this country as on the continent, they constitute a very difficult group from the standpoint of treatment. In the past, results of therapy on the whole have been disappointing. In recent years, however, four different agents have been added to our armamentarium, and the prognosis in cutaneous tuberculosis is much brighter than was previously the case. These several agents are streptomycin, Vitamin D_2 (or Calciferol) para-amino salicylic acid and isoniazid. It is not possible to go into detail here with regard to each of these drugs, but it should be said that with none of them are the results uniformly successful, and that the percentage of cures varies greatly in the different types of cutaneous tuberculosis.

Treatment with isoniazid (Rimofon), of course, is the most recent addition to the group of therapeutic agents, and observations made up to the present seem to indicate that it is the most effective and most rapidly acting of these drugs. Marchionini and Rockl, for example, reported that in a group of 108 cases of cutaneous tuberculosis, the great majority of which were cases of lupus vulgaris, improvement was rapid and consistent, while three of four cases of Bazin's disease were healed. They used a dosage of 10 to 15 mg. per kilo of body weight, a higher dose than is generally employed. Lieder and Sawicky, using doses of 2 to 4 mg. per pound (150 to 250 mg. daily for one to about seven months), found that among twenty patients with tuberculosis of the skin, they obtained excellent results in cases of lupus vulgaris, erythema induratum and scrofuloderma. Other observers have reported success in the treatment of tuberculosis cutis orificialis, tuberculosis cutis verrucosa and the rosacea like tuberculid of Lewandowsky. In general, the results with sarcoid are disappointing although response has occurred in some cases (Kile). With papulonecrotic tuberculids the effects are inconstant.

Healing begins to take place in from one to four weeks, and complete healing may occur in five to eight weeks after beginning treatment, although treatment may be continued for a longer period if necessary. The drug is usually very well tolerated although nausea, loss of appetite, abdominal discomfort, constipation, diarrhea, giddiness, dyspnea, thirst, headache and febrile reaction have occurred in a few cases. In cases of intolerance, desensitization has been accomplished with the use of small, increasing doses of the drug by the oral or intramuscular routes.

Bamber points out that the tubercle bacillus may acquire resistance to the isoniazid and suggests that streptomycin may then be used to obviate that possibility and to act as a synergist.

Treatment with Vitamin D_2 was introduced independently by three different men (Charpy in France, Fanielle in Belgium, Dowling in England.) It is difficult to set up any standard dosage with this agent since the element of toxicity plays so important a part. In general, a dose of 150,000 units daily for four to eight weeks, then 100,000 I.U. daily, is a widely used and effective dosage.

When calciferol is to be used, the serum calcium and phosphorus levels and the blood urea content should be obtained before beginning treatment, and the urea level should be checked frequently to avoid interference with renal function, as such a result may be permanent. Side effects are thirst, anorexia, constipation, headaches, severe vomiting, polyuria, mental depression, pains in the teeth, jaws, and joints, parasthesias and headache. Charpy advocates that patients using calciferol should reduce the intake of fat and salts and recommends that at least 1½ pints of milk be taken daily. Before Vitamin D_2 is used, it is essential that visceral tuberculous involvement be eliminated, since this drug may cause rapid activation of such a process. Marcussen states that in young subjects and in those with a weakly positive tuberculin reaction, calciferol has proved to be very prone to produce a rapid extension of visceral involvement. Calciferol treatment is especially effective in lupus vulgaris, tuberculosis verrucosa cutis and scrofuloderma, but in Bazin's disease, micropapular tuberculosis of the skin and follicles, is rather ineffective, and the results with sarcoid are generally disappointing.

Huriez advocates the use of antibiotics and calciferol in alternation as giving better results than the use of the vitamin alone.

At the present time, para-amino salicylic acid and streptomycin are used chiefly in combination with or in alternation with the Vitamin D_2 or isoniazid therapy. Likewise, combined Vitamin D_2 and isoniazid treatment is suggested, as the former apparently acts by increasing the resistance of the host while the isoniazid apparently acts directly on the bacillus.

Experience with all of these agents is as yet insufficient to allow a final evaluation of their comparative values, or a determination of what combinations of two or more of them simultaneously or in sequence may be most effective. Also not yet determined with certainty is the incidence of recurrence or relapse in improved or presumably cured cases, since in some cases patients who appear to have been cured clinically will still show histological evidence of the disease. Likewise, some of the earlier measures such as ultraviolet light irradiation, salt-free diet or excision or local destructive measures may still have to be employed as adjuvant measures.

Seborrhea and Seborrheic Dermatitis

Until recent years the treatment of "dandruff" was restricted to the use of sulphur, salicylic acid and resorcin, but in the past three years there has been available a new preparation which has proved to be much more satisfactory than any agents used in the past. The use of suspensions of selenium sulfide, commercially available as Selsun Suspension, was first described by Slinger and Hubbard in 1951. They reported control of seborrhea capitis in 81 per cent of ninety-four cases of seborrheic dermatitis treated with this agent, with 95 per cent of favorable results in the mild cases and 85 per cent in the moderately severe type. Slepyan, in 1952, reported on 286 patients and found that complete control was obtained in 87 per cent. With the dry type of seborrhea, he obtained 92 per cent of good results and 85 per cent with the oily type. Bereston, in 1954, reported that he had treated 250 patients with seborrheic dermatitis of the scalp with favorable results in 88 per cent followed for a two-year period.

The product is extremely well tolerated and scaling and itching are usually relieved after two or three applications of the drug. It is usually sufficient to employ the preparation once a week but in patients with heavy scaling it may be used twice a week for two weeks, then once a week. As with any preparation used for the treatment of seborrhea capitis, the use of the drug must be continued indefinitely and the individual is soon able to determine for himself whether the salt is to be used once in one, two, or more weeks for control of his seborrhea. The drug is extremely toxic if taken internally but there is no evidence that systemic intoxication takes place from its use in restricted areas of the skin. Likewise, the preparation is extremely well tolerated locally.

One drawback to the use of selenium sulfide is the finding that in some patients the oiliness of the scalp and hair is notably increased. Sauer found this undesirable result in four of sixty-two patients. Likewise, in a few instances, persons with gray hair have developed a yellowish discoloration of the hair, but I have met with this only twice among a large number of patients with canities who have used the preparation.

Ayers used selenium sulfide in ointment form in 1 per cent strength in a water-miscible base in the treatment of seborrheic dermatitis of parts other than the scalp in thirty-seven cases, and ob-

tained a generally satisfactory response in 73 per cent and a highly satisfactory response in 46 per cent. There was, however, an incidence of 27 per cent of cases in which the condition was aggravated or in which there were complaints of irritation. Ayers felt that these reactions represented a primary irritant response rather than an allergic contact type reaction, and later reported that with the use of 0.5 per cent strength ointment the evidence of irritation was very low, a finding with which Nelson concurred.

Due to the possible toxic effects from absorption, the selenium salt should not be used on extensive areas at one time.

Pigmentary Disturbances

During the past three years attention has been called rather coincidentally to one treatment which restores lost pigment in vitiligo and to another treatment which removes excess melanin pigmentation.

In the treatment of vitiligo, a disorder previously unresponsive to any method of treatment, crystalline extracts of the plant Amma majus have been successful in producing complete recovery or great improvement. In some instances, the best results have been obtained when the oral administration of the drug was combined with painting of the leukodermatous areas with the drug plus exposure to ultraviolet rays, but in other instances the local treatment alone has given prompt response. Response to treatment begins in three to six weeks, and seems to take place more readily in younger patches, although patches of long standing may become repigmented. Lesions on the trunk respond most readily; those on the extremities, and especially those on the hands and feet, may require more than four months of treatment.

The tablets of Meladinin, containing 10 mg. of ammoidin and 5 mg. of ammidin, and a paint containing 7.5 mg. ammoidin—2.5 mg. ammidin per cubic centimeter—are available commercially.

Nausea, insomnia and nervousness may occur as side effects following internal use but are transient. Liver or renal disease, hypertension and arteriosclerosis are contraindications to the use of the drug internally.

Hyperpigmentation due to melanin has recently been treated with 20 per cent monobenzylether of hydroquinone in ointment form in 5 to 20 per cent strength (commercially available as Benoquin), and excellent results have been reported in the case of generalized lentigines, severe freckling, berlock dermatitis, and the melasma of Addison's disease, and some observers have reported good results in the treatment of the melasma of pregnancy and in postinflammatory hyperpigmentation. The pigment disappears in successfully treated cases in from three weeks to six months. The use of adhesive dressings over the ointment treated areas hastens the response. Occasionally sensitization to the ointment develops with the production of dermatitis, this occurring in eleven of eighty-four cases reported by Lerner and Fitzpatrick.

HEALTH INSURANCE COVERAGE

Health insurance coverage is at record high. Nearly two out of every three men, women, and children in the United States now are protected by voluntary health insurance, the Health Insurance Council announced in releasing the findings of its ninth annual survey of health insurance in America.

On December 31, 1954, a total of 101,493,000 Americans had hospital expense protection. This represents an increase of 4.3 per cent during that year. Since the beginning of 1941, the number of persons with hospital expense protection has multiplied nearly eight and one-half times.

Nearly eighty-six million persons had surgical expense protection, an increase of 6.1 per cent. About 85 per cent of those with hospital expense protection also had surgical coverage—up from a figure of 83 per cent one year earlier. Since 1941, the number of persons with surgical insurance has multiplied about 16 times.

Medical expense coverage increased by more than four million persons, or nearly 11 per cent, to a total of 47,248,000.

Nearly thirty-nine million workers had protection against loss of income due to disability, about 60 per cent of the civilian labor force.

The newest form of voluntary health insurance—major medical expense—covers 2,235,000 persons, a gain of 83 per cent.—Research Council for Economic Security.

New or Old - - But Fit

"All That's New and Fit to Use" is the theme of our 1956 Michigan Clinical Institute, to be held in Detroit, March 7-8-9. The finest teachers and clinicians throughout the country will be on this program. They will bring us the latest in therapy discovered or made available during the last 365 days. We recommend your attendance at this worthy Institute.

The theme of the MCI reminds us of another theme that's "old but fit to use." We are referring to the people's attitude toward the medical profession. Presently, there are many economic and social implications resulting from contacts with our patients and with their friends, especially how the doctor uses his leisure time in front of his patients.

This theme is old. But it's still a good thing to remember that a display of pseudo-wealth is never good, especially in the company of those we serve. It may be physically comfortable for a physician to own a large car and occupy the best house in the community, but at times that is not conducive to the best public relations for the medical profession as a whole.

Discussing the patient's attitude toward us may be "old hat," but today it's still fit. Let us look in the mirror and try to see ourselves as others see us. If that reflection displeases us, now is the time to cast off any vulgar clods of materialism and shine our countenance with those qualities our patients want to see in us. Let us all be fit to be called "Doctor of Medicine."

W. B. Jones

President, Michigan State Medical Society

President's



Message

Michigan Clinical Institute--1956

Theme: "All That's New and Fit To Use!"

Sheraton-Cadillac Hotel, Detroit—March 7-8-9, 1956

TIME	WEDNESDAY March 7, 1956	TIME	THURSDAY March 8, 1956	TIME	FRIDAY March 9, 1956
A.M. 8:45	Registration. Exhibits Open.	A.M. 8:45	Registration. Exhibits Open.	A.M. 8:45	Registration. Exhibits Open.
9:00	SURGERY BLOCK J. E. Dunphy, M.D. Boston, Massachusetts		SEVENTH ANNUAL MICHIGAN HEART DAY		OBSTETRICS AND PEDIATRICS BLOCK
		9:15	Benedict F. Massell, M.D. Boston, Mass. "Prevention and Prophylaxis of Rheumatic Fever"	9:00	Meyer A. Perlstein, M.D. Chicago, Illinois "What's New in Cerebral Palsy"
9:30	Eugene A. Osius, M.D. Detroit "Peripheral Arterial Disease"	9:45	Anthony C. Nolke, M.D. Detroit and James B. Blodgett, M.D. Detroit "Interatrial Septal Defect—Its Clinical Course and Surgical Correction"	9:30	Milton V. Veldee, M.D. Palto Alto, California "Poliomyelitis Vaccine: Problems in Processing and Antigenic Value"
10:00	INTERMISSION TO VIEW EXHIBITS	10:00	INTERMISSION TO VIEW EXHIBITS		INTERMISSION TO VIEW EXHIBITS
11:00	Michigan Cancer Co-ordinating Committee Lecture: Owen H. Wangensteen, M.D. Minneapolis, Minnesota "Trends and Accomplishments in Alimentary Tract Cancer"	11:00	Yoshikazu Morita, M.D. Detroit "Diuretics in the Treatment of Congestive Heart Failure"	11:00	Charles S. Stevenson, M.D. Detroit "The Handling of Breech Presentation"
11:30	Michigan Foundation for Medical and Health Education Lecture: Alton Ochsner, M.D. New Orleans, Louisiana "What's New in Lung Cancer"	11:20	J. A. Polhemus, M.D. Ann Arbor "Clinical Evaluation of Sinthrom (G-23350), A New Oral Anti-Coagulant"	11:20	George S. Sayre, M.D. Ypsilanti "Cystocele and Rectocele—Present-Day Indications for Correction, and Technical Advances"
12:00	DISCUSSION CONFERENCE	11:40	Angel Keys, M.D. Minneapolis, Minnesota "Epidemiological Aspects of Heart Disease"	11:40	Ernest H. Watson, M.D. Ann Arbor "Recent Advances in Medical Care of Children"
P.M. 1:00	LUNCHEON	12:00	DISCUSSION CONFERENCE	12:00	DISCUSSION CONFERENCE
	TRAUMA BLOCK	P.M. 1:00	LUNCHEON	P.M. 1:00	LUNCHEON
2:00	William C. Baum, M.D. Ann Arbor "Management of Bladder and Urethral Injury Following Pelvic Fracture"		INTERNAL MEDICINE BLOCK		GENERAL MEDICINE BLOCK
2:15	M. M. Frohlich, M.D. Ann Arbor "Accident-Proneness"	2:00	Tom D. Spies, M.D. Birmingham, Alabama "What's New in Vitamin and Hormone Treatment of Arthritis"	2:00	Frederick F. Yonkman, M.D. Summit, New Jersey "What's New in Drugs, 1956"
2:30	George J. Curry, M.D. Flint "Responsibility to the Injured"	2:30	R. W. Wilkins, M.D. Boston, Massachusetts "Rauwolfia in Hypertension"	2:30	Arthur C. Curtis, M.D. Ann Arbor "Tips on the Treatment of Skin Diseases"
3:00	INTERMISSION TO VIEW EXHIBITS	3:00	INTERMISSION TO VIEW EXHIBITS	3:00	FINAL INTERMISSION TO VIEW EXHIBITS
4:00	Nicholas S. Gimbel, M.D. Detroit "New and Old Methods of Managing Burn Wounds"	4:00	Henry T. Ricketts, M.D. Chicago, Illinois "What's New in Diabetes"	3:30	David J. Sandweiss, M.D. Detroit "What's New in Ulcerative Colitis"
4:15	E. Stephen Gurdjian, M.D. Detroit "The Shoulder-Hand Syndrome"	4:30	Leo Loewe, M.D. Brooklyn, New York "What's New in Antibiotics"	3:50	Herbert E. Sloan, Jr., M.D. Ann Arbor "Cardiac Arrest"
4:30	Michael L. Mason, M.D. Chicago "Injuries of the Hand"			4:00	John T. Ferguson, M.D. Traverse City "A New Approach to the Clinical Management and Treatment of Behavior Problems"
	MEETINGS OF ANCILLARY GROUPS		MEETINGS OF ANCILLARY GROUPS		End of 1956 MCI

Repeating the Popular "BLOCK SYSTEM"—A Truly Stupendous Scientific Session

Editorial

FACT AND OPINION

THE editorial columns of this issue, as do other issues and other journals, permit the expression of opinion whether or not supported by fact. This editorial, however, is a plea that opinion be held accountable to observed fact, that opinion follow fact and not lead it. This plea is needed now in our state on this tenth anniversary of the first observed fact that an antibiotic would effectively alter the course of human tuberculosis. During the ensuing decade other facts have been observed: that other drugs in combination with the antibiotic, and with each other, were needed to overcome failures; that dosage, timing, continuity duration, and precise laboratory control were necessary to success; that sputum could be rendered harmless, sometimes with and sometimes without surgery; that the pain of tuberculosis of the bladder, bowel, and larynx was relieved by definitive, rather than symptomatic treatment; that involvement of the trachea need not end in suffocation; that the terror of miliary and meningeal tuberculosis could be outlived.

All these facts are observed and recorded in hospitals and sanatoria. Whether or not they could have been, or can now be, duplicated outside of hospitals and sanatoria becomes a matter of opinion. The fact is, however, that opinion, both medical and lay, is the real factor that determines demand for beds in tuberculosis institutions. Regardless of fact, or before the fact has been determined, let opinion of either the physician or the patient hold that drugs alone, at home or at work, are sufficient; then our institutions will be rendered crippled and useless even though, in fact, they may be needed. It certainly may be possible to gather facts to demonstrate either that such institutions are unneeded at all or unneeded in such numbers and size. But up to this date such facts have not been observed and the demonstration has not been made.

The nearest thing to such a demonstration is the observed fact that those patients who have shown a successful response to institutional treatment may be discharged earlier if they then continue drug treatment outside under constant clinical and laboratory guidance and control. We can only trust that this recently demonstrated success will be lasting in a disease which in the past was capable of relapse many years after apparent success. In any event, the drug treatment needs to be continued without any interruption over a prolonged period of time. This is not prolonged treatment with merely an arbitrarily chosen set of drugs that are known to be effective in the average case. This is prolonged treatment with a definite drug schedule that was proven effective in that particular patient. This proof was obtained in the hospital while the patient was safely isolated from the uninfected.

There has been ample demonstration, as it has been said in Detroit, that, "Prolonged inadequate treatment is still inadequate." We still have failures. A bad start is still a bad start, and still means a bad end for a tragic number that were once hopeful, and had equally optimistic, but ill informed physicians.

Throughout recent decades, Michigan has acted and reacted with great vigor to all new opportunities for the treatment of its tuberculous. Each newly proposed method has been given a rigorous trial before Michigan has abandoned it. In this new opportunity, let us temper our vigor with wisdom and proceed toward our goal with "all deliberate speed!"

JOHN B. BARNWELL, M.D.
Chief, Tuberculosis Division
Veterans Administration
Washington, D. C.

PRIMARY ALDOSTERONISM

VERY rarely is a new disease entity described. Michigan is elated that such an honor should come to one of our members, Jerome W. Conn, M.D., Professor of Internal Medicine at the University of Michigan, Ann Arbor.

The condition was first described by Dr. Conn to his medical students in March, 1954, as a set of symptoms pointing suspiciously to an unusual abnormality of the adrenal glands. The condition was also considered to be related to kidney malfunction and high blood pressure. Dr. Conn made extensive studies of his patient for eight months.

For seven years, the patient, a thirty-four-year-old housewife, had been troubled by spasms, weak-

ness, and periodic paralysis of muscles. Tests showed an excess of salt in the patient's body, as well as a deficiency of potassium. She also had high blood pressure and kidney disease. A tumor of the adrenal gland was suspected and proven by surgery. There had been an excessive discharge of the hormone, aldosterone. The tumor contained tremendous amounts of the hormone.

This report constituted Dr. Conn's presidential address in October, 1954, before the Central Society for Clinical Research. The London *Lancet* (June 4, 1955) said, "This discovery may be as important to medicine as Harvey Cushing's recognition of the syndrome which bears his name."

The editor of *The Journal of the American Medical Association* (August 20, 1955) states, in describing Dr. Conn's work: "Evidence is now accumulating to suggest that increased aldosterone production may actually be the cause of a disease condition. Conn suggests that these cases (potassium-losing nephritis) represent a hitherto unrecognized syndrome. He has suggested that the name "primary aldosteronism" be applied to it, and recommends that all such patients undergo adrenal surgery."

As far back as 1949, Dr. Conn predicted that one day an adrenal hormone would be discovered, an excess of which would be associated with diseases not yet linked with abnormally functioning adrenal glands.

After the hormone called "aldosterone" had been isolated, Dr. Conn did find a patient exhibiting the ill-effects of too much of the chemical.

MEDICAL EDUCATION

THE House of Delegates of the Michigan State Medical Society, in September, 1954, instructed the Council to arrange a panel discussion on undergraduate medical education for some part of the 1955 annual session. The participants requested were the two Deans: A. C. Furstenberg, M.D., Ann Arbor, Dean of the University of Michigan School of Medicine, and G. H. Scott, Ph.D., Detroit, Dean of Wayne University College of Medicine. The panel discussion was held as requested on Monday, September 26, 1955, at 4 P.M., at the House of Delegates meeting. The discussion was most interesting and instructive. As a result of a question asked during the conference, Dean Furstenberg said Michigan needs a third medical school, and probably by 1975, a fourth.

The Committee to Study the Basic Science Act, in its report, tabulates the number of registrations by the Michigan State Board of Registration in Medicine for ten years up to 1954. There were 1,057 from the University of Michigan, 601 from Wayne University, 2,635 from other states and Canada, and 28 from foreign countries, a total of 4,321. Michigan educated 1,658 doctors of medicine, 38.3 per cent of those registered. We do not have the numbers educated in Michigan who went to other states to practice, but in 1954 there were twenty-two from the University of Michigan and five from Wayne who passed examinations in other states.

The State of Michigan is very definitely not doing its share in the whole program of medical education when we have to import a yearly average of 266 doctors of medicine to care for our people. Our legislature and our people must face the facts, as presented, and make plans for much greater allocations in medical education.

Eight years ago, MSMS President E. F. Sladek, M.D., of Traverse City, invited attention to a wealth of clinical material in Wayne's Eloise Hospital, the largest hospital in the world, which teaching material is completely bypassed. Research buildings could be built for postgraduate use now. The University School of Medicine is probably as large as can be advantageously used. Wayne University College of Medicine still could be expanded, but not enough to fill the gap. We need another medical school, and by another five years that need may be desperate. It will take at least five years to establish another school with hospital facilities and, most important, a functioning faculty.

Michigan, wake up!

ANNUAL MEETING

THE ninetieth annual session of the Michigan State Medical Society will be reported in the regular Secretary's reports to be published in The JOURNAL as soon as compiled by the reporters and official stenographers. That will take some time, but for our members, we present an abridged account.

Sunday, September 25, 1955, was almost completely devoted to the Council Session. Three committees—County Societies, Finance, and Publication, met at 10:00, each one with many items on its agenda. At 12:30, the Council met for luncheon and an extensive program: approving

the proceedings of the Executive Committee during the interim months, unfinished business, nominations for appointment to the State Board of Registration in Medicine (The law provides that the State Medical Society make five nominations for each appointment). Reports of ten committees of the Council and the Society were reviewed and approved. The monthly reports of the officers were considered and the Legal Counsel and Public Relations Counsel reports were studied. Nominations for the Foremost Family Physician Award were screened to three for presentation to the House of Delegates on the Monday and Tuesday, the session of the House of Delegates was held.

Tuesday afternoon, the Membership of Michigan Medical Service met. The session was presided over by Wilfrid Haughey, M.D., in lieu of R. L. Novy, M.D., resigned President. The first business was the nomination of directors. Those made by the nominating committee were received, also one from the floor. Ballots were distributed and, while the tellers were at work, the financial report was received showing the Corporation to be in a strong condition.

The President's report was read by Jay Ketchum also the Executive Director's report. Plenty of time was given for questions from the members. Elections resulted in the selection of the following in alphabetical order: E. I. Carr, M.D., Lansing, for two years, re-elected; Carlton Fox, D.D.S., Detroit, re-elected for three years; B. M. Harris, M.D., Ypsilanti, three years; Wilfrid Haughey, M.D., Battle Creek, re-elected for three years; G. Thomas McKean, M.D., Detroit, three years; E. F. Sladek, M.D., Traverse City, three years; George W. Slagle, M.D., Battle Creek, re-elected three years; W. I. Stoddard, Grand Rapids, re-elected for three years; John M. Wellman, M.D., Lansing, three years; Leonard Woodcock, Detroit, re-elected for three years; Glen W. Fausey, Lansing, and Ronald Yaw, Grand Rapids, representing Michigan Hospital Service, re-elected for three years; and A. Kent Schafer, Traverse City, re-elected for one year.

At the final meeting of MSMS House of Delegates, Tuesday evening, September 27, the following elections occurred: President-Elect, Arch Walls, M.D., Detroit; Councilors, Oliver B. McGillicuddy, M.D., Lansing, to succeed Robert S. Breakey, M.D.; George W. Slagle, M.D., Battle Creek, to succeed himself; D. Bruce Wiley, M.D., Utica to succeed himself; G. T. McKean, M.D., to succeed himself; Arthur E. Schiller, M.D., Detroit, to succeed Arch Walls, M.D. Delegates to the AMA are: John S. DeTar, M.D., Milan, to succeed himself; Wm. A. Hyland, M.D., Grand Rapids, to succeed himself; C. I. Owen, M.D., Detroit, to succeed R. A. Johnson, M.D., Detroit. Alternate Delegates re-elected were: W. W. Babcock, M.D., Detroit; E. F. Sladek, M.D., Traverse City; O. J. Johnson, M.D., Bay City. William Broome, M.D., Detroit, was elected to succeed C. I. Owen, M.D., Detroit. The Speaker, J. E. Livesay, M.D., Flint, and Vice Speaker, K. H. Johnson, M.D., Lansing, were re-elected.

The final and reorganization meeting of the Council on Friday morning, September 30, 1955, selected as Chairman, D. Bruce Wiley, M.D., Utica; Vice Chairman, W. B. Harm, M.D., Detroit; Chairman of County Societies Committee, Wm. M. LeFevre, M.D., Muskegon; Chairman of Finance Committee, Ralph W. Shook, M.D., Kalamazoo, re-elected; and Chairman of Publications Committee, G. B. Saltonstall, M.D., Charelvoix, re-elected.

MEDICAL COSTS

THIS summer, the medical profession has been placed on the bargain table. Our services became a part of the final agreement in the great labor-bargaining procedure which adopted a form of the Guaranteed Annual Wage in the automobile industry. We were not consulted or represented, but almost half of our total business was bartered and signed away.

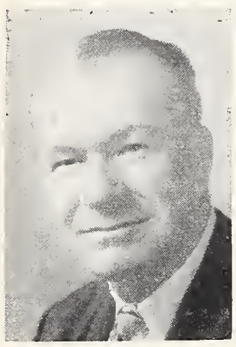
Five years ago, labor leaders accomplished a settlement with most of industry, recognizing the validity of tying wages to the increased costs of living. The government, which, every three months, publishes an index of the "cost of living," furnished a recognized measure for increases of pay for the whole automobile industry and many others.

Except for a few items, medical costs have remained fairly stationary. Most surgical charges are proportionately the same as they were when our older practitioners entered practice. In a greatly increasing economy we have not been realistic. We should take a tip from our public. Why should we not put an escalator clause in the new contracts Michigan Medical Service is con-

templating to offer to the great automobile companies and their employes? It would be nothing new to labor or industry. The new contracts would demonstrate an awareness of the changing times and of the changing economic world.

We believe our insured persons would concede the fairness of the proposal. We believe the employers might also see the justice of recognizing and actuating a new concept of medical cost accounting.

PRESIDENT-ELECT



ARCH WALLS, M.D., Detroit, was unanimously selected President-elect of the Michigan State Medical Society at the annual session in Grand Rapids, September 28, 1955. He was born in Pontiac, Michigan, in 1895, graduated from Pontiac High School and attended the University of Michigan. His course was interrupted by war service where he was a Lieutenant in the Infantry of the regular army. He returned to school and graduated in medicine at the University of Michigan School of Medicine in 1923. He interned at Harper Hospital and is on the staff of Florence Crittenton Hospital. He played football in high school and one year in college.

Dr. Walls has been a member of the Wayne County Medical Society and always a very active one, serving as Secretary in 1944-45, Trustee in 1949-54, and President in 1951-52. He has been a delegate to the Michigan State Medical Society, chairman of the Post-War Planning Committee; chairman of the Entertainment Committee; chairman of Movie Subcommittee of the Public Relations Committee of the Michigan State Medical Society; chairman, Michigan State Medical Society Public Relations Committee, member of the Council of the Michigan State Medical Society, serving his second term; member of the Advisory Board of Michigan Medical Service, and member of the Board of Directors, now serving his second term.

Dr. Walls has been very active in promoting the interests of the general practitioner and was a leader in organizing the first General Practice Section in the different hospitals. He is one of the Founders of the Academy of General Practice, and is a past president of the American Academy of General Practice of Wayne County. He is a past chairman of the Board of Directors of the American Academy of General Practice.

Dr. Walls is married and has two children.

DELEGATE TO THE AMA

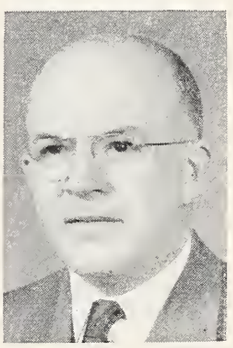


CLARENCE I. OWEN, M.D., of Detroit, was elected Delegate to the AMA at the annual session of the Michigan State Medical Society held in Grand Rapids in September. Dr. Owen is a graduate of Detroit Western High School, taking his premedical education at Ferris Institute and at the University of Michigan.

He received his M.D. degree from Wayne University College of Medicine in Detroit and was for many years on its teaching staff. His residency training in Pathology was taken at Harper Hospital under Plinn F. Morse, M.D. Today he is Attending Pathologist at Grace Hospital in Detroit. He is author and co-author of many medical papers.

Dr. Owen spent five and one half years in service in World War II, as a Colonel in the Medical Corps. He is a diplomate of the American Board of Pathology, member of the Detroit Academy of Medicine, and has been a delegate to the Michigan State Medical Society from Wayne County for many years.

CHAIRMAN OF THE COUNCIL



D BRUCE WILEY, M.D., Utica, was born in 1904 in Blenheim, Ontario, Canada, graduated from the University of Western Ontario Faculty of Medicine, London, Ontario, in 1928 and was licensed to practice in 1929 in Michigan. He served his internship at St. Joseph Hospital, Mt. Clemens, Michigan, in 1928-1929.

Dr. Wiley was elected councilor of the 15th district in 1950. He has been a member of the Executive Committee of the Council of the Michigan State Medical Society since 1953. He was re-elected Councilor of the 15th district in 1955.

Dr. Wiley is a member of the Macomb County Tuberculosis and Health Association, member of

the Board of Trustees, Michigan Health Council, member of the Board of Directors, Michigan Medical Service and a member of the American Medical Association. He is Past President and Past Secretary of the Macomb County Medical Society and has been a delegate from Macomb County to the House of Delegates of the Michigan State Medical Society for ten years. He is Michigan representative and a member of the Executive Committee of the National Conference of County Medical Societies Officers of the American Medical Association, 1947-1950.

He is Past President and Past Secretary of the Utica Rotary Club. He is a member of the active staff of St. Joseph Hospital, Mt. Clemens, a general practitioner with particular interest in obstetrics and pediatrics.

NEW COUNCILORS



OLIVER B. McGILLICUDDY, M.D., the newly elected councilor from the Second District, is the son of a doctor of medicine and surgeon in Lansing. He also has a brother practicing in Lansing. Dr. Oliver McGillicuddy is a well-known ear, nose and throat surgeon and has practiced in the capital city for twenty-four years.

He was born in Shepardsville, Michigan, May 21, 1902, and graduated from the Ovid High School in 1919, from the Literary Department of the University of Michigan and the Medical School in 1925.

He served his junior internship at Harper Hospital in Detroit, 1925-1926, and was resident and instructor in Otolaryngology in 1926-1930. He was associated with T. J. Carmody, M.D., Danville, Illinois, from 1930 to 1932.

Dr. McGillicuddy started the practice of Otolaryngology in Lansing in 1932. Since that time, he has been chief of ear, nose and throat at Edward Sparrow and St. Lawrence Hospitals in Lansing.

He is a member of the Ingham County Medical Society, the Michigan State Medical Society, the American Medical Association, American Triological Society, Southern Michigan Triological Society, Detroit Otolaryngological Society, American Academy of Ophthalmology and Otolaryngology, Lansing Country Club, Lansing City Club, Lansing Automobile Club, Rotary, and the People's Church. He has authored articles in the *Annals* and *Archives of Otolaryngology.*

He is a Past President of the Ingham County Medical Society, a Delegate to the Michigan State Medical Society, former President of Southern Michigan Triological Society, Vice Chairman, Michigan State Medical Society Legislative Committee, member of the Michigan State Medical Society Public Relations Committee, diplomate of the Board of Otolaryngology, 1929, and has been Vice President of the Ingham County Community Chest and President of the Lansing Country Club.



ARTHUR E. SCHILLER, M.D., Detroit, was born in Bay City in 1892. He graduated from the Detroit College of Medicine and Surgery in 1914 with the degree of M.D. He interned at Grace Hospital and has done postgraduate work in dermatology at the University of Michigan, 1919-1921. He is Associate Professor of Dermatology, Wayne University College of Medicine, Attending Dermatologist at Grace Hospital where he is Chief of Department, at Receiving Hospital and at Sinai Hospital. He is married and has two children and five grandchildren.

Dr. Schiller is Past President of the Detroit Dermatological Society, Past President of the Central States Dermatological Society, a Fellow of the American Academy of Dermatology, a Fellow of the American Medical Association and Past Vice President of its Dermatological Section. He is a member of the Michigan State Medical Society and Past President of the Dermatological Section; chairman, Radio-Television Committee; member, Public Relations Committee; now Councilor, First District, Wayne County; Delegate from Wayne County Medical Society; chairman, Reference Committee on Executive Session, and a member of the Wayne County Medical Society where he has been on the Council, chairman of the Ethics Committee, member of Physicians Hospitals Committee, member, Public Relations Committee, Educational Liaison Committee, and Prepaid Medical Plan Committee.

He is also a member of the United Community Service Committee, Franklin Hills Country Club, and Excelsior Club.

Lynn A. Ferguson, M. D.

He Jumped 18 Miles to Success

One of the traditional prerequisites of men of achievement is to be born in a small town. So it was with Lynn Adelbert Ferguson, M.D., who was born, May 4, 1891, in Sparta, Michigan, a country town about 18 miles northwest of Grand Rapids. This small midwestern town offered countless opportunities to occupy and entertain a curious, eager, and industrious boy.



Lynn's Scotch parents were hard-working and thrifty and they saw to it that he had ample opportunity to work, as well as to learn and to play. He worked at the usual jobs boys find during summer vacations and acquired some experience in handling livestock. Also he was fortunate enough to acquire considerable skill as a mechanic and toolmaker's apprentice by working with one of the craftsmen in Sparta. The habits of hard work and application to various tasks left their mark on the boy, and have been shown by Lynn Ferguson to this day.

It was not all work, of course. Lynn developed a great liking for baseball as a boy and he likes to recall that he was a "pretty good shortstop" around Sparta. Like many boys, he entertained visions of becoming a professional ballplayer, but by the time he graduated from the Sparta High School in 1910, dreams of college and of becoming a doctor filled his mind.

His parents encouraged him and offered what little help they could. However, he realized that if he wanted to go to college and medical school, he would have to work his way to a large extent. He worked for a year and, then, in the fall of 1911, entered the University of Michigan in the combined literary-medical curriculum. Part-time jobs at waiting on table, washing dishes, stoking furnaces and carrying out the inevitable ashes were eagerly accepted. When he had completed the first years of the medical course, he was delighted to accept the opportunity to become an assistant in the Department of Physiology. This assignment necessitated attending two summer school sessions, affording him the chance to acquire additional credits in physiology and embryology. He received a B.S. degree in 1915 and the M.D. degree in 1917, and he recalls that it was hard work but that he thoroughly enjoyed it. He believes he got more out of his education because he worked his way than if he had not.

Like so many industrious people, Dr. Ferguson's ability to get work done was not unnoticed by his classmates, and as a freshman in the Medical School he acquired the job of Secretary of the Class of 1917. He must have been an exceptional secretary—or perhaps no one else would touch the job! At any rate, he continued in that position throughout his years in Medical School, and as far as is known is still the Secretary of the Class of 1917! He also became a member of the Alpha Kappa Kappa Medical Fraternity and today is the Michigan State Secretary of Alpha Kappa Kappa, a position he has been unable to elude for the last twenty years—to the consternation, we might add, of *his* secretary!

The young graduate served as resident in obstetrics and gynecology at the Providence Hospital, Washington, D. C. He then returned to Michigan and entered the practice of proctology in Grand Rapids. After a few years of practice in a clinic well known in its day, he and his brother, Ward S.

Ferguson, M.D., with James C. Droste, M.D., resigned and founded a new clinic and hospital in Grand Rapids, bearing the names of the three founders and devoted to the specialty of proctology.

Although the new clinic demanded much of his time and energy, Dr. Ferguson was active in the general hospitals in Grand Rapids, and for a period of about eighteen years he served St. Mary's Hospital in various capacities, including Chief of Staff, Vice Chief of Staff, and Chairman of the Medical Board. He also devoted some of his efforts and energy to the Boy Scouts, to the Lions Club, to the University of Michigan Alumni Association, of which he is a past director, and to the Masonic Order.

Dr. Lynn's interests have not been limited to his profession alone. In the fall of 1916, at the beginning of his senior year in the Medical School, he married Miss Alice T. Layton. His four children, two boys and two girls, have presented him with eleven grandchildren. However, since the children have established their homes outside Grand Rapids, Dr. Lynn maintains a fairly high degree of activity at his home with a pair of large and handsome dogs. Butch and Flame are boxers, and Dr. Lynn feels that it is a pity, somehow, that Butch can't talk and write, because he is sure that Butch is at least as smart as some people!

In 1940, Dr. Ferguson suffered a coronary attack. Since that time he has limited his activities —or so he says! He has maintained a keen interest in the Association of American Physicians and Surgeons, and has served as a Michigan delegate to that body. Over the years, the field of colon surgery and the study of gastroenterology have interested him more and more. He has been greatly interested and active in the College of Gastroenterology, of which he is a founder and of which he has the honor of serving as President this year.

Dr. Ferguson would like to have more time for fishing and boating. He would like to have time to study electronics and to tinker with his workshop and tools. However, those who know him are sure that he is happiest when he is busiest. And, whenever there is an opportunity to develop the specialty of proctology, Dr. Lynn A. Ferguson, conscientious physician that he is, will, somehow, take the time to do whatever he can.

—Howard G. Benjamin, M.D.

SOME MEDICAL ASPECTS OF EXOPHTHALMOS

(Continued from Page 1328)

increased to 2½ grains daily. A recent letter reported apparent good progress with marked improvement of the eye condition.

Summary

1. A brief review of certain backgrounds in exophthalmos is given.

2. Proptosis is emphasized as only one part of the local exophthalmic picture.

3. The presence of "mixed gland dysthyroidism" is offered as a subgroup of thyroid dysfunction along with thyrotoxicosis and hypothyroidism in the consideration of endocrine etiology.

4. A precise surface scanning technique in radioactive iodine tracer (I^{131}) studies seems to furnish the only diagnostic answer for certain patients in whom the clinical spectrum basal metabolic rate, blood protein bound iodine and cholesterol are normal or equivocal.

5. Clinical and laboratory results are detailed in two patients (of a group of twenty-five similarly studied and treated) with the employment of I^{131}, therapeutically. In one, 16 MC in three divided doses was given; in the other, a single 10 MC dose. In both, a resultant myxedema was corrected with adequate amounts of thyroid extract, and in each very satisfactory ophthalmic, clinical and laboratory improvement took place.

References

1. Graves, R. J.: London M. & S. J., 7:516-517, 1835.
2. Reynolds, L.; Corrigan, K. E., and Hayden, H. S.: Diagnostic use of radioactive isotopes. Am. J. Roentgenol., 68:421-434 (Sept.) 1952.

"Today"--With Michigan Health Council

"Concern yourself with but today, grasp it—and teach it to obey . . ."

—Anon.

By "grasping the todays" during the past six-and-one-half years, Michigan Health Council has developed a comprehensive program unmatched in scope and breadth by any other state.

Its nineteen current projects encompass health activities involving rural and urban people and range from weekly television presentations to M.D. Placement activities.

- M.D. Placement Program
- Medical Assistants Placement
- M.H.C. Weekly Television Series
- Regional Health Council Conferences
- Kinescope Production
- M.H.C. Awards
- M.H.C. Slide Series
- Membership Enrollment Campaign
- Annual Michigan Rural Health Conference
- C.H.C. Organizational Activities
- Michigan Health Council Bulletin
- Community Health Council News
- Michigan Health Council Directory
- Michigan Health Council Film Production
- Medical Associates Procurement
- Periodic Health Appraisal
- Film Information Service
- Clearing House on Health Questions
- Community Health Council Service Bureau

Basic Policy Maintained

In the development of the present expanded activities program, the Council has held fast to its basic objective of further expansion of the Community Health Council idea. Before any new project can be accepted, it is analyzed and considered in the light of its adaptability to the Community Health Council program. This in itself, could account, in part at least, for the constant increase in the number of Community Health Councils which have accepted Associate Membership in MHC. It also could account for the slow, cautious increase in the number of projects during recent years.

As a result of this deliberate policy, MHC's projects have proved popular with other health groups and in certain instances, such as the M.D. Placement Program, have been successful in bringing many groups together in a mutual effort.

Community Health Councils Increase

Evidence of the popularity and the acceptance of the Community Health Council idea is obvious in the constantly increasing number being formed annually. During the past twelve months, eighteen community groups were formed in various areas of the state. A total of sixty-six Community Health Councils now hold Associate Membership in Michigan Health Council.

Advisory Board Formed

Pursuing the directive provided in the By-Laws, the Board of Trustees urged the creation of a Community Health Council Advisory Board. Elected as the first chairman of the Community Health Council Advisory Board, Sidney Chapin, M.D., Dearborn, has developed a working organization which will hold its second annual meeting in Kalamazoo, in January, 1956. Once functioning, this Board will be in a position to provide valuable information from the community groups.

Other elected officers serving the Advisory Board are Herbert Ellis, Detroit, Vice-chairman, and Verna Dolbee, Kalamazoo, Secretary.

Health Publications Expanded

For the sixth consecutive year, circulation of MHC publications has been increased. The printed *Bulletin and Inspection News* now reaches 2300 readers. New features include regular reports of MHC television productions and listings of M.D. placements in Michigan.

Planned for future issues is a series entitled "Facing the Facts," in which interesting medical and health facts will be featured.

Now in production is an attractive folder entitled, "The Man Who Wasn't There," featuring the M.D. Placement Service, its purpose and objectives.

Medical Assistants Placement Pilot Study Completed

Working jointly with the Michigan State Association of Medical Assistants and the Ingham

County Medical Society, Michigan Health Council conducted an intensive pilot study in Medical Assistants Placement.

The study, completed on October 1, 1955, will provide valuable information for any county or community interested or considering the setting up of such a service.

Results now are being tabulated, and a report is being completed. Copies of the report will be made available on request, when finished.

Regional Health Council Conference Staged

Working with representatives of the five counties surrounding Grand Traverse, Michigan Health Council planned and staged its Second Regional Health Council Conference in Traverse City on October 27, 1955.

The Conference, featuring workshop sessions on the organizing and functioning of a Community Health Council, brought in qualified resource persons from all areas of the state. From the interest displayed in the area, it is logical that many new community groups may be stimulated and new Community Health Councils formed.

M.D. Placement Project Enjoys Good Year

Constant expansion of the Michigan Health Council M.D. Placement Program has produced gratifying results. To date, the service has been involved in 151 placements throughout the state, the majority of these being in the smaller communities of Michigan.

The service has registered more than 1200 doctors of medicine to date, and 481 are listed with the project at this time.

During the past few months, a system was devised to place the service in contact with every Michigan man now enrolled in medical school in any other state. These men will be contacted regularly and urged to consider Michigan opportunities when they have completed their training.

A system has been devised to contact all graduates of Michigan medical schools during their intern year, offering them placement information on Michigan opportunities.

The project, guided by the Committee on Rural Medical Service of MSMS, has produced unusual results during the past two years.

Through the joint financial assistance of MSMS and The Upjohn Company of Kalamazoo, its future progress will be expanded even further.

Working with a limited number of staff people, Michigan Health Council has been able to develop an enviable program in heath activities, only through the co-operation of Michigan doctors. Working closely with the program on both the local and the state level, Michigan's men of medicine provide the necessary ingredients to assure even greater progress in the future. By "concerning ourselves with but today," we shall constantly aim toward that objective.

M.H.C. TELEVISION

★ **"Court of Health"**

WJBK-TV—Detroit (Sundays)

Weekly shows produced to date	159
Number M.D.s who have appeared	129
Number different health subjects	57

★ **"Report in Health"**

WKAR-TV—E. Lansing (Thursday evening)

Weekly shows produced to date	10
Number of M.D.s who have appeared	5
Number different health subjects	10

★ **Kinescope**

During the coming months, a series of six 15-minute kinescope films will be produced on the "REPORT IN HEALTH" series.

★ All production details are handled at M.H.C. offices and all expenses are borne by M.H.C. general fund.

M.D. PLACEMENT

The M.D. Placement activities have been expanded constantly during the past year. This progress is made possible through the joint financial sponsorship of Michigan State Medical Society and The Upjohn Company, of Kalamazoo, Michigan.

The service registered more than 1200 M.D.s to date and 481 now are on record with us for future placement when their training is completed.

Other figures, showing steady growth, are as follows:

Number openings registered to date	285
Number openings now registered	134
M.D.'s placed to date:	
Direct placements	64
Indirect placements	87
Total placements	151

Postgraduate Continuation Courses

Wayne University College of Medicine

December 5, 1955—March 10, 1956

These courses are open to all qualified persons.

Veterans receiving benefits under the G.I. Bill should contact Dr. Arthur Johnson, Veterans Administrator at Wayne University, 666 Student Center Building, 5050 Cass, Detroit, Michigan.

Registration for these courses should be made in the office of Postgraduate Medical Education at the College of Medicine, 1401 Rivard, Detroit, Michigan, **before December 2, 1955.**

Title of Course	Place	Time	Fee
	MICROBIOLOGY		
Seminar	College of Medicine	Thur. 3-4	$15.00
	PHYSIOLOGICAL CHEMISTRY		
Comparative Physiological Chemistry	College of Medicine	Tues. 1:30-2:30	$15.00
Intermediary Metabolism	College of Medicine	Tues. 3-4	$15.00
Physical Biochemistry	College of Medicine	Mon. 9-10, Thur. 2-5	$30.00
Seminar	College of Medicine	Wed. 2:30-3:30	$15.00
	PHYSIOLOGY AND PHARMACOLOGY		
General Endocrinology	College of Medicine	Mon. 3-5, Thur. 3-4	$30.00
Blood (Two Quarters)	College of Medicine	Wed. 3-5	$30.00
Seminar	College of Medicine	Tues. 4-5	$15.00
	PATHOLOGY		
Path. of Parasitic Diseases (Minimum of six)	College of Medicine	Tues. 2:30-4:30	$50.00
Advanced Hematology (Limit 5)	College of Medicine	Mon. 1-5	$50.00
	DERMATOLOGY		
Seminar in Dermatology	Receiving Hospital	Wed. 10-12	$15.00
Dermopathology Seminar	Receiving Hospital	Wed. 1-2	$15.00
	INTERNAL MEDICINE		
Medical Conference	Receiving Hospital 243 Farwell Annex	Wed. 5-6	$15.00
Gastroenterological Clinic	Receiving Hospital 243 Farwell Annex	Sat. 8-9 a.m.	$15.00
Medical X-Ray Conference	Receiving Hospital 243 Farwell Annex	1st, 2nd, 3rd, 5th Tues. 11-12	$15.00
Medical Pathologic Conference	Receiving Hospital 243 Farwell Annex	Wed. 11-12	$15.00
	ONCOLOGY		
Cancer Detection	Yates Clinic	Wed. 3-5	$25.00
	PSYCHIATRY		
Psychosomatic Conference	201 Farwell Annex Receiving Hospital	Tues. 11-12	$15.00
Psychoanalytic Psychiatry	201 Farwell Annex Receiving Hospital	Mon. 11-12	$15.00
	SURGERY		
Seminar	645 Mullett. 4th Fl.	Mon. 4-5	$15.00

Success Crowns Ninetieth Annual Session

When the Ninetieth Annual Session of the Michigan State Medical Society closed on September 30, it was immediately tabbed by many of the 3,585 registrants as the most successful MSMS meeting ever held in Grand Rapids. Two weeks later, after time to reflect upon the values gained at the 1955 session, they held the same opinion, and there were few who would argue the point.

Although attendance was 211 greater than the record-breaking (for Grand Rapids) 1953 Annual Session, "bigness" was not the standard used to measure success. The session was well-planned and well-balanced, and the scientific program brought more compliments from MSMS members than any in recent years, particularly for its practical applications in the daily work of the M.D.

MSMS is accustomed to widespread co-operation from its members and from the members of the host county society—in this instance the Kent County Medical Society—in planning and operating its two major scientific meetings each year, but seldom, if ever before, had so many members taken a direct interest and participated so actively as they did at the 1955 Annual Session. That was the consensus among MSMS officers and others who have watched annual sessions grow through the years.

Heading the committee responsible for general arrangements for the Ninetieth Annual Session were Co-Chairman C. Allen Payne, M.D., and Felix S. Alfenito, M.D., both of Grand Rapids.

MSMS activities and the medical advances which were unfolded before the three-day scientific session were headline news throughout Michigan all during the week, as were the activities of the seventeen related groups which sponsored various concurrent events. Press, radio, and television representatives gave full coverage, and once again MSMS speakers appeared before a number of Grand Rapids service clubs. A new feature for 1955 was a daily broadcast direct from the mezzanine of the Pantlind Hotel, featuring interviews and Annual Session highlights as the closing five minutes of a popular dinner-hour news program on WOOD.

Adding to emphasis on medical affairs during the session was a special exhibit at Grand Rapids Public Museum, sponsored by the Kent County Medical Society, illustrating the great progress in Medicine during the ninety years of MSMS' existence.

Honors as "Michigan's Foremost Family Physician" for the year went to Walter H. Winchester, M.D., of Flint. Several other special awards were announced or presented, in recognition of outstanding service to Health and Medicine. (See "PR Report" in this issue, and pictorial record accompanying this article.)

Successful as it may have been, however, the Ninetieth Annual Session is now a part of MSMS history, and those who plan such events already are deeply involved with the future. The foundation was laid long ago for a "greater" Michigan Clinical Institute next March 7-8-9, and most of the preliminaries are well under way for the Ninety-first Annual Session next September 26-27-28. Both meetings will be held in Detroit.

NEW ATTENDANCE RECORD (FOR GRAND RAPIDS)

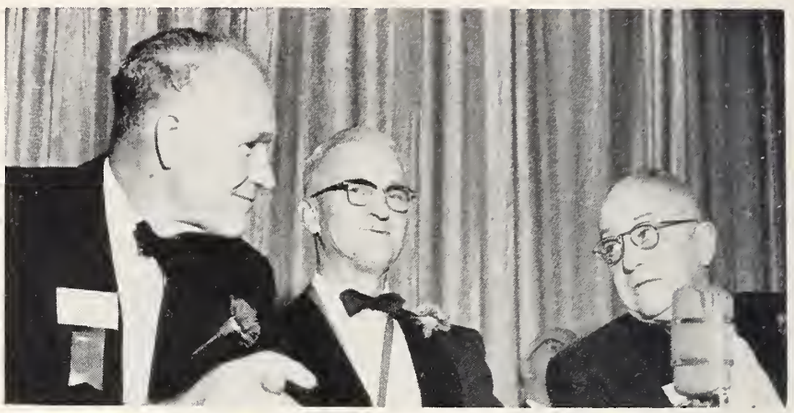
Breakdown of the registration at the 1955 Annual Session, which topped the previous record of 3,266 in Grand Rapids in 1953, follows:

Doctors of Medicine	1,671
Guests	559
Exhibitors	597
	2,827
Woman's Auxiliary members	366
Medical Assistants members	392
Grand Total	3,585

Officers' Night Honors



WILLIAM S. JONES, M.D., officially became MSMS President when his badge of office was tendered by Retiring President Robert H. Baker, M.D., Pontiac, before the crowd at the traditional Officers' Night program.



ARCH WALLS, M.D. (left), Detroit, made his first official appearance as MSMS President-Elect on the platform at Officers' Night. He was seated with President Jones and MSMS Secretary L. Fernald Foster, M.D., Bay City (right).



PRESIDENT JONES' first official act was to honor a former fellow-townsman, Jean Worth, Editor of the *Escanaba Press,* with an MSMS scroll commending him for his "distinguished contribution to public understanding of Medicine and Health."



ONE OF President Baker's final duties was to present a handsome silver wall plaque to Wilfrid Haughey, M.D., Battle Creek, veteran Editor of THE JOURNAL MSMS, as a token of appreciation for many years of service.



JAMES GERITY, JR., Adrian, was honored for his distinguished service in public education in medical advances through the medium of television. He is President of WNEM-TV, Bay City, as well as radio stations WABJ, Adrian, and WPON, Pontiac. Mr. Gerity also heads an Adrian manufacturing firm.

OFFICERS' NIGHT traditionally is climaxed by the presentation of the Biddle Lecture, principal non-medical address of each Annual Session. Charles L. Anspach, President of Central Michigan College of Education, Mount Pleasant, presented the 1955 Biddle Lecture, an inspirational speech spiced with generous amounts of humor.



Ninetieth Annual Session - MSMS

THE BASIC FOUNDATION for any MSMS Annual Session is typified in these views at Grand Rapids. Below is the crowded lecture hall, where lecturers and clinicians shared their knowledge with every MSMS member. Below that is the busy exhibition hall where 133 technical and scientific exhibits provided MSMS members another means for firsthand information about what's new for the M.D.





ABOVE is a scene at the platform during a House of Delegates recess as delegates check upcoming details with Speaker Jackson E. Livesay, M.D. (standing left), Miss Helen Schulte, MSMS Executive Assistant, and Secretary L. Fernald Foster, M.D. (seated, left center).

NERVE CENTER for the corps of newspaper, radio, and television reporters covering the 90th Annual Session was the bustling Press Room. Pictured are science writers from the three Detroit dailies, a speaker's "ubiquitous host," a former MSMS President, and members of the Press Committee and Public Relations Staff. In the center is Paul W. Kniskern, M.D., Grand Rapids, Scientific Press Chairman.





AWARD-WINNING reporter Jean Pearson (right) spent the full week in Grand Rapids digging out the latest news in medical progress from the mass of information presented at the Annual Session. Mrs. Pearson, with her newspaper, the *Detroit Free Press*, will share the MSMS Award for Excellence in Medical Reporting to be presented at the 1956 Michigan Clinical Institute. She is pictured interviewing Harold W. Jacox, M.D.



WALTER H. WINCHESTER, M.D., eighty-year-old Flint physician chosen by the House of Delegates as "Michigan's Foremost Family Physician of 1955," endeared himself to convention-goers with his wit, philosophy, and enthusiasm. He was congratulated warmly (above) by his daughter, Clarice, of Flint, and was honored at a dinner by his Genesee County colleagues, where he chatted (at right) with Jackson E. Livesay, M.D. (left), Speaker of the MSMS House of Delegates, and Harold H. Hiscock, M.D. (center), MSMS Councilor, both of Flint.



Ninetieth Annual Session - MSMS



THE UPPER PENINSULA was especially proud of the induction of William S. Jones, M.D. (center), Menominee, as MSMS President. MSMS Councilors from Upper Michigan, T. P. Wickliffe, M.D. (left), Calumet, and B. T. Montgomery, M.D. (right), Sault Ste. Marie, spearheaded plans for a special reception and dinner honoring Dr. Jones.

THE ANNUAL BEAUMONT LECTURE was presented by Garnet W. Ault, M.D. (left), Washington, D. C. proctologist. He received the traditional scroll from Otto O. Beck, M.D., Birmingham, Chairman, MSMS Beaumont Memorial Committee.



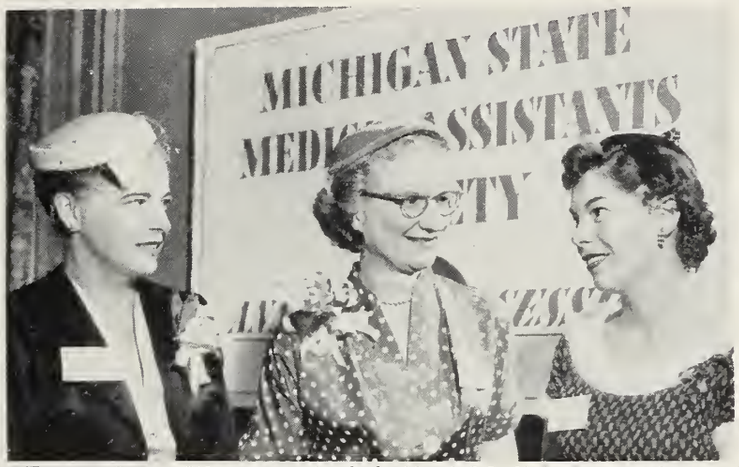


MEDICAL EDUCATION in Michigan, its current status and future aims, was ably outlined before the House of Delegates in an informative panel discussion. Chatting at the rostrum are the deans of Michigan's two medical schools, who were the featured speakers, Gordon H. Scott, Ph.D., Wayne University, and A. C. Furstenberg, M.D., University of Michigan.



900 YEARS of medical service to the people of Michigan were represented among the eighteen MSMS members inducted into the "50-Year Club" in Officers' Night ceremonies. Eleven were present to accept the honor. (See page 1382 for list of names.)

Ninetieth Annual Session - MSMS



FRONT LINE WORKERS in behalf of Medicine—members of the Michigan State Medical Assistants Society—held their Annual Session concurrently with MSMS. Three leaders posed at luncheon, left to right: Mrs. Charlotte Ash, Kalamazoo, Immediate Past President; Miss Hallie Cummins, Caro, President, and Miss Doris Jarrad, Lansing, President-Elect. Almost 60 per cent of the 700 members turned out for the two-day MSMAS meeting.



LOOKING TO THE FUTURE, nearly 400 members of the Woman's Auxiliary to MSMS conducted one of their busiest annual meetings during the three-day 90th Annual Session. Seated at the banquet table are Mrs. Delbert M. MacGregor, Flint, 1955-56 President; Mrs. Mason G. Lawson, Little Rock, Ark., President of the AMA Woman's Auxiliary, and Mrs. F. Milford, Ypsilanti, Immediate Past President. Standing: Mrs. A. C. Stander, Saginaw, President-Elect, and Mrs. C. Allen Payne, Grand Rapids, First Vice President.

THE COUNCIL OF MSMS played host to guests of honor at a formal dinner preceding Officers Night ceremonies. At the head table, left to right, were: James Gerity, Jr., Adrian; Charles L. Anspach, Ph.D., Mount Pleasant, Biddle Lecturer; Robert H. Baker, M.D., Retiring President; Chairman William Bromme, M.D.; William S. Jones, M.D., now President, and Jean Worth, Escanaba. In right foreground is Earl I. Carr, M.D., Lansing, President of the Michigan Foundation for Medical and Health Education.





SILVER ANNIVERSARY of the founding, in Michigan, of the Medical Exhibitors Association, was observed at this year's Gridiron Dinner. S. A. Montgomery (left), Fremont, accepted a sterling silver plaque from President Jones, a token of appreciation for twenty-five years of service by MEA and its members to the medical profession in Michigan.



PRESIDENTS AND SECRETARIES of two organizations which have been friends for twenty-five years were photographed together before the Silver Anniversary Gridiron Dinner honoring the Medical Exhibitors Association. Seated are: MSMS President William S. Jones, M.D., and MEA President S. A. Montgomery, of Gerber Products, Fremont. Standing are: MEA Secretary R. T., Osterlund, Johnson & Johnson, New Brunswick, N. J.; Mrs. Helen L. Breining, Philadelphia, Penn., MEA Assistant Secretary, and MSMS Secretary L. Fernald Foster, M.D., Bay City.

MSMS NINETIETH ANNUAL SESSION—GRAND RAPIDS
SCHEDULE OF PUBLIC PRESENTATIONS

SERVICE CLUBS

Date and Club	Speaker	Subject
Monday, September 26		
Grandville Rotary Club	Harry B. Zemmer, M.D.	"Newer Advances in Medicine and their Economic Value to the Patient"
Lee Rotary Club	G. B. Saltonstall, M.D.	"Salk Vaccine"
Tuesday, September 27		
Kiwanis Club of Grand Rapids—North Second Congregational Church	Gordon H. Scott, Ph.D.	"More Doctors for Michigan"
Grand Rapids Lions Club	William Bromme, M.D.	"The Tumult and the Shouting Dies" (polio vaccine)
Wyoming Park Rotary Club	D. Bruce Wiley, M.D.	"Keeping Up with Medical Progress"
Southkent Kiwanis Club	George W. Slagle, M.D.	"Health is Your Business"
Wednesday, September 28		
Kiwanis Club of Grand Rapids—South	W. M. LeFevre, M.D.	"Do *You* Have Diabetes?"
Kiwanis Club of Grand Rapids—West	Robert H. Baker, M.D.	"What Became of the General Practitioner?"
Optimist Club of Grand Rapids	H. Marvin Pollard, M.D.	"The Problem of Medical Research"

RADIO STATIONS

Date & Station	Participants	Program
Saturday, September 24		
WOOD-TV	Ruth Herrick, M.D.	"This Amazing World" (Grand Rapids Public Museum)
Sunday, September 25		
WOOD-TV	R. H. Baker, M.D.; L. F. Foster, M.D.; W. S. Jones, M.D.; C. A. Payne, M.D.; W. C. Beets, M.D.; S. L. Moleski, M.D.; H. G. Benjamin, M.D.	"Health of Our City" (Grand Rapids Health Department)
WGRD	Paul W. Kniskern, M.D.	News interview
Monday, September 26		
WJEF	L. Paul Ralph, M.D.	Interview—Margaret Curley
WOOD	H. W. Brenneman & W. H. Winchester, M.D.	News roundup—Pantlind Lobby
Tuesday, September 27		
WJEF	Frederick S. Gillett, M.D.	Interview—Margaret Curley
WLAV	Isla G. DePree, M.D.	Interview—Edith Klaeser
WOOD	H. W. Brenneman & W. S. Jones, M.D.	News roundup—Pantlind Lobby
WFDF, Flint	W. H. Winchester, M.D.	Interview (tape recorded in Grand Rapids)
Wednesday, September 28		
WOOD	H. W. Brenneman & Arch Walls, M.D.	News roundup—Pantlind Lobby
Thursday, September 29		
WJEF	C. A. Payne, M.D., & F. S. Alfenito, M.D.	"Know Your City"
WOOD	H. W. Brenneman & L. F. Foster, M.D.	News roundup—Pantlind Lobby
Friday, September 30		
WOOD	H. W. Brenneman & M.D.s selected at random	News roundup—Pantlind Lobby

What They Said About the 1955 MSMS Annual Session

Governor G. Mennen Williams, Michigan (guest speaker): "It was a real pleasure to have the opportunity to be with you at the 90th Annual Session of the Michigan State Medical Society. I enjoyed very much being present for the morning session, and I trust your meeting was most successful and enjoyable. With every good wish."

Charles L. Anspach, Ph.D., Mt. Pleasant (Biddle Lecturer): "I want you to know how much I appreciate the many courtesies shown me by the Society at the Grand Rapids conference. It was a great experience for me. Thanks for the honor which is mine."

Robert R. Kierland, M.D., Rochester, Minnesota (guest speaker): "It was a grand experience for me to be with your group and may I also put in a good word for Dr. and Mrs. Kornelius Van Goor (our ubiquitous hosts). They were most cordial and did everything possible to make our stay pleasant. May I offer, through you, thanks to your Society for all the kind things done for us. The basket of fruit and the corsage for Mrs. Kierland were just a few of the many nice things. I only hope that what I had to offer proved worthy."

Franklin H. Top, M.D., Iowa City, Iowa (guest speaker): "The courtesy extended Mrs. Top and myself at the meeting was remarkable and sets a high standard for other organizations to meet or follow. We appreciated your thoughtfulness and the basket of fruit very much and thank you also for the corsage Mrs. Top received. Coming back to Michigan is indeed a pleasant experience."

Garnet W. Ault, M.D., Washington, D. C. (guest speaker): "Please convey my thanks and sincere appreciation to the officers of the Michigan State Medical Society and of the Section on Gastroenterology and Proctology for their generous hospitality at the 90th Annual Session.

"It was a distinct honor and pleasure to be asked to give the Beaumont Lecture before the Assembly and to present a paper to the meeting of the Section.

"You have a most active State Society, and it was an educational privilege for me to listen to the other speakers. A renewal of old friendships with former classmates and colleagues made my stay unusually enjoyable. With best wishes for continued success in a job you have done so well."

R. Russell Best, M.D., Omaha, Nebraska (guest speaker): "It is my impression that you have one of the best organized state medical annual sessions that I have had the privilege of attending. Not only did you have a good attendance but everything seemed to run so smoothly. Also I learned a few things which I am going to transmit to our own state society. Please extend my thanks to Mr. Burns who was so kind to me.

"Again many thanks to you, and kindest regards."

Arthur M. Master, M.D., New York, New York (guest speaker): "I cannot begin to thank the officials and the members of your Society, particularly Dr. Gordon Balyeat, for the sincere hospitality shown me and the kind consideration I received during my visit to Michigan. To cap it all, the basket of fruit was most attractive. I had very comfortable rooms. Gordon Balyeat was with me from the moment I arrived, late Thursday night, until the time I left for New York. It was extremely wonderful to have such a fine internist, a fine doctor, and shipmate of World War II as my host.

"Thank you and your Society for a most enjoyable and memorable stay."

Harold Jacox, M.D., New York, New York (guest speaker): "Your organization is tremendous in arranging all the details for your guest speakers at the annual meeting. My ubiquitous host was Dr. D. P. Moore of Grand Rapids and he was perfect.

"I had a marvelous time meeting friends and classmates I had not seen for more than twenty-five years. Mr. Corson of the Pantlind Hotel made my stay there most comfortable. Please thank Dr. Baker for including me in his program and with much appreciation to you."

Richard L. Sutton, Jr., M.D., Kansas City, Missouri (guest speaker): "I wish you to know how very much I appreciate the courtesy extended to me, and the minute attention to details that I observed, when I had the pleasure of being your guest on September 30.

"Everything ran like clockwork. The men with whom I was closely associated were most amiable and considerate. Dr. Bill Kruse is indeed a fine host. I feel that I can now count him among my close personal friends."

F. Lee Stone, M.D., Chicago (President-Elect, Illinois State Medical Society): "When I received your letter of invitation to the Annual Session of the Michigan State Medical Society in Grand Rapids this year, I did not expect the enthusiastic reception that I received, not only from Ralph Shook and Wilfrid Haughey, but your entire official family. It was a revelation to me to meet so many of your group of officers, councillors, and House of Delegates. I can only say that I had a wonderful time with a wonderful group of fine men."

S. A. Cosgrove, M.D., Jersey City, N. J. (guest speaker): "Permit me to say how greatly I enjoyed my visit to your organization at its Annual Session in Grand Rapids and my deep appreciation of the courtesy of your officers and members, very particularly of the fine care which Dr. Jarvis took of me during the entire period of my visit with you in Michigan."

Willard R. Cooke, M.D., Galveston, Texas (guest speaker): "Let me express my appreciation of the invitation to address your Society and of the many kindnesses shown me while in Grand Rapids."

Ralph Colp, M.D., New York City (guest speaker): "May I thank you for the kind hospitality extended me

while in Grand Rapids. I had a most delightful time and shall look back upon it with a great deal of pleasure. My deep appreciation and kindest personal regards."

A. Carlton Ernstene, M.D., Cleveland, Ohio (guest speaker): "I enjoyed my visit to Grand Rapids very much, and appreciated the opportunity to speak before the Michigan State Medical Society."

Stanley O. Hoerr, M.D., Cleveland, Ohio (guest speaker): "I wish to say again that it was a most enjoyable meeting."

Maurice Levine, M.D., Cincinnati, Ohio (guest speaker): "I enjoyed coming and I am very appreciative indeed of the excellent way in which my trip was handled by your Society."

L. S. McGoogan, M.D., Omaha, Nebraska (guest speaker): "I would like to thank the Michigan State Medical Society through you for their invitation to speak at the recent meeting in Grand Rapids and for their marvelous hospitality and kindness during the meeting. It was indeed a pleasure to come to Grand Rapids and to talk before your group, and I sincerely hope that sometime I may be able to return."

Ovid O. Meyer, M.D., Madison, Wisconsin (guest speaker): "I had a very fine time at the meeting, and I have never had a better sponsor than Dr. Ralph Fitts. His courtesy and kindness were unsurpassed. I appreciate very much having been invited to take part in the very fine meeting."

Waldo E. Nelson, M.D., Philadelphia, Pa. (guest speaker): "To the officers of the Society, I would like to express my appreciation for being honored twice within a comparatively short time in being asked to speak before your Society. I am, of course, particularly indebted to Dr. J. E. Webber who did so much to make my stay in Grand Rapids extremely comfortable and pleasant."

R. H. Lyons, M.D., Syracuse, N. Y. (guest speaker): "I want to tell you how much I enjoyed returning to meet all of my old friends in Michigan. It made a very pleasant reunion for me, and I am delighted that the meeting was considered a success. I am sure I played a very small rôle in it, but it was nice of you to include me."

R. V. Platou, M.D., New Orleans, La. (guest speaker): "Commendations are due all the officers of the Michigan State Medical Society for the excellent conduct of your Annual Session just completed. I am particularly grateful to my ubiquitous host, Dr. Hill of Grand Rapids, who tended to every need."

James B. Costen, M.D., St. Louis, Missouri (guest speaker): "Dr. Flynn and all concerned with your meeting made my visit extremely pleasant, and I enjoyed every part of it. Thanks for a nice visit to Michigan and to your Society."

R. W. TeLinde, M.D., Baltimore, Maryland (guest speaker): "This is to say thank you to my ubiquitous host, James R. Beaton, M.D., of Grand Rapids, who was most attentive during my day in Grand Rapids. I enjoyed meeting the men, particularly those in Obstetrics and Gynecology, at the luncheon at the Peninsula Club."

J. William Boren, Jr., M.D., Marinette, Wisconsin (guest): "I want to take this opportunity to thank you very much for the wonderful time you showed us at Grand Rapids and also to congratulate you on a wonderfully well run convention. I certainly appreciated being included in the meeting."

Richard T. Smith, M.D., Philadelphia (Scientific Exhibitor): "I can never tell you how much pleasure I had out of being in Grand Rapids with you folks. You people are the most wonderful hosts anywhere. The meeting, in my opinion, was a huge success. I enjoyed meeting many of our old friends, and having the opportunity to be with them.

"Thank you for your very generous hospitality. I would be most happy to return to Michigan at any time that I could be of any service on a program and as an exhibitor."

James Milton Robb, M.D., Detroit (MSMS Past President): "I do not believe that any state medical society can compare with ours, and the spirit of cheer and good works is outstanding. This spirit, I might add, is the result of the efforts of you both. You give so much of yourselves. This comes back to the profession in good will and solid support."

John M. Sheldon, M.D., Ann Arbor, Director, University of Michigan Department of Postgraduate Medicine: "I think the meeting was better than ever this year. I am sure this was due to your untiring efforts."

James Gerity, Jr., Adrian, President, Gerity-Michigan Corporation (honored guest): "Thank you very much for the honor bestowed on me at the Officers Night program last Wednesday. It is most reassuring to me and to my associates that the efforts we have made in this field have been appreciated, and you may be certain that we will continue to use all our facilities of radio and television to continue our policies in these matters. We hope to initiate some longer programs in the near future and will surely keep you all advised of our plans."

H. Leon Snow, Lansing, Executive Secretary, Michigan State Dental Association (guest): "It was possible for me to attend only on Wednesday of your Annual Session and I enjoyed attending very much. You certainly have an excellent and an outstanding meeting, of which I know you are proud."

J. D. Jorgensen, Lansing, Executive Secretary, Michigan Funeral Directors Association, Inc. (guest): "I certainly want to express my appreciation for the invitation to attend your convention at Grand Rapids. As a relatively new man in the trade association field, I did want to see your convention as I have heard so many good things about it. Needless to say, it was everything I had heard and more."

Robert J. Lyon, Chicago, Assistant Business and Advertising Manager, American Medical Association (guest): "I just want to tell you how much I enjoyed visiting the MSMS meeting. It was splendidly organized and I'm sure you have grounds for much personal satisfaction in all of the nice things the exhibitors were saying. I enjoyed the meeting very much and our hats are off to you and your Council for the very fine program that was worked out."

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A. Paul Burton, Philadelphia, Past President, Medical Exhibitors Association: "Congratulations to you is such old stuff that the words haven't much zip left. In spite of that, I want you to know what a tremendous job you did at putting on the annual party. Believe me, it will live long in the memory of everyone who was there."

M. Joe Hardwick, Bristol, Tennessee, Convention Manager, The S. E. Massengill Company: "Letters have literally been pouring into my office complimenting the Michigan State Medical Society meeting. I write this because the letters which usually follow conventions are not of the complimentary variety. They are usually loaded with complaints and trite comments as to how it could have been better. This happens in spite of the fact that much the same procedure is followed by this office. We never have trouble with the conventions you manage. Each one seems to be 'The Best Yet.' Here is to many more of them.

"Many thanks for your many considerations."

Ed W. Roehm, Indianapolis, Past President, Medical Exhibitors Association: "It is most difficult for me to write a letter of thanks that can possibly adequately cover the magnificence of your State Medical Society's party for MEA.

"I have never attended anything to compare with it. Not only for generosity but for genuine hospitality as well. You certainly did everything to honor your guests and make them fell at home, and you may be sure it will always be one of the highlights of my life. Everything was most enjoyable.

"I doubt if you know I was born and raised in Detroit and did not leave Michigan until 1927. Your party made me proud of my home state and the Michigan State Medical Society."

W. M. Monday, Nutley, New Jersey, Director, Medical Exhibitors Association: "It was stupendous, terrific, colossal! I could add another dozen or two adjectives to try and describe your meeting last week. They still wouldn't adequately convey to you how I feel about this affair. I was truly amazed, and I feel sure that practically everyone who was present feels the same way.

"Please accept my congratulations for holding such a successful affair. I know that these things take a lot of planning, work, and co-operation; and it was evident that all of these important things had been done to make the 25th Anniversary of MEA a wonderful affair.

"I also want to congratulate you for the State Medical Society meeting. As you know, it was the first meeting of MSMS which I have attended, and in all sincerity, I can say it was the best state meeting that I have ever attended. It is clearly evident why the MSMS convention is so well thought of and discussed by exhibitors and physicians alike. Again, please accept my thanks for a delightful visit in Grand Rapids with you and friends of MSMS."

S. Lee Hileman, M.D., Secretary, Wayne University Alumni Association, Detroit: "The Executive Committee of the Alumni Association of the Wayne University College of Medicine wishes to thank you for the very fine co-operation you gave our organization at the recent meeting of the MSMS in Grand Rapids.

"Everyone knows that is your way of doing things, but we wanted you to know that we 'like it that way.'"

S. A. Montgomery, Fremont, Michigan, Gerber Products Co. (President, Medical Exhibitors Association): "Medical Exhibitors Association was signally honored by the Michigan State Medical Society's observance of its 25th Anniversary. Your presentation of the beautifully inscribed Silver Scroll marked a never-to-be forgotten occasion.

"The MSMS Silver Scroll is now, and always will be, a treasured possession of our Association. It will inspire our future officers and directors to even greater service to the medical and allied professions. It will remind these men that MEA was 'born' in Michigan and grew in stature through the unstinted encouragement of your Medical Society.

"We medical exhibitors shall look forward to the next twenty-five years of close association with Michigan State Medical Society."

R. T. Osterlund, New Brunswick, N. J., Secretary, Medical Exhibitors Association: "I'll always remember Thursday night's affair. Obviously, its results were due to much thought and planning. Even when spontaneous however, everything appeared to go smoothly.

"I hope you'll remember the spontaneous part. It clearly showed the high regard that exhibitors have for the Michigan State Medical Society and Bill Burns.

"Thanks for a wonderful experience. As always, your touch made it most enjoyable, more friendly and truly sincere."

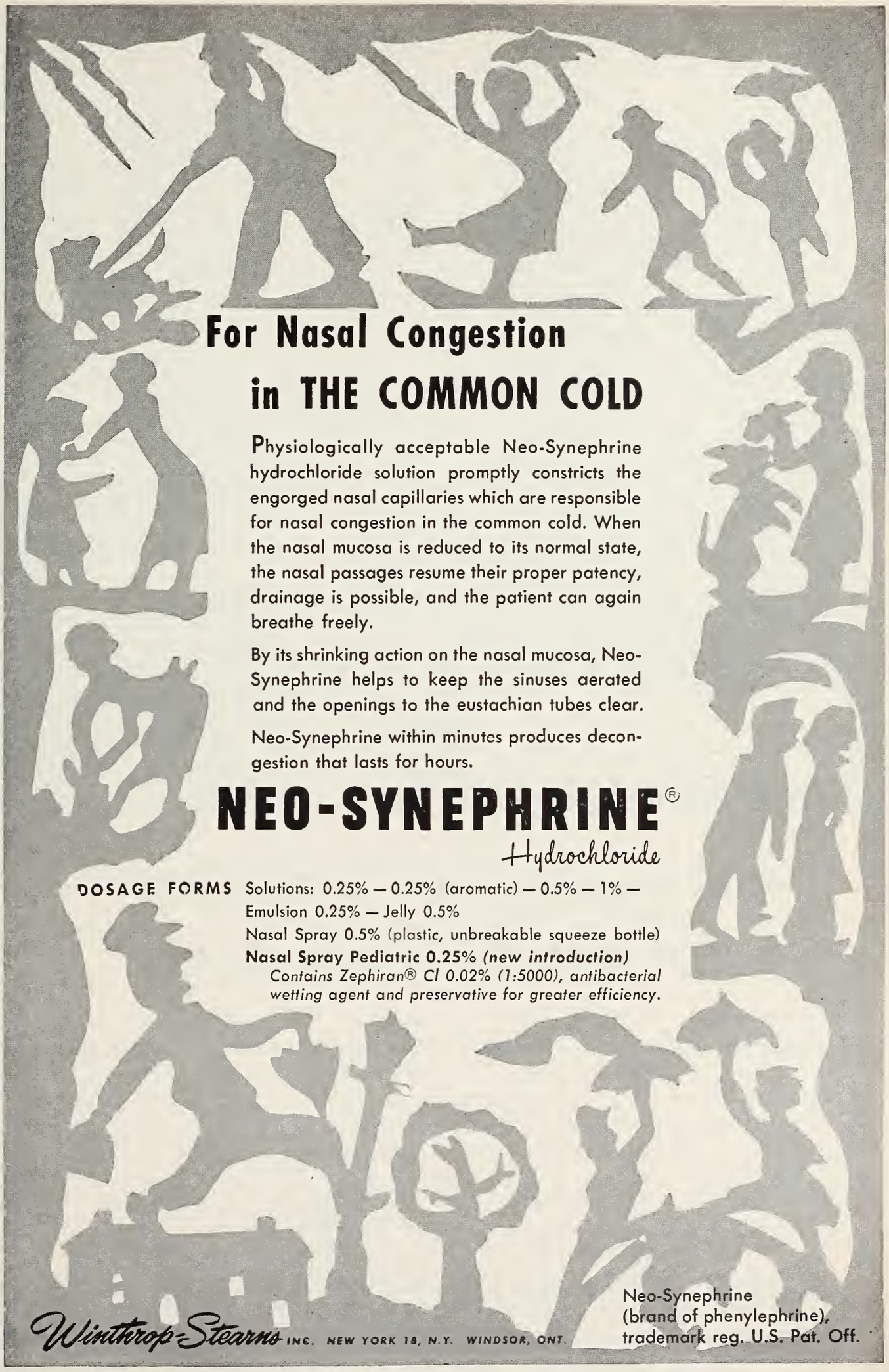
Frank M. Rhatigan, Chicago, Secretary, American Surgical Trade Association (Past President, Medical Exhibitors Association): "It was mighty nice again to be a guest at the famous Gridiron Dinner. That, to me, has always been a highlight of the great MSMS Convention—the best among the States."

Fay Burnett, Instant Sanka, White Plains, N. Y. (Member, Board of Directors, Medical Exhibitors Association): "In all my experience, I have never seen a better convention. And those are not idle words. The success of this meeting in large part is due to your untiring and intelligent handling of the exhibitor's part in it. Congratulations on making it run so smoothly, not only from my point of view but from everyone else's who had any contact with you.

"We also recognize that without the co-operation of the physicians you would not be able to carry out your own part. So please convey our appreciation to the members of the Society that work so closely with you.

"To have been present at the convention and experience the hospitality of you and your associates was a dream come true, for I have so long wanted to come to one of your meetings. Again, my deep appreciation for everything that you and the members of the Society did for making it such a worthwhile meeting from the standpoint of the exhibitors."

Helen Beck, White Plains, New York, Instant Sanka (Exhibitor): "You've evidently scored again. Our Miss Burnett has been stuffing your ballot box like mad since her return from the MSMS Annual Session."



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Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

POLIOMYELITIS VACCINE

As of October 1, all counties in Michigan, except Wayne, and all cities, except Detroit, Dearborn and Bay City, had completed the giving of second injections of poliomyelitis vaccine to children in the first and second grades. Participation in second shots was good, about 90 per cent of those getting the first injections reporting for the second. This concluded the National Foundation part of the program.

Enough vaccine is now in the hands of local health department directors to give first injections to approximately half of the children in the five to nine-year age group who have not received the vaccine. By February 15, all federal funds for purchase of the vaccine must have been committed, and by the end of February all state funds set aside for the same purpose must have been assigned.

For the Record

The polio vaccination program in Michigan began in the summer of 1954 when the state agreed to participate in the field trials of the vaccine. In ten Michigan counties, 52,600 boys and girls received three injections. Half of the children, 26,300, received Salk vaccine and the other half a placebo.

On April 12, 1955 with data from all forty-four participating states analyzed, the Evaluation Center in Ann Arbor announced that the Salk vaccine was found effective, safe and potent.

In the meantime, the National Foundation had contracted with six pharmaceutical houses to purchase enough vaccine for all first and second grade children in the United States, Hawaii and Alaska. Vaccine was to be supplied also for children who had received the placebo in the 1954 field trials and to give booster doses to those who had received the polio vaccine at that time.

By April 18, Michigan had received enough NIH licensed poliomyelitis vaccine to give the first injection to the children in the first and second grades and to those who received the placebo in the ten field trial counties. On May 7, question arose concerning the safety of some of the products of one of the six pharmaceutical houses manufacturing the vaccine, and the Surgeon General recommended temporary halting of the vaccination program.

Since, by May 6, Michigan had completed 325,920 injections of vaccine manufactured by Parke, Davis with no untoward results, it was the decision of the Michigan Department of Health to continue vaccinating children until all the vaccine on hand had been used. It seemed reasonable to assume that if the product being used was safe for nearly a third of a million children, the balance of the same product would be equally safe. As a result of this decision, approximately 30,000 children received their second injections.

From May 7 until late in July, no one knew with certainty when or if enough vaccine would become available to complete the second injections. Finally, in August, enough vaccine was assured, and most of the health jursdictions resumed their programs in spite of the difficulty of rounding up school children who were on vacation.

One Million Cards Will Help Evaluate Vaccination Results

Act 231, Public Acts of 1955 requires that complete data be kept on the status of every vaccinated child in the priority group. These records will provide an opportunity to evaluate the effectiveness of the polio vaccine being used.

The Michigan Department of Health is supplying for the use of local health departments and practicing physicians 3x5 inch printed cards, white for the first injection, pink for the second, and blue for the third. On these cards is space for the residence of the patient by county, name, age, sex, address, site of injection, route, name of manufacturer, lot number and date, and the signature of the physician.

When a physician receives his first allotment of poliomyelitis vaccine, he will be given a supply of cards with the understanding that his vaccine supply will be replenished on the basis of the number of completed and signed cards returned by him to the health department.

The card file will enable state and local health departments to check reported cases of poliomyelitis to determine the vaccine status of the case. The file will also be valuable in determining whether or not booster doses are going to be needed in the future.

BRACHIAL PLEXUS BLOCK ANESTHESIA

(Continued from Page 1331)

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. . . . . NEWS MEDICAL

MICHIGAN AUTHORS

Murray R. Abell, Ann Arbor, is the author of an article entitled "Diseases of the Gallbladder: Their Nature and Classification," published in *Canadian Medical Association Journal,* April 15, 1955.

Levona W. Olmsted and **William H. Beierwaltes,** Ann Arbor, are the authors of an article entitled "Thyroidectomizing Dose of Radioactive Iodine in Humans with Malignant Melanoma" published in *Cancer,* March-April, 1955.

S. W. Hoopler, T. G. Kabza, and **R. W. Corley,** Ann Arbor, are the authors of an article entitled "The Effect of Protoveratrine on the Cardiac Output and on Some Regional Circulations in Man," published in the *Journal of Clinical Investigation,* April, 1955.

William U. McReynolds, M.D., Ann Arbor, is the author of an article entitled "Simplified Tangent Screen Examination Using a Recording Scotometer," published in *Transactions of the American Academy of Ophthalmology and Otolaryngology,* May-June, 1955.

Carl E. Schneider, Detroit, is the author of an article entitled "Human Relations in the Medical Profession," published in *Harper Hospital Bulletin,* July-August, 1955.

George Sewell, M.D. and **Sherwin Lutz, M.D.,** Detroit, are the authors of an article entitled "Perineal Punch Biopsy of the Prostate," published in *Harper Hospital Bulletin,* July-August, 1955.

Perry B. Miller, M.D., Ann Arbor, is the author of an article entitled "Treatment of Rheumatoid Arthritis with Prednisone (Meticorten)—A Preliminary Report," published in *Harper Hospital Bulletin,* July-August, 1955.

Gordon H. Hardie, M.D., and **Daniel C. Hunter, Jr., M.D.,** Ann Arbor, are the authors of an article entitled "Skin Necrosis with the Intravenous Use of Norepinephrine," published in the *University of Michigan Medical Bulletin,* July, 1955.

William M. Cutler, M.D., Ann Arbor, is the author of an article entitled "The Ocular Manifestations of Lethal Midline Granuloma: Two Cases," published in the *University of Michigan Medical Bulletin,* July, 1955.

John P. Fotopoulos, M.D., Ann Arbor, is the author of an article entitled "Intravenous Cholangiography: Preliminary Report" published in the *University of Michigan Medical Bulletin,* July, 1955.

J. R. Gamble, E. W. Dennis, W. W. Coon, P. Hodgson, P. W. Willis III, J. A. MaCris, and **I. F. Duff,** Ann Arbor, are the authors of an article entitled "Clinical Comparison of Vitamin K_1 and Water Soluble Vitamin K," published in AMA *Archives of Internal Medicine,* January, 1955.

Henry D. Kaine, Holbrooke S. Seltzer, and **Jerome W. Conn,** Ann Arbor, are the authors of an article entitled "Mechanism of Diurnal Eosinophil Rhythm in Man" published in the *Journal of Laboratory and Clinical Medicine,* February, 1955.

J. Richard Johnson and **Winthrop N. Davey,** Ann Arbor, are the authors of an article entitled "Cortisone, Corticotropin, and Antimicrobial Therapy in Tuberculosis in Animals and Man: A Review," published in the *American Review of Tuberculosis,* October, 1954.

J. Richard Johnson and **Winthrop N. Davey,** Ann Arbor, are authors of an article entitled "Treatment of a Patient with Lupus Erythematosus and Pulmonary Tuberculosis with ACTH, Streptomycin, and Para-aminosalicylic Acid," published in *Annals of Internal Medicine,* May, 1955.

Robert M. Stewart, M.D., Detroit, is the author of an article entitled "Abdominal Pregnancy—Report of Two Cases," published in *Harper Hospital Bulletin,* July-August, 1955.

W. D. Barrett, M.D., Robert Hamburg, M.D., and **W. S. Reveno, M.D.,** Detroit, are the authors of groups of abstracts of papers presented at the 1955 meeting of the American Goiter Association under the title, "Gleanings—1955 Meeting, American Goiter Association." The papers are to be published in full in the *Journal of Clinical Endocrinology and Metabolism* and in the Transactions of the American Goiter Association.

George L. Waldbott, M.D., Detroit, is the author of an article entitled "Ocular Allergy from the Allergist's Point of View," published in *Transactions of the American Academy of Ophthalmology and Otolaryngology,* July-August, 1955. The article was presented at the Fifty-Ninth Annual Session of the American Academy of Ophthalmology and Otolaryngology, September 19-24, 1954, New York.

Noah E. Aronstam, M.D., Detroit, is the author of an article entitled "The Treatment of Occupational or Erg Dermatoses with Titanium Oxide," published in the *Indiana Journal of Dermatology and Venereology,* Bombay, April-June, 1955.

Robert S. Myers, M.D., Vergil N. Slee, M.D., and **Robert G. Hoffman, Ph.D.,** are the authors of an article entitled "The Medical Audit," published in *The Modern Hospital,* September, 1955.

Arthur L. Drew, M.D., Ann Arbor, is the author of an article entitled "Familial Reading Disability," pre-

(Continued on Page 1372)

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(Continued from Page 1370)

sented at the Ann Arbor meeting of the Neurosurgical Travel Club, June, 1955, and published in the *University of Michigan Medical Bulletin,* August, 1955.

W. S. Harrison, M.D., Ann Arbor, is the author of an article entitled "Familial Spastic Paraplegia: Three Families," published in the *University of Michigan Medical Bulletin,* August, 1955.

C. J. Stringer, M.D., A. L. Stanley, M.D., R. C. Bates, M. D., and John E. Summers, M.D., Lansing, are the authors of an article entitled "Pulmonary Arteriovenous Fistula," published in the *American Journal of Surgery,* May, 1955.

Martin J. Urist, M.D., South Haven, is the author of an article entitled "Eccentric Fixation in Amblyopia Exanopsia," published in the AMA *Archives of Ophthalmology,* September, 1955.

Richard H. Meade, M.D., Grand Rapids, is author of two original articles, one published in the *American Journal of Surgery,* May, 1955, on "Infected Cystic Diseases of the Lung"; and the other in *Surgery,* August, 1955, entitled "Surgery for Mitrostenosis: Some Aspects of Its Evolution."

* * *

The new $650,000 University of Michigan Kresge Medical Library officially opened its doors Thursday, September 29, 1955, a gift to the University by the Kresge Foundation.

Adjoining the Kresge Medical Research Building, the new medical library is considered one of the finest university medical libraries in the country. It provides space for over 150,000 medical volumes.

Dean A. C. Furstenberg called the library "the fulfillment of a long-standing medical school need." Formerly medical books were divided between the General Library and University Hospital. Additional volumes had been stored in the School of Business Administration.

Contemporary in decor the Kresge Medical Library is equipped with modern furnishings of bleached woods. The color motif is light blue and persimmon. The atmosphere is informal with screened desks for privacy and furniture groupings for small discussions.

An unusual feature is the Rare Book Room, adjacent to the main reading room. Specially constructed glass display cases will house some of the Medical School's two thousand rare books.

The Medical School possesses three outstanding collections of rare medical texts, the Crummer, Warthin, and Pilcher collections. These include a first edition Vesalius, first edition Harvey, and the first collected works of Ambroise Paré.

* * *

The National Foundation for Infantile Paralysis has announced grants and appropriations totaling $1,372,513 for professional education in selected fields, to train doctors and associate medical personnel urgently needed for research and total patient care.

These new awards bring to a total of $21,562,456

(Continued on Page 1374)

The organisms commonly involved in

Pyelitis



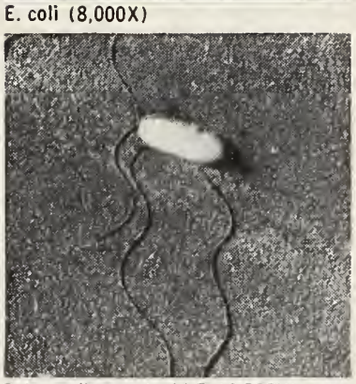
E. coli (8,000X)



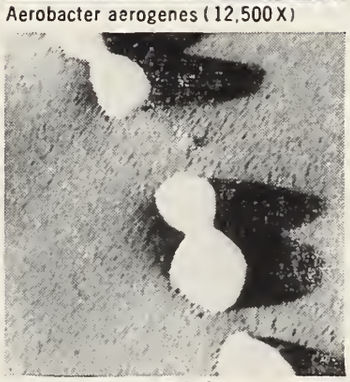
Aerobacter aerogenes (12,500X)



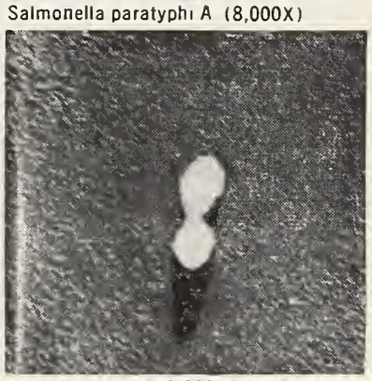
Salmonella paratyphi A (8,000X)



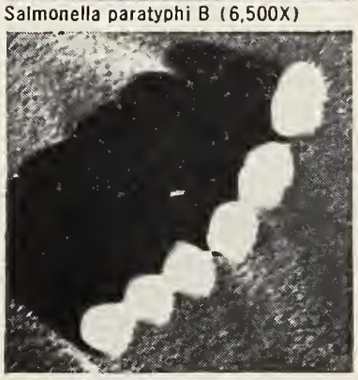
Salmonella paratyphi B (6,500X)



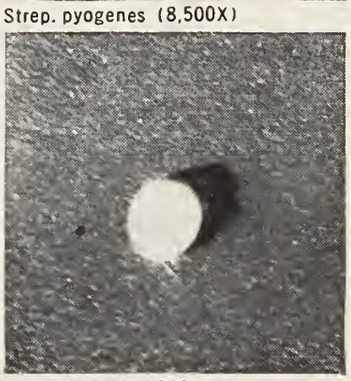
Strep. pyogenes (8,500X)



Strep. faecalis (10,000X)



Strep. viridans (9,000X)



Staph. aureus (9,000X)

Upjohn

ELECTRON MICROGRAPHS

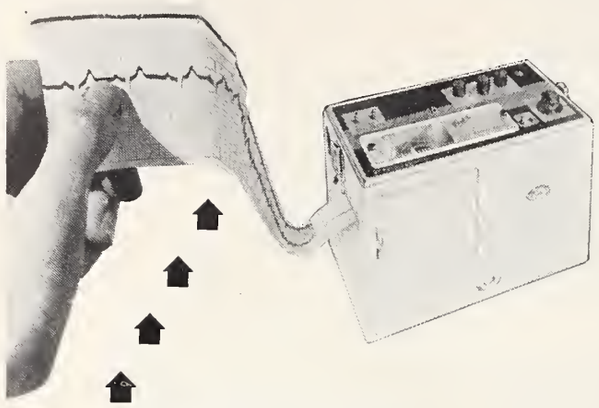
***All* of them are included in the more than 30 organisms susceptible to broad-spectrum**

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Queries and minor notes, J.A.M.A. March 28, 1953, page 1155.

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(Continued from Page 1372)

the March of Dimes funds authorized since 1938 for professional education, the largest ever undertaken by a voluntary agency. In all, 5,334 scholarships and fellowships have been awarded by the National Foundation from 1938 through August 30, 1955.

* * *

The U. S. Public Health Service made a grant of $63,402 to E. Wendell Hewson and John M. Sheldon at the University of Michgian for a study of atmospheric pollution by aeroallergens. This is from a fund voted by Congress earlier this year for research in air pollution problems.

* * *

"The Fractured Rib," by R. L. Rapport, R. B. Allen, M.D., and C. J. Curry, M.D., which was published in the July, 1955, issue of *Archives of Surgery,* is to be reprinted in Modern Medicine and tape-recorded by Audio-Digest.

* * *

Doctor's Guide—Michigan State Medical Society.—No one knows *all* the answers, but physicians should know enough about the operation of Blue Cross and Blue Shield plans to be able to answer the questions their patients ask. To help doctors bone up on the facts about health insurance coverage, a twelve-page booklet (copy in the Exchange) recently was prepared as a co-operative effort by the Michigan Hospital Service, Michigan Medical Service and the Michigan State Medical Society. *"Doctor's Guide to Blue Cross and Blue Shield"* is written in easy-to-follow Q. and A. form; it discusses the doctor's responsibility to health insurance programs, suggests how to handle patients who ask for hospitalization for convenience rather than need and reviews Blue Cross and Blue Shield advertising.—AMA *PR Bulletin,* September, 1955.

* * *

George F. Lull, M.D., secretary-general manager of the AMA, attending the World Medical Association meeting, gave an interesting account of the recent "strike" by Vienna doctors protesting a proposed law extending government medicine. The two-day stoppage, called by the Austrian Medical Association late in August, was given considerable publicity in this country.

The "strike" took place on August 25 and 26 when the physicians decided not to see any patients except in emergencies. Dr. Lull said that in talking with Vienna physicians he learned that the "strike" came about after Parliament decided that it wanted new laws covering social security. The old laws were based on Nazi law.

"Nearly all of the insurance companies are controlled by trade unions," Dr. Lull wrote, "and the president of the Hauptverband, which is the over-all controlling body of the insurance companies, is also a member of Parliament, a leading member of the Socialist party, and the president of the trade unions.

"The proposed changes in the law were mapped out

(Continued on Page 1376)

the drug of choice

. . . as a tranquilizing (ataractic) agent in anxiety and tension states*

. . . in hypertension

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Squibb Whole Root Rauwolfia

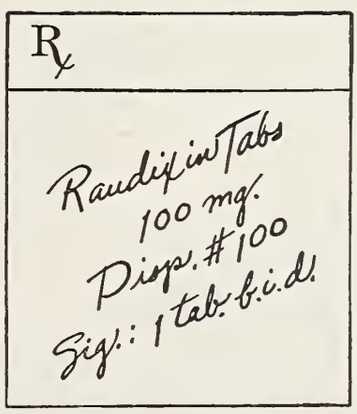
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- Raudixin is not habit-forming; the hazard of overdosage is virtually absent. Tolerance and cumulation have not been reported.
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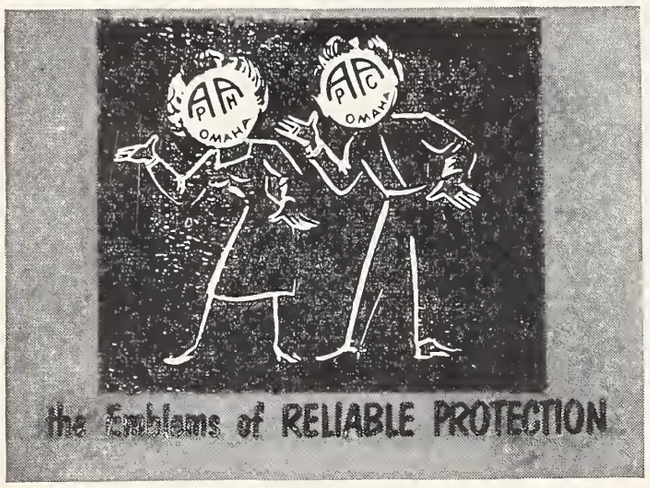


*Ataractic, from ataraxia: calmness untroubled by mental or emotional excitation. (Use of term suggested by Dr. Howard Fabing at a recent meeting of the American Psychiatric Association.)

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PHYSICIANS CASUALTY AND HEALTH ASSOCIATIONS
OMAHA 2, NEBRASKA

(Continued from Page 1374)

by the officials of the Hauptverband. The trouble really started when it was found that nearly all of the favorable paragraphs of the old law were deleted and all of the objectionable paragraphs retained with many more added.

"The first demonstration took place on June 18, when the general assembly of Austrian physicians, numbering 5,000, met in Vienna and marched the streets to the chancellery."

Dr. Lull said no one suffered from actual lack of medical care during the "strike," and the total effect was that public opinion was built up in favor of the physicians.

The general feeling, according to Dr. Lull's letter, is that the physicians will get what they want when the law is finally modified.

The doctors' main objection is that government-proposed law would leave them at the mercy of the state-run health insurance companies. The law, as proposed before the demonstration, would give the companies the right to appoint some doctors and deny patients to others. —AMA Secretary's Letter.

* * *

County and State Medical societies and their auxiliaries are invited to sponsor the 1965 Essay Contest for high school students. The subject chosen is "The Advantages of Private Medical Care."

The AAPS's Freedom Programs, Inc., will award six national prizes: first, $1,000; second, $500; third, $100; fourth, fifth and sixth, $25.00 each.

The contest is open to all students of the 10th, 11th and 12th grades of public and parochial schools. This program is meant to achieve understanding on why the American people enjoy the highest quality of medical care in the world.

Further information regarding the AAPS Contest should be addressed to Dr. Mal Rumph, Chairman, AAPS Essay Contest Committee, Suite 318, 185 North Wabash Avenue, Chicago 1, Illinois.

* * *

Carl M. Peterson, M.D., secretary of the AMA Council on Industrial Health since its organization in 1938, was fatally injured when a private plane in which he was riding crashed and burned on a farm near Asheville, N. C., airport. Dr. Peterson, fifty-five, was taken to Pardee Memorial Hospital at Hendersonville, N. C., where he died on September 27.

Dr. Peterson was a fine administrator, whose important stimulus to better practices in the industrial health field will be missed.

* * *

The Detroit Pediatric Society's calendar includes five additional meetings throughout the society year: *December 8,* a joint meeting with the Detroit Ophthalmological Society at the Harmony Club, Detroit; *January 18,* joint meeting with the Detroit Branch, American Urological Society at Harper Hospital, Detroit; *March 7,* Clinic at Henry Ford Hospital with dinner at Park-Shelton Hotel, Detroit; *May 23,* joint meeting with Chil-

(Continued on Page 1378)

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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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(Continued from Page 1376)

dren's Hospital—Annual Clinic Day, with dinner at Park-Shelton Hotel, Detroit; *June,* meeting at Wayne County Training School, with the wives of members.

* * *

"Our nation of 165,000,000 people is so large that government agencies cannot often deal directly with individuals. In all larger problems, associations have long been invaluable. Especially is this true in their rôle of expressing the attitudes of the average 'small businessman'—often termed 'the foundation stone of American democracy.' "—From American Trade Association Executives Annual Report, 1955 Convention, Mackinac Island, Michigan.

* * *



William S. Reveno, M.D., Detroit, is Chairman of the Program Committee for the 1956 Michigan Clinical Institute, to be held at the Sheraton-Cadillac Hotel, Detroit, March 7-8-9, 1956.

The theme of the 1956 Institute is *"All That's New and Fit to Use."*

* * *

The Detroit Department of Health (Joseph G. Molner, M.D., Commissioner) has received a $20,000 grant from the United States Public Health Service to start a special program of research into air pollution problems. The overall federal program of ten grants totals $295,367.

* * *

Few physicians over sixty-five retire, according to a recent poll conducted by *Medicine in the News,* a monthly publication sponsored by the Schering Corporation of Bloomfield, N. J. As a result of a questionnaire sent to all M.D.'s over sixty-five, *Medicine in the News* found that eight of every ten are still in active practice; one of every two sees more than forty patients in an average week; one of every four treats patients of all ages; one of every two sees chiefly patients between forty and sixty years of age; and one of every four will handle all types of cases; three of every four do not accept surgical cases.

Overall results of the polls showed that while many physicians restrict their activities after sixty-five, general retirement at that age for the majority seems not only undesirable, but impossible.

* * *

"Going Our Way?" is the title of a new color motion picture, produced with a Hollywood cast headed by Marshall Thompson and released October 1 for showings before medical, pharmaceutical and allied professional groups. The thirty-minute film indicates on one hand the story of a new doctor trying to get started in a small town whose inhabitants think he is too young to have

(Continued on Page 1380)

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(Continued from Page 1378)

had enough experience; on the other, it is the large story of medicine and pharmacy and the opportunities for service that exist in the health professions. Financial sponsor of the film is Parke, Davis & Co. A number of the shots were made in the PD factory in Detroit. For bookings, contact John A. MacCartney, Trade Relations Manager, Parke, Davis & Co., Detroit 32, Michigan. In a recent interview, Mr. MacCartney stated: "Running all through the picture is the challenge to young people to consider a career for themselves in medicine or pharmacy."

* * *

The American College of Physicians, Michigan Division, will hold a Michigan regional meeting Saturday, December 3, 1955, in the Sheraton-Cadillac Hotel, Detroit. The scientific program will run from 9:00 a.m. to 4:30 p.m., followed by a reception and banquet at 6:30 p.m.

All members of the medical profession are cordially invited to attend, and a particular invitation is extended to interns and residents.

* * *

AMA Tour to Nassau.—The Jungle Club in Nassau will provide an unusual setting for luncheon and a medical meeting on December 7 for members of the American Medical Association who accept an invitation extended recently by the Bahamas Medical Association.

So that physicians may accept the invitation, an Official Tour to Nassau has been scheduled for the week of December 2-10, immediately following the AMA Clinical Session in Boston.

A certificate of attendance at a medical meeting will be issued to each physician, which may affect partially the fiscal effects of Christmas shopping among the tempting array of British and European imports at bargain prices.

A full calendar of sightseeing, sporting events, and social functions has been arranged for physicians and their wives, assuring tour members of a delightful vacation amidst the colorful surroundings of Nassau.

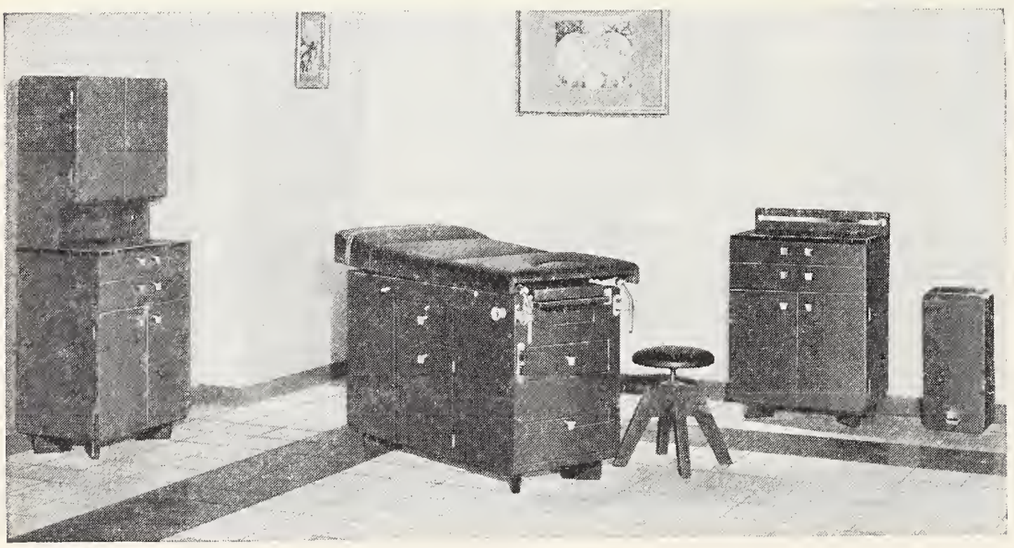
Travel arrangements have been made co-operatively by United Air Lines, British Overseas Airways, Nassau Development Board, and International Travel Service, Inc., of Chicago.

Official tour folders may be secured by writing to AMA Nassau Tour Headquarters at 35 East Monroe Street, Chicago 3, Illinois.

* * *

The corporate name of Winthrop-Stearns, Inc., has been changed to Winthrop Laboratories, Inc., according to an announcement of its president, Theodore G. Klumpp, M.D.

(Continued on Page 1382)



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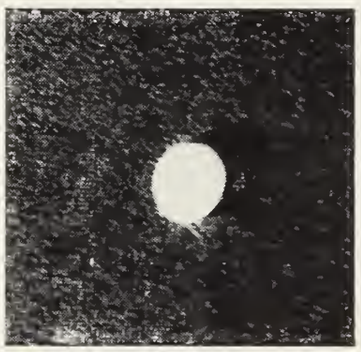
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The organisms commonly involved in

Acute Pharyngitis



Strep. pyogenes (8,500X)



Staph. aureus (9,000X)



D. pneumoniae (10,000X)



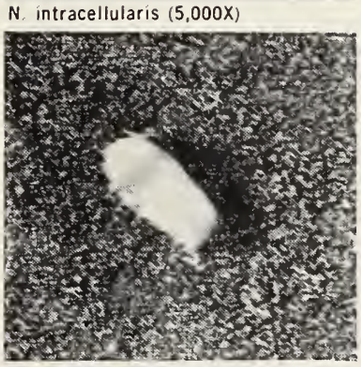
N. intracellularis (5,000X)



H. influenzae (16,000X)



C. diphtheriae (6,000X)



K. pneumoniae (13,000X)

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(Continued from Page 1380)

50-Year Club of 1955—Eighteen MSMS members were inducted into the 50-Year Club in Officers' Night ceremonies at the meeting in Grand Rapids in September. Eleven members who were present to receive the honor are pictured on Page 1358 of this issue, as follows:

(Seated) R. S. Jiroch, M.D., Saginaw; W. J. Smith, M.D., Cadillac; A. H. Miller, M.D., Gladstone; Christopher G. Parnall, M.D., Ann Arbor.

(Standing) R. C. Lyle, M.D., Bridgeport; Cyrus B. Gardner, M.D., Lansing; Alvin H. Seibert, M.D., Grosse Pointe Park; Robert A. C. Wollenberg, M.D., Detroit; Donald H. McRae, M.D., Detroit; Nathaniel Gates, M.D., Detroit, and A. J. Zaremba, M.D., Bay City. Not present were: William E. Barstow, M.D., St. Louis (now deceased), 1949-50 MSMS President; Clark D. Brooks, M.D., Detroit; Benjamin T. Goodfellow, M.D., Flint; Fred J. Hohn, M.D., Saginaw; Henry A. Luce, M.D., Detroit, (now deceased) MSMS 1938-39 President; H. T. Sethney, M.D., Menominee and Leslie L. Willoughby, M.D., Flint.

* * *

"A Report from the Medics" was the title of the morning meeting of October 14 at the 1955 Volunteer Leadership Training Conference of the American Cancer Society, Michigan Division and Southeastern Michigan Division co-operating with the Michigan Cancer Co-ordinating Committee. Harry M. Nelson, M.D., Detroit, presided. Speakers were James E. Lofstrom, M.D., Detroit; Owen H. McConnell, D.D.S., Grand Rapids; E. Thurston Thieme, M.D., Ann Arbor; and Gerald S. Wilson, M.D., Detroit.

At the Friday medical luncheon, C. Allen Payne, M.D., Grand Rapids, chairman of the Michigan Cancer Co-ordinating Committee, was toastmaster. Wm. Baum, M.D., of Bethesda, Maryland, was guest speaker on "The Role of Government in the Cancer Control Program."

* * *

The New Orleans Graduate Medical Assembly will be held in the Municipal Auditorium in New Orleans, February 27-March 1, 1956. On the program is Joseph A. Johnston, M.D., Detroit.

For complete program and information, write Maurice E. St. Martin, M.D., 1430 Tulane Avenue, New Orleans 12, Louisiana.

* * *

Richard H. Meade, M.D., Grand Rapids, has been elected President of the American Association for Thoracic Surgery.

Congratulations, President Meade!

* * *

The Michigan Foundation for Medical and Health Education, Inc., is the financial sponsor of the annual Biddle Lecture, presented at Annual Sessions of the Michigan State Medical Society. The funds for the

(Continued on Page 1384)

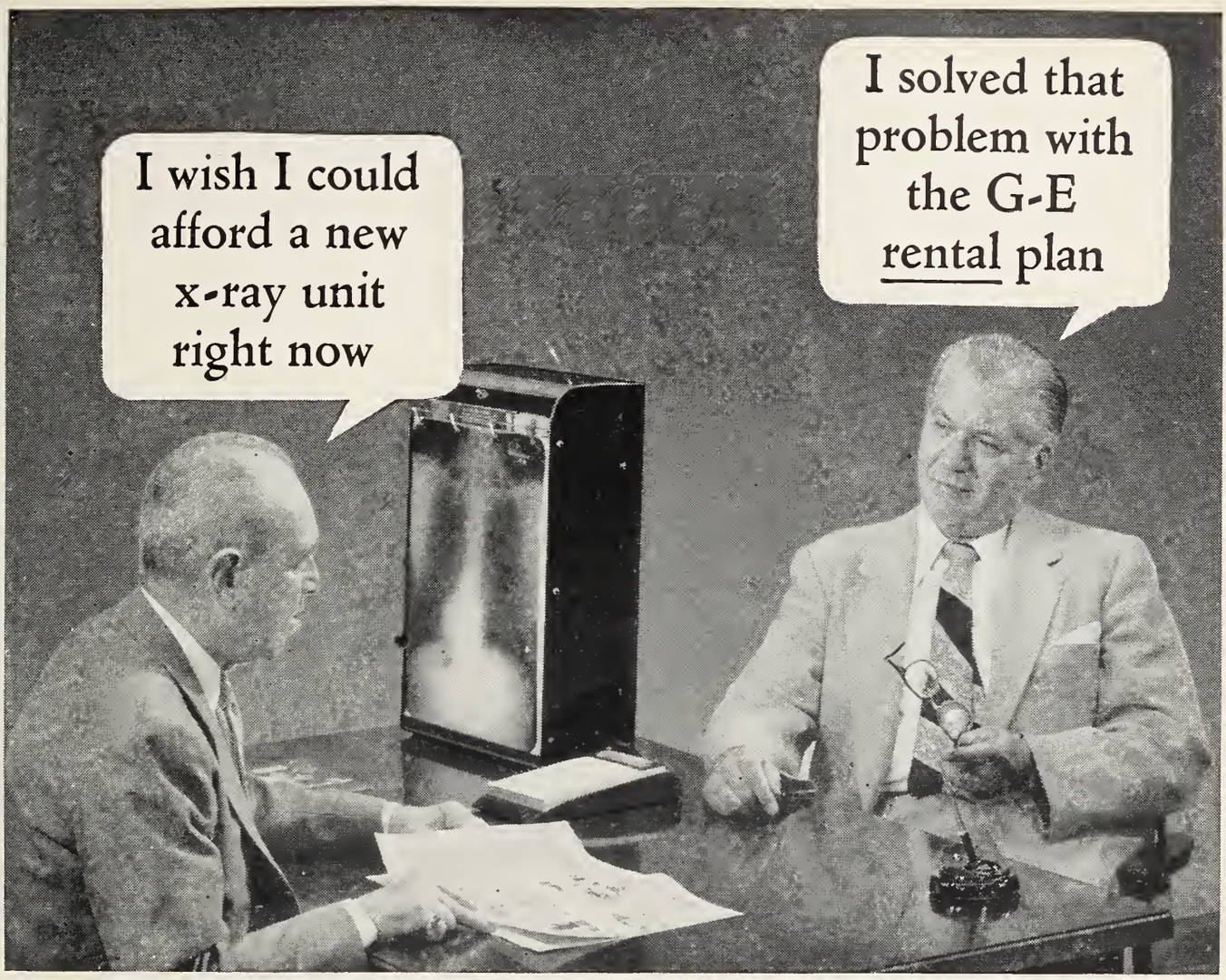
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(Continued from Page 1382)

Biddle lecturer's expenses and honorarium come from a grant made to the Foundation by the late Andrew P. and Grace M. Biddle. Dr. Biddle was a leading dermatologist in Detroit and President of both the Wayne County Medical Society and the Michigan State Medical Society, prior to his death on August 2, 1944.

* * *

President W. S. Jones, M.D., of Menominee, addressed the Saginaw County Medical Society on November 15 on the subject, "What You Get for What You Pay."

Secretary L. Fernald Foster, M.D., Bay City, also spoke at this meeting on "Which of the Twenty-six Projects Do You Want?"

* * *

Motion pictures are available without cost, through the Michigan Heart Association, for showings before lay groups in schools or at club meetings and other organizations. Physicians interested in some fourteen excellent heart films may secure them by writing the Michigan Heart Association, 3919 John R Street, Detroit 1, Michigan (telephone TEmple 1-8550).

* * *

Belle Moss, manufacturing chemist of Detroit, was an exhibitor at the 1955 Annual Session in Grand Rapids, whose description was received too late for publication in the program of the meeting. This chemist displayed DIAPREX, "for effective treatment and prevention of diaper rash, useful also for adults as well as for children in heat rash and chafing; also CARBAX for relief in all types of eczemas especially in patients overmedicated with tar and other such preparations."

* * *

The American College of Chest Physicians offers three cash awards for the best contributions prepared by undergraduate medical students on any phase in the diagnosis and treatment of chest diseases (heart and/or lungs). The first prize is $250.00; second prize $100.00; and third prize $50.00—with each winner receiving a certificate of merit. For additional information and entry blanks, write American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

* * *

Paul M. Ireland, M.D., has been appointed manager of the Veterans Administration Hospital in Ann Arbor. Dr. Ireland received his M.D. degree from the University of Michigan in 1920 and served his internship in the U. of M. Hospital. He is a Diplomate of the American Board of Surgery (1939).

* * *

Thomas H. Alphin, M.D., has returned as deputy director of the Washington office of the American Medical Association. He served as assistant director for two years, February, 1953, to March, 1955, and then returned to the University of Missouri School of Medicine to become assistant dean of the faculty of

(Continued on Page 1386)

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Bronchial asthma
Inflammatory skin conditions

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IF HE WANTS TO QUIT that's our BUSINESS

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We know that today's physician recognizes the many-sided nature of the disease—Alcoholism. Beyond the physical, which requires expert treatment in itself, the alcoholic's physician is plagued, we know, with the equally vital aspects, which make demands on his time and attention, of the emotional, spiritual and mental sickness he notes in his patient.

We believe that Brighton Hospital offers the answer. Physicians can now send their alcoholic patients to Brighton with the certain assurance that they will find expert medical and nursing attention AND that, if they so desire, patients will be thoroughly indoctrinated with the program of Alcoholics Anonymous.

BRIGHTON HOSPITAL is NOT interested in the patient who merely wishes to be dried out in order to resume drinking. We ARE interested in those patients who really, fervently, seek complete rehabilitation and a way of life FREED from alcohol.

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DOCTORS, we are here to serve you. We are here to serve your patients.

BRIGHTON HOSPITAL

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(Continued from Page 1384)

medicine and associate professor of anatomy. In returning to Washington on September 19, Dr. Alphin assumed major administrative responsibilities.

* * *

All physicians should be alerted to the fact that case register loads of active tuberculosis are higher now than at any time in the last few years. With the improved therapy of tuberculosis, case loads obviously will continue to be heavy for some time. Tuberculosis, therefore, is far from being a conquered disease. Physicians should regard it as a duty, both in their practice and in their public utterances, to push for adequate and complete eradication of tuberculosis with whatever tools are feasible and available.—MICHAEL L. FURCOLOW, M.D., Editorial, *Journal-Lancet,* April, 1955.

* * *

John A. MacCartney, trade relations manager for Parke, Davis and Company, Detroit, has been named president-elect of the American Pharmaceutical Association. Mr. MacCartney will be installed at the group's annual convention in Detroit the week of April 8, 1956.

* * *

Robert Drews, M.D., of Detroit, was elected Historian at the New York meeting of the Academy of Psychosomatic Medicine.

MICHIGAN MEDICAL SERVICE ANNUAL MEETING

The annual meeting of the Board of Michigan Medical Service was held in Detroit on October 12, 1955, and the following were elected:

Wilfrid Haughey, M.D., Battle Creek.....President
L. Fernald Foster, M.D., Bay City.....Vice President
Jay C. Ketchum, Detroit.....Executive Vice President
Waldo I. Stoddard, Grand Rapids.....Treasurer
Robert H. Baker, M.D., Pontiac.....Secretary
Miss Florian Paulson, Detroit.....Assistant Secretary

The Executive Committee is as follows: Wilfrid Haughey, M.D., Battle Creek, chairman; Robert H. Baker, M.D., Pontiac; L. Fernald Foster, M.D., Bay City; Arch Walls, M.D., Detroit; D. Bruce Wiley, M.D., Utica; George W. Slagle, M.D., Battle Creek; W. I. Stoddard, Grand Rapids, Ronald Yaw, Grand Rapids, and John Ried, Lansing.

The Finance Committee is as follows: W. I. Stoddard, Grand Rapids, chairman; Earl I. Carr, M.D., Lansing; W. A. Hyland, M.D., Grand Rapids; R. N. Long, Detroit, and Wilfrid Haughey, M.D., Battle Creek.

The Medical Advisory Committee is composed of Robert H. Baker, M.D., Pontiac, chairman; G. Thomas McKean, M.D., Detroit; Bradley M. Harris, M.D., Ypsi-

(Continued on Page 1388)





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(Continued from Page 1386)

lanti; John M. Wellman, M.D., Lansing, Carleton Fox, D.D.S., Detroit; E. C. Baumgarten, M.D., Detroit; Joseph F. Beer, M.D., St. Clair; James B. Blodgett, M.D., Detroit; C. K. Hasley, M.D., Detroit; W. H. Huron, M.D., Iron Mountain; Ellery A. Oakes, M.D., Manistee; Philip Riley, M.D., Jackson; G. W. Slagle, M.D., Battle Creek; D. W. Thorup, M.D., Benton Harbor; Arch Walls, M.D., Detroit; and D. Bruce Wiley, M.D., Utica.

TO ALL MY PATIENTS

About a year ago the AMA suggested a placque for display in the office or reception room of the doctor with this heading, and the Michigan Medical Service furnished placques of that nature to all of our members.

The AMA is now publishing a twelve-page pamphlet to be distributed to patients. These may be obtained without charge from the AMA office, 535 N. Dearborn Street, Chicago, Illinois.

THE TAX TAKE

A recent chart published in conjunction with a *Chicago Tribune* editorial graphically discloses that a single person without dependents, earning $2,000 a year, works until March 14 of each calendar year to complete paying his taxes; a person with a $5,000 income works until March 22; a person with $100,000 annual income, until September 3, and a person with $500,000 income, until November 13.

MEDICAL TELEVISION SHOWS

Produced by Michigan Health Council

Sept. 1 (WKAR-TV)—Health Aspects of Civil Defense
John Griffin, Lansing

Sept. 4 (WJBK-TV)—Bathing Time for Babies
Film

Sept. 8 (WKAR-TV)—School Health
Robert Koopman, Lansing

Sept. 11 (WJBK-TV)—Blood Types
Elmer R. Jennings, M.D., Detroit

Sept. 15 (WKAR-TV)—Medical Assistants
Doris Jarrad, Lansing

Sept. 18 (WJBK-TV)—Common Disorders of Aging Skin
Alice E. Palmer, M.D., Detroit

Sept. 22 (WKAR-TV)—Nursing in Michigan
Hazel Gabrielson, Lansing

Sept. 25 (WJBK-TV)—Rabies Control in Detroit
Joseph Molner, M.D., and Robert F. Willson, DVM., Detroit

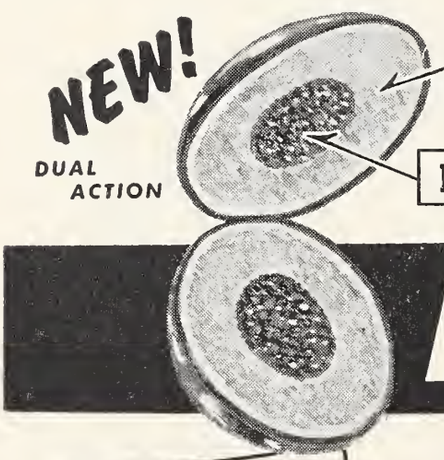
Sept. 29 (WKAR-TV)—Red Cross Blood Program
J. H. Venier, M.D., Lansing

DOCTOR LOCATIONS

Through October 1, 1955

Placed by Michigan Health Council

Name	*Opened Practice in*	*Approximate Date*
Girard Veenschoten, M.D.	Hesperia	August 15
Robert P. Rogers, M.D.	Brighton	September 1
C. K. Dettman, M.D.	Grand Ledge	September 1



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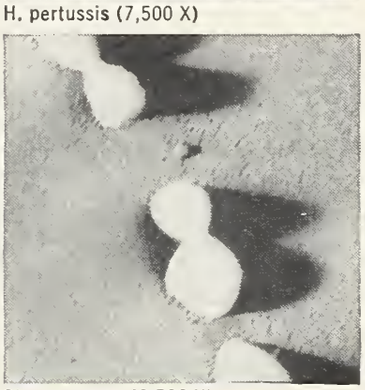
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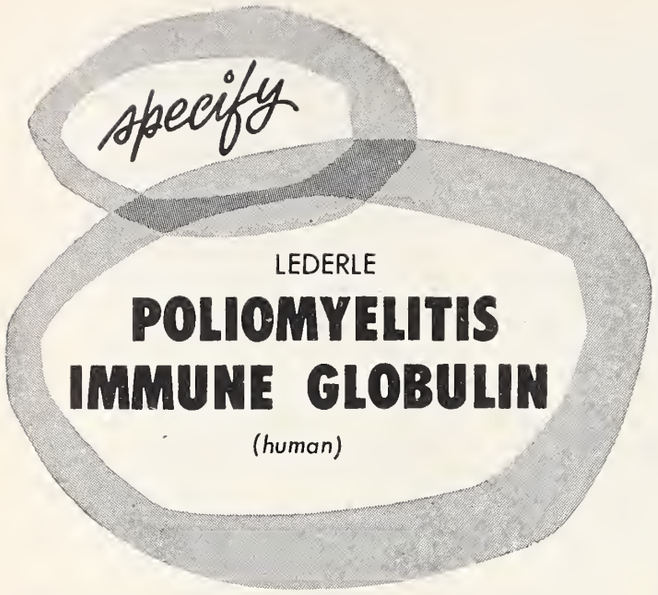
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THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

STRESS SITUATIONS. Edited by Samuel Liebman, M.D., Medical Director, North Shore Health Resort, Winnetka, Illinois; Clinical Assistant Professor of Psychiatry, University of Illinois College of Medicine. Philadelphia and Montreal: J. B. Lippincott Company, 1955. Price, $3.00.

POMP AND PESTILENCE. Infectious Disease, Its Origins and Conquest, by Ronald Hare, M.D., Professor of Bacteriology in the University of London at St. Thomas's Hospital Medical School. New York: The Philosophical Library, Inc., 1955. Price, $5.75.

EARLY CARE OF ACUTE SOFT TISSUE INJURIES. By the Committee on Trauma. First edition. Chicago: American College of Surgeons, 1955.

AN OUTLINE OF THE TREATMENT OF FRACTURES. By the Committee on Trauma. Revised and amplified, Fifth edition. Chicago: American College of Surgeons, 1954.

FRACTURES IN CHILDREN. By Walter Putman, A.B., M.D., F.A.C.S., Chairman of the Orthopaedic Section, Milwaukee Children's Hospital; Attending Staff Surgeon, Columbia Hospital, Johnson Emergency Hospital, Milwaukee; Consulting Staff, Milwaukee County Hospital; Member of the American Orthopaedic Association, American Academy of Orthopaedic Surgeons, Société Internationale de Chirurgie Orthopédique et de Traumatologie, Honorary Member, Deutsche Orthopädische Gesellschaft. Baltimore: Williams and Wilkins Company, 1954. Price, $9.50.

THE CIBA COLLECTION OF MEDICAL ILLUSTRATIONS. Volume 2. A Compilation of Paintings on the Normal and Pathologiu Anatomy of the Reproductive System. Prepared by Frank H. Netter, M.D. Edited by Ernst Oppenheimer, M.D., Foreword by John Rock, M.D., Clinical Professor of Gynecology, Harvard Medical School. Commissioned and published by Ciba. Summit, New Jersey: Ciba Pharmaceutical Products, Inc., 1955. Price, $13.00.

CLINICAL ORTHOPAEDICS. Anthony F. DePalma, Editor-in-Chief, with the assistance of the Associate Editors and the Board of Advisory Editors. Number 4. Philadelphia, London, Montreal: J. B. Lippincott, 1955. Price, $7.50; sustaining $5.00.

DOCTORS IN THE SKY. The Story of the Aero Medical Association. By Robert J. Benford, M.D., Colonel, Medical Corps, United States Air Force. Springfield, Illinois: Charles C Thomas, 1954. Price, $8.75.

PROLONGED AND PERPLEXING FEVERS. By Chester S. Keefer, M.D., Physician-in-Chief and Director, Evans Memorial, Massachusetts Memorial Hospitals; Wade Professor of Medicine, Boston University School of Medicine; and Samuel E. Leard, M.D., Assistant Visiting Physician and Assistant Member, Evans Memorial, Massachusetts Memorial Hospitals; Instructor in Medicine, Boston University School of Medicine. Boston-Toronto: Little, Brown and Company, 1955. Price, $5.50.

(Continued on Page 1392)

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(Continued from Page 1390)

PREMATURE INFANTS: A Manual for Physicians. By Ethel C. Dunham, M.D., formerly Associate Clinical Professor of Pediatrics, Yale University School of Medicine; Director, Division of Research in Child Development, U. S. Children's Bureau; and Consultant in Pediatrics, World Health Organization, Geneva, Switzerland. Second edition, completely revised and reset. New York: Hoeber-Harper, 1955. Price, $8.00.

This second edition covers very well the new developments in the care of the premature infant. The book should be available in every general hospital library for staff instruction.

No book can be completely up to date. In this edition, the Public Health statistics are necessarily no later than 1948-1950. The latest recommendation on oxygen therapy in the prevention of retrolental fibroplasia are not available, but anticipated.

The author covers all aspects of care very well and, by evaluating all controversal points, really helps to orient the reader. R.S.S.

PROLONGED AND PERPLEXING FEVERS. By Chester S. Keefer, M.D., Physician-in-Chief and Director, Evans Memorial, Massachusetts Memorial Hospitals; Wade Professor of Medicine, Boston University School of Medicine; and Samuel E. Leard, M.D., Assistant Visiting Physician and Assistant Member, Evans Memorial, Massachusetts Memorial Hospitals; Instructor in Medicine, Boston University School of Medicine. Boston-Toronto: Little, Brown and Company, 1955. Price, $5.50.

The pharmaceutical houses have laid at our disposal a spectrum of antibiotics which well control most of the infection processes, but in many instances we are confronted with febrile entities which do not respond to the antibiotics. This may be due in part to lack of proper etiologic diagnosis or febrile processes due to non-infectious agents. Despite the tremendous number of antibiotics available, it behooves us to make a correct etiologic diagnosis when we are confronted with unexplained pyrexia.

This text is an approach to unexplained pyrexia. The contents are divided into three sections of diagnostic studies, infections and non-infections, causes of unexplained pyrexia. The bibliography is exhaustive. This is an excellent text on a perplexing problem. V.A.L.

THE BIOLOGICAL EFFECTS OF TOBACCO, With Emphasis on the Clinical and Experimental Aspects. Edited by Ernest L. Wynder, M.D., Head, Section of Epidemiology, and Associate, Sloan-Kettering Institute for Cancer Research. Foreword by Joseph Garland, M.D., Editor, *The New England Journal of Medicine*. Boston-Toronto: Little, Brown and Company, 1955. Price, $4.50.

The lay public, during the past few years, has been caught in a cross fire between medical data and tobacco companies' publicity. If they are not confused as to the effects of smoking on the human body, it is a wonder.

There is no single cause of cancer, and many delicate

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and painstaking studies have been carried out as to the patho-physiologic effects of smoking on the human body. Articles by leading investigators contradict each other.

It is time to call a spade a spade and let the chips fall where they may. We won't influence the great American habit of smoking. If there is a causal relationship, let it be known. No line of delineation has been drawn, no conclusions drawn which there should be.

This analysis by leading collaborators deals with the chemistry, pharmacology of tobacco contents and their influence on the cardiovascular, gastrointestinal tract, neoplastic disease and in the field of allergy.

There is no definite answer as to the question of whether to smoke or not to smoke. However, the text is worth reading and adds to our knowledge concerning the cause and effect that tobacco produces.

V.A.L.

BEDSIDE DIAGNOSIS. By Charles Seward, M.D., F.R.C.P. (Edin.), Physician, Royal Devon and Exeter Hospital; Consulting Physician, Princess Elizabeth Orthopaedic Hospital, West of England Eye Infirmary and the Ministry of Pensions; Honeyman Gillespie Lecturer; Late Advisor in Medicine to Eastern Command, India; Deputy President, Review Medical Board, India. With a Foreword by Sir Henry Cohen, M.D., D.Sc., LL.D., F.R.C.P., F.F.R., Professor of Medicine, University of Liverpool. Third Edition. Edinburgh and London: E. S. Livingstone, Ltd., 1955. Price, $4.00.

One of the prices we pay because of advances in diagnostic procedures and methods is that it has a tendency to make us lax and depend less and less on good sound basic interrogation of patients and a careful physical examination. Given a good history and physical examination report, 95 per cent of problems can be diagnosed without laboratory aids.

Bedside diagnosis will remain the most important weapon a physican will ever have no matter what comes forth in the fields of diagnostic tools. It is something we are all indoctrinated with in medical school curriculum and we should endeavor to gather finesse as we practice medicine rather than let it become obsolete or decay.

This third edition of Bedside Diagnosis is small, complete, well organized, and returns an abundance of diagnostic pearls which may have been lost or forgotten. It is complete with tables of normal values, well indexed and harmonious.

This text can be recommended for medical students, interns, residents and the practicing physician.

V.A.L.

PROCEEDINGS OF THE THIRD MEDICAL CONFERENCE OF MUSCULAR DYSTROPHY ASSOCIATION OF AMERICA, INC., New York, N. Y., October 8 and 9, 1954.

This volume is a record of the proceedings of the Third Medical Conference of Muscular Dystrophy Association of America held in New York, October 8 and 9, 1954. It originally appeared in the *American Journal of Physical Medicine,* February, 1955.

Say you saw it in the Journal of the Michigan State Medical Society

The Muscular Dystrophy Association was formed to aid and to cure those persons afflicted with "muscular dystrophy or from any other similar or allied diseases." Though no effective treatment has yet been reported, the Association has fostered and encouraged fundamental research into the basic mechanism of muscle function. Clinical investigation in conjunction with these basic studies has likewise been given attention.

This book would indicate that these goals have been kept clearly in mind during the Third Medical Conference. The papers presented were grouped into six symposia and of these, only two dealt with the clinical aspects. The other covered "Contracture of Muscle," "Basic Muscle Chemistry, Physiology and Pharmacology," "Degeneration, Regeneration and Growth of Muscle," and "Metabolic Alterations."

This healthy approach to a difficult and challenging problem adds much to what is known about the muscle cell and its activity. Thus this volume is an excellent review of the present status of the problem and should be in the library of all those dealing intimately with the problems and disorders of muscle function. In addition, it contains much interesting material for those interested in the emotional and social aspects of muscular dystrophy and similar chronic disabling disorders.

F.O.M.

ASCLEPIADES. His Life and Writings. A Translation of Cocchi's Life of Asclepiades and Gumpert's Fragments of Asclepiades. By Robert Montraville Green, M.D., Emeritus Professor of Anatomy, Harvard Medical School, Boston, Massachusetts. New Haven, Connecticut: Elizabeth Licht, Publisher, 1955. Price, $6.00.

This is something entirely new. The Asclepiades history has come down in snatches through the ages. There have been twenty-seven men with that name or title. One has been chosen who passed on Hippocrates' learning. Galen picked up both and preserved them for posterity. There has been no book in English since 1762. Dr. Antonio Cocchi, Professor of Anatomy in Florence, Italy, wrote a life history and translation which was translated into English.

Christian Gottlieb Gumpert, while at the University of Weimar, gathered all fragments of ancient medicine and wrote a book published in 1794. These two authors have preserved all the known references and quotations. Their work is hereby translated into English. It is extremely interesting reading and spots many theories as ancient belief.

Atoms, molecules and corpuscles are explained. The book deserves a place in any historial library.

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Surgical Anatomy and Clinical Surgery, two weeks, March 5
Surgery of Colon and Rectum, one week, November 28, February 27
General Surgery, one week, February 13; two weeks, April 23
Basic Principles in General Surgery, two weeks, April 9
Gallbladder Surgery, ten hours, April 9
Fractures and Traumatic Surgery, two weeks, March 12

GYNECOLOGY—Office and Operative Gynecology, two weeks, November 28, February 13
Vaginal Approach to Pelvic Surgery, one week, December 12, February 6

OBSTETRICS—General and Surgical Obstetrics, two weeks, February 27

MEDICINE—Internal Medicine, two weeks, May 7
Electrocardiography and Heart Disease, two-week basic course, March 12
Gastroscopy, forty-hour basic course, March 19
Dermatology, two weeks, May 7

RADIOLOGY—Diagnostic X-ray, two weeks, January 9
Clinical Use of Radioactive Iodine, one week, April 2
Clinical Uses of Radioisotopes, two weeks, May 7

PEDIATRICS—Intensive Review Course, two weeks, April 9

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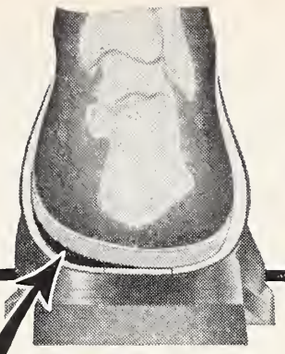
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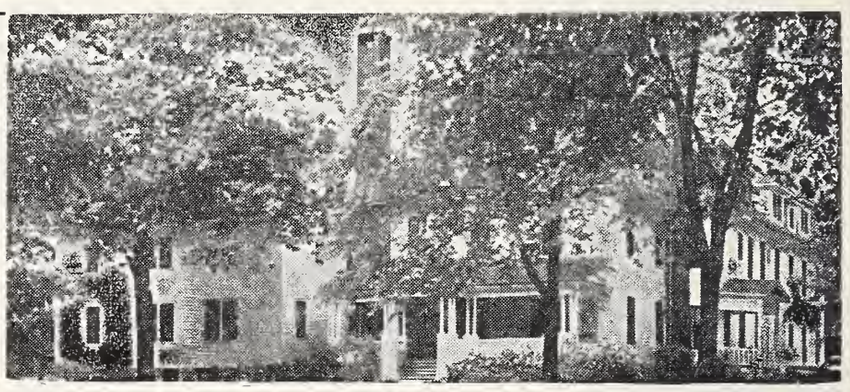
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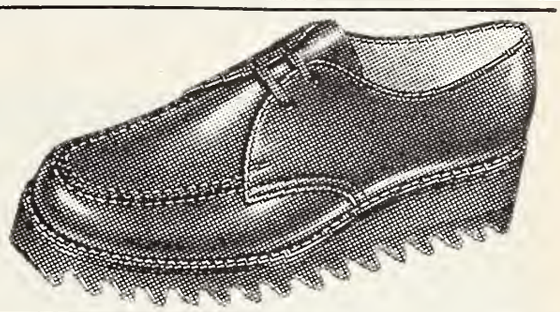
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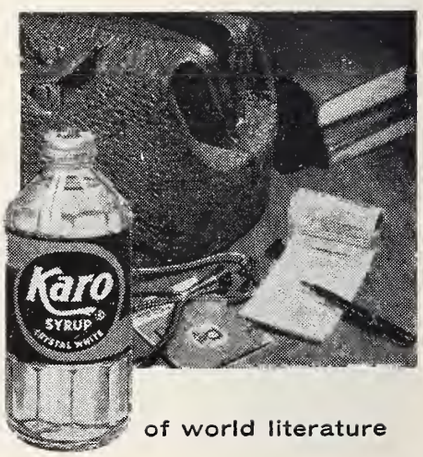


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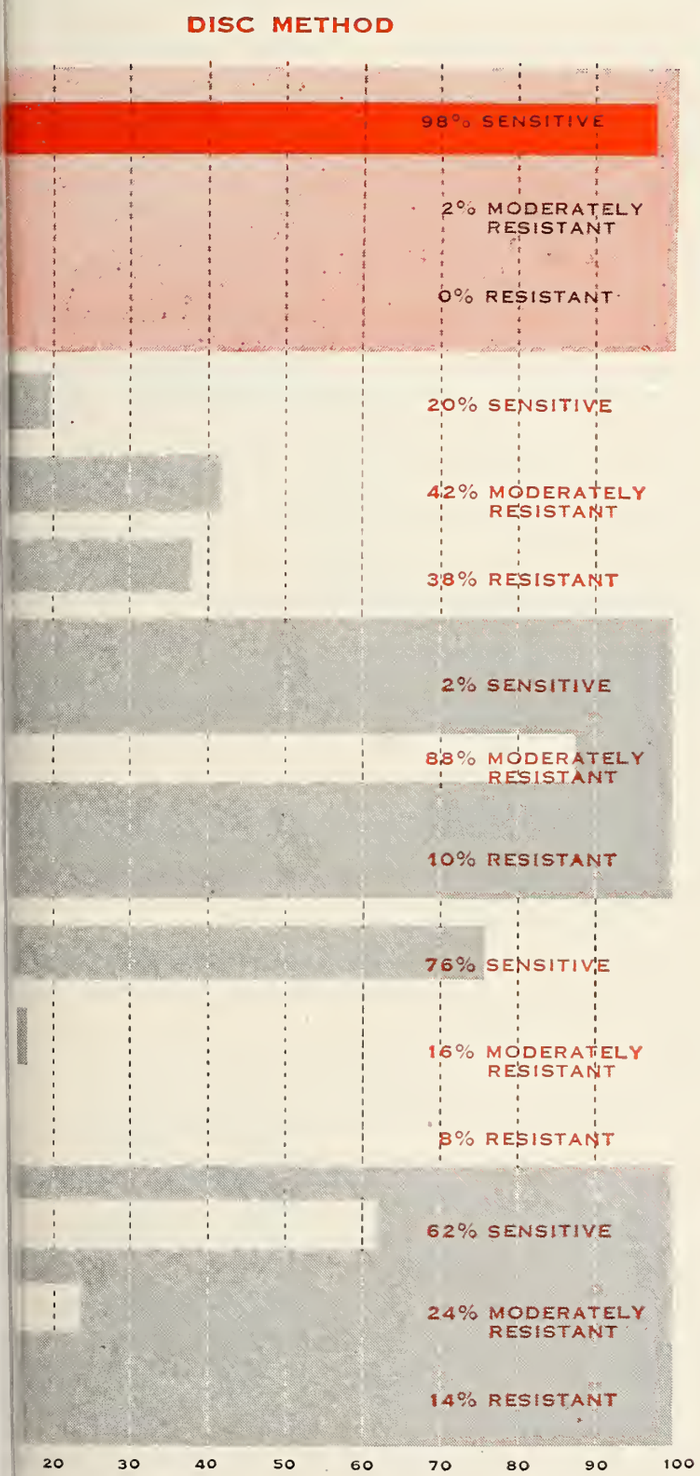


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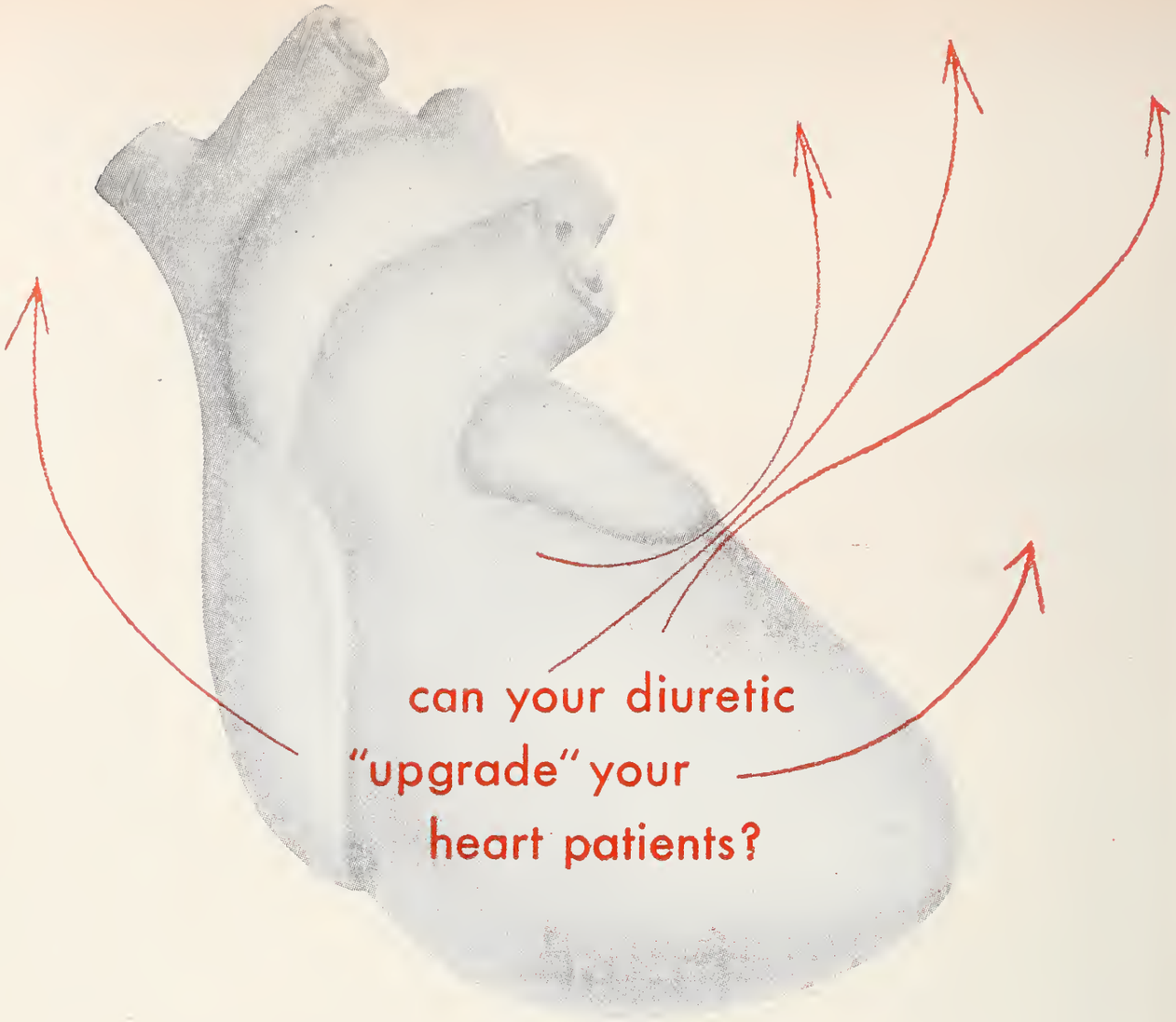
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K. J. McMorrow, M.D.



Otto K. Engelke, M.D.



E. G. M. Krieg, M.D.

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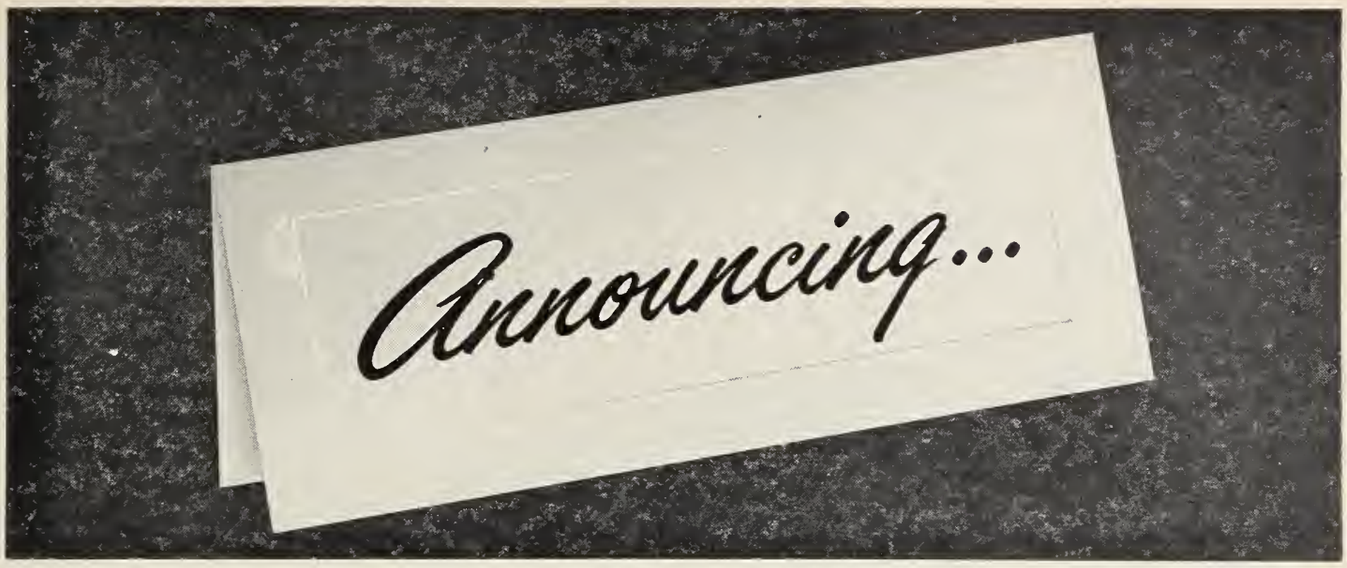
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MICHIGAN MEDICAL SERVICE ELECTS NEW OFFICERS

Wilfrid Haughey, M.D., of Battle Creek, Editor of THE JOURNAL MSMS since 1942, has a new job, that of President of Michigan Medical Service. Stepping up with Dr. Haughey is L. Fernald Foster, M.D., Bay City, who replaced Dr. Haughey as Vice President of Blue Shield.



WILFRID HAUGHEY, M.D.



L. FERNALD FOSTER, M.D.

Dr. Haughey succeeds Robert L. Novy, M.D., of Detroit, who resigned as Blue Shield President after thirteen years' service. The election was held October 12. Dr. Haughey is one of the pioneers in prepaid medical care plans and has been a member of the Blue Shield Board of Trustees since Michigan Medical Service was established in 1940. He has practiced medicine in Battle Creek since 1906.

Dr. Foster, a pediatrician, completing his twentieth year as Secretary of MSMS, is another of the Blue Shield pioneers, having been active in establishing Blue Shield and serving on its Board of Trustees since the corporation was founded.

Robert H. Baker, M.D., of Pontiac, immediate Past President of MSMS, was re-elected as Secretary of Michigan Medical Service and Waldo I. Stoddard, Grand Rapids bank executive, returned as Treasurer.

NEW—FIT TO USE

"All That's New and Fit to Use" tells the story of the 1956 Michigan Clinical Institute, to be held March 7-8-9. That's the theme which has been selected by the Committee on Arrangements under the chairmanship of L. W. Hull, M.D.

Once again, the emphasis is on "new" and "use," for the program has been laid out to present Michigan doctors of medicine, and their colleagues from nearby states, with the very latest in medical progress that can be used every day in their office and in the hospitals.

"We are certainly proud of the many headliners that have accepted our invitation to be on the MCI program," Dr. Hull said. "We think it is the greatest scientific program ever lined up for any MCI."

The entire three-day meeting is aimed at the private practitioner who wants to hear the newest information, and see the results of the latest research, presented by really top-level lecturers and clinicians. Altogether, thirty outstanding doctors are scheduled to appear in the six meetings planned during the MCI. There is every indication that the 1956 MCI will top all previous sessions in its interest, subject matter, and quality of presentation.

Now, Doctor, is the time to arrange your schedule to attend the 1956 Michigan Clinical Institute at the Sheraton-Cadillac Hotel, Detroit, March 7-8-9, 1956. Write directly to the Sheraton-Cadillac Hotel for reservations, addressing your request to the Committee on Hotels, Michigan Clinical Institute, Miss Dorothy J. Gibb, Secretary.

HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of October 19, 1955

Seventy-two items were presented to the Executive Committee of The Council at its October 19 meeting in Lansing. Items of chief importance were:

- **C. D. Selby, M.D., Port Huron,** and **Orlen J. Johnson, M.D.,** Bay City, were appointed Chairman and Secretary, respectively, of the new Section on Occupational Health, created by the 1955 MSMS House of Delegates.
- **A Special Committee to Improve Officers' Night Ceremonies** was appointed by Council Chairman D. Bruce Wiley, M.D.: L. Fernald Foster, M.D., Bay City, Chairman; R. H. Baker, M.D., Pontiac; William A. Hyland, M.D., Grand Rapids; W. S. Jones, M.D., Menominee; and Arch Walls, M.D., Detroit.
- **A suitable memento** for R. L. Novy, M.D., Detroit, retired President of Michigan Medical Service, was authorized, and the Chairman was empowered to select the gift.
- **Financial Reports** were presented, given study, and approved. Bills payable were approved and payment was authorized.
- **Committee Reports:** The following committee reports were presented—(a) Committee on Study of Cancer Quackery (appointed by President W. S. Jones, M.D., on instruction of 1955 House of Delegates), meeting of October 14;

(Continued on Page 1408)



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HIGHLIGHTS OF THE COUNCIL

(Continued from Page 1406)

(b) Michigan Cancer Co-ordinating Committee, October 14; (c) Committee on Hospital Pharmacy Operation (a committee of the Michigan Hospital Association), October 14.

- **Walter S. Stinson, M.D.,** Bay City, was appointed as Councilor of the Tenth District for the unexpired term (1957) of Fred H. Drummond, M.D., retired. Commendation on the excellent work of Dr. Drummond during the last decade and his service to Medicine in Michigan, were made a matter of record in The Council minutes.
- **A joint meeting** with the Executive Committee of the Board of Commissioners, State Bar of Michigan, was held, and matters of mutual interest were discussed, including medicolegal testimony (Minnesota Plan) and the Interprofessional Code of Wisconsin. The State Bar representatives suggested the creation of a joint committee, of three lawyers and three doctors of medicine, to study the possibility of drafting an interprofessional guide between medical witnesses and lawyers for the State of Michigan.
- **1959 MSMS Annual Session:** The dates of September 28-29-30 and October 1-2 were set for the Grand Rapids Annual Session of 1959.
- **Lester E. Bauer, M.D.,** Detroit, was appointed Discussion Conference Leader for the Michigan Clinical Institute Session of Friday, March 9.
- **Liaison Committee with State Executive Office:** W. S. Jones, M.D., Menominee, was appointed Chairman, with the following committee personnel: Robert H. Baker, M.D., Pontiac; L. Fernald Foster, M.D., Bay City; B. M. Harris, M.D., Ypsilanti; K. H. Johnson, M.D., Lansing; Ralph W. Shook, M.D., Kalamazoo, and D. Bruce Wiley, M.D., Utica.
- **1956 MSMS Annual Session and University of Michigan Triennial Medical Alumni Reunion Dates.** Suggestion from Dean A. C. Furstenberg, M.D., Ann Arbor, concerning next year's Triennial Reunion, which will coincide on two of the three Annual Session dates was adopted. The MSMS dates will be Wednesday-Thursday-Friday, September 26-27-28, in Detroit; the Triennial Medical Reunion dates will be Thursday-Friday-Saturday, September 27-28-29, in Ann Arbor.
- **B. L. Masters, M.D.,** of Fremont, was chosen as MSMS representative to the Michigan Health Council, in lieu of John R. Rodger, M.D., Bellaire, resigned.
- **Appointment of Committees of The Council,** as made by Council Chairman D. Bruce Wiley, M.D., were confirmed.
- **Legal Counsel J. Joseph Herbert** rendered opinions on several matters including inquiry re a physican participating as a stockholder in a proposed corporation; and re capacity and competence to make wills.
- **New Michigan Medical Service Officers:** Report was given that Wilfrid Haughey, M.D., long-time Editor of JMSMS, recently was elected President of Michigan Medical Service; L. Fernald Foster, M.D., Bay City, was chosen as Vice President.

MEDICAL MEETINGS AND CLINIC DAYS

A list of known medical meetings and clinic days, sponsored by county medical societies and other physician groups in Michigan, follows:

1956		
January 18-21	Michigan Rural Health Conference	Kalamazoo
January 22-24	Industrial Health Conference, AMA, Sheraton-Cadillac Hotel	Detroit
January 25-27	Annual Meeting of the MSMS Council, Sheraton-Cadillac Hotel	Detroit
January 27-29	MSMS County Secretaries-Public Relations Seminar, Sheraton-Cadillac Hotel	Detroit
February 16	MSMS Executive Committee of The Council	Detroit
March 6	Michigan Chapter, American College of Surgeons	Detroit
March 7-9	Michigan Clinical Institute, Sheraton-Cadillac Hotel	Detroit
March 9	MSMS Executive Committee of The Council	Detroit
Spring	MSMS Postgraduate Extramural Courses	Statewide
April 11	Genesee County Medical Society's Eleventh Annual Cancer Day	Flint
April 18	MSMS Executive Committee of The Council	Lansing
May 3	Twenty-Eighth Annual May Clinic, Ingham County Medical Society	Lansing
May 8-9	Annual Clinic Day and Alumni Reunion, Wayne University College of Medicine	Detroit
May 16	MSMS Executive Committee of The Council	Detroit
June 4-7	American Cancer Society, Sheraton-Cadillac Hotel	Detroit
June 11-15	Annual Session, American Medical Association	Chicago
June 20	MSMS Executive Committee of The Council	Muskegon
June 22-23	Upper Peninsula Medical Society	Sault Ste. Marie
July 19-21	Mid-summer Session of the MSMS Council	Mackinac Island

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Cancer Comment

CANCER CONTROL

While reviewing cancer progress, the writer has been impressed by the conclusions of some of the vast number engaged in research in this disease.

Noteworthy is that portion of the report of the Director of the Sloan-Kettering Institute, titled:

Steps Toward Cancer Control

1. The diagnosis of early cancer of certain sites has been improved by better means of defining the presence of cancer cells in fluids from the prostate gland, lung, and uterus.

2. An electronic device has been contrived which perhaps in time will automatically detect in body fluids cells which might be cancer.

3. Promising leads have been found toward the development of a blood test for cancer, but final success has not yet been achieved.

4. A chemical method has been discovered that aids in the diagnosis of heart attacks due to closure of the coronary arteries, one of the most frequent causes of death from heart disease. This test is also very sensitive in detecting acute damage to liver cells.

5. A chemical has been prepared that dissolves clots in both the veins and arteries of experimental animals. It can be administered safely to human beings, but final proof of its ability to dissolve these often fatal clots in man is not yet available.

6. The cause has been disclosed of the digestive difficulties which follow, and limit the usefulness of, operations to cure cancer of the stomach, and some means for their control devised.

7. More information has been gained and more effective control devised for certain complications of surgery due to chemical disturbances in the body.

8. New procedures have been devised for measuring exactly the amounts of ionizing radiation delivered to particular areas of the body and so to make radiation treatment for cancer more precise.

9. Accurate methods applicable to patients have been developed for defining the control by body chemistry (hormones) of the growth of some types of cancer.

10. The existence has been proved of two types of cancer of the breast requiring different procedures for their temporary chemical control.

11. Cortisone has been proved to restrain temporarily the growth of breast cancer in certain patients.

12. An effective chemical treatment of formerly uncontrollable tumors of small blood vessels has been devised.

13. Differences have been disclosed in chemical compounds as released by normal and cancerous thyroid tissue.

14. New knowledge of the action of pituitary hormones on various organs has been acquired, particularly as they may induce or stimulate growth of breast cancer.

15. Temporary restraint of progressive cancer of the breast or of the prostate gland has been achieved in a few patients by the removal of the pituitary gland.

16. New procedures have been discovered for the more accurate evaluation of the ability of new drugs to control pain in cancer patients.

17. Improved and reliable methods for measuring minute amounts of metals in normal and cancer tissue are yielding unexpected and significant new information.

18. Further new information has been achieved concerning different requirements of human normal and cancer cells for the chemicals they use for reproduction and growth.

19. Several types of human cancer have been grown in the test tube.

20. Several viruses have been found to invade and parasitize human cancer growing in the test tube.

21. The ability of one virus to destroy human cancer cells of one type in the test tube has been enormously enhanced, and the same time its injurious effect on animal normal tissue has decreased.

22. Four strains of human cancer are now in mass cultivation in animals, in tissue culture, and in incubated fertile eggs and are being distributed to other laboratories.

23. New information has been gained on the minute chemical structure of the compound that governs inherited characteristics and is believed to be the key to cancer growth.

24. Test tube methods of greatly increased sensitivity and accuracy have been devised and employed to define the ability of certain chemicals selectively to injure cancer as compared with normal cells.

25. The techniques of electron microscopy have been greatly improved for the study of normal as compared with cancer tissue. Incredibly minute details of cellular structure have been revealed.

26. Two new pure chemicals have been synthesized and several impure ones prepared which strongly restrain the growth of animal cancer.

27. Chemicals capable of curing several different types of transplantable animal cancer have been discovered.

28. A chemical, 6-mercaptopurine, has been discovered in collaboration with Wellcome Research Laboratories and appears to be one of the most effective in restraining acute leukemia in children and adults.

29. New information has been obtained which suggests circumcision as a practical means for the prevention of cancer of the cervix in women.

30. Data have been accumulated on the incidence of precancerous changes of the large intestine, and studies are in progress to evaluate their significance.

31. An extensive co-operative effort has been established to define the constituents of cigarette smoke that have been proved to cause cancer in animals.

32. A method of growing normal embryonic human lung and other normal human tissue in experimental animals has been devised.

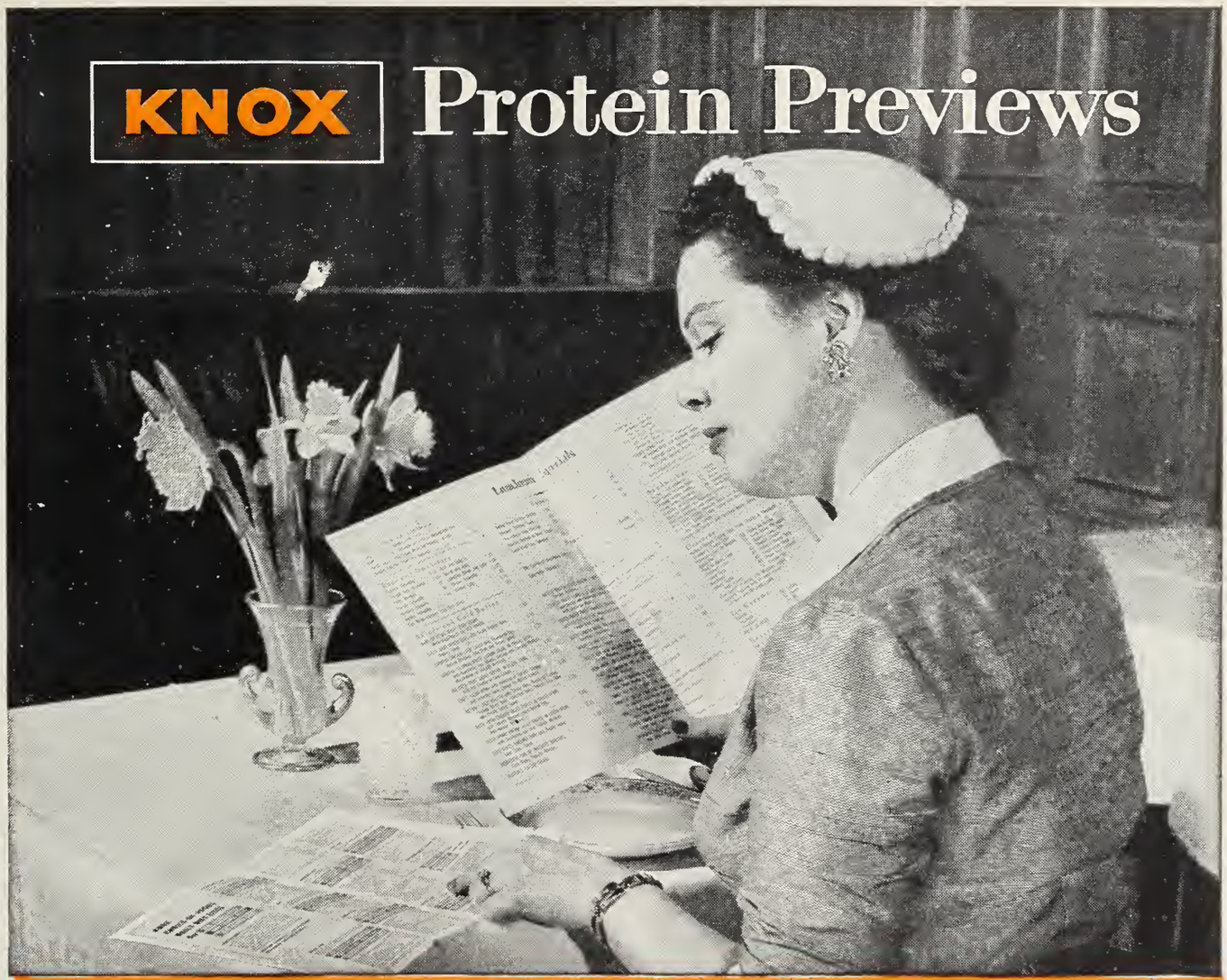
33. Improved new and reliable procedures have been developed for defining and measuring the production of hormones of the sex and adrenal glands and the changes they undergo in the body.

34. Correlations have been suggested between deviations in hormone production and alterations in the normal physiology of human subjects.

35. The delay of leukemia in experimental animals prone to that disease has been achieved by chemical.

36. A wholly new, basic scientific principle of biochemistry that should permit the selective injury of almost any desired type of body cell has been discovered.

(Continued on Page 1412)



New Knox Food Exchange Chart Eliminates Calorie Counting



To help your obese patients reduce and stay reduced, Knox introduced this year a new dieting plan based on the use of nutritionally tested Food Exchanges.[1] The very heart of this new dietary is a "choice-of-foods diet list" chart which presents diets of 1200, 1600 and 1800 calories.

Each of these diets may be easily modified to meet special needs. However, the important points for your patients are that the use of this chart eliminates calorie counting, permits the patient a wide range of food choices and dispels that old empty feeling by allowing between-meal snacks.

These advantages should make your management of difficult and average cases easier. If you would like a supply of the new Knox charts for your practice, just fill in the coupon below.

1. Developed by the U. S. Public Health Service assisted by committees of The American Diabetes Association, Inc. and The American Dietetic Association.



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Professional Service Dept. SJ-12
Johnstown, N. Y.

Please send me_____copies of the new, color-coded "choice-of-foods diet list" chart.

YOUR NAME AND ADDRESS:

CANCER CONTROL

(Continued from Page 1410)

These steps have been achieved by the expenditure of time and effort by many-many scientists and research staffs. This is convincing evidence indicative of progress in the cancer field.

Apart from the scientific development those in the research field have some interesting statistics.

Statistical Facts

1. Cancer will at some time strike one in every four Americans, according to present estimates.
2. It is estimated that more than 40,000,000 Americans now living will at some time develop cancer.
3. Out of every seven deaths in the United States, one is caused by cancer.
4. If present death rates continue, 24,000,000 Americans now living will die of cancer.
5. On the average, cancer strikes about two out of every three American families.
6. Every day approximately 650 Americans die of cancer.
7. There is one cancer death approximately every two minutes in the United States.
8. Last year, every seven minutes, on the average, another American was saved from dying of cancer.
9. Every seven minutes, on the average, another American who might have been saved dies of cancer because proper treatment was begun too late.
10. This year, more than 235,000 Americans will die of cancer.
11. It is estimated that this year more than 700,000 Americans will be under medical care for cancer.
12. It is estimated that this year there will be about a half million new cancer cases in the United States (cases diagnosed for the first time).
13. It is estimated that there are about 400,000 persons living in America who were saved from cancer at least five years ago.
14. Last year, perhaps 75,000 Americans were saved from dying of cancer.
15. Last year, more than 230,000 Americans died of cancer.
16. Last year, perhaps 75,000 cancer patients who might have been saved died because proper treatment was begun too late.
17. Last year, more men than women died of cancer. (This has been true since 1949.)
18. Last year, cancer took the lives of some 3,000 children (under fifteen years of age.)
19. Last year, cancer of the lung killed approximately 24,000 Americans, about seven times as many as in 1933.
20. At present rates, of every four people who get cancer, one will be saved, and three will die of the disease.
    (A) One will be saved from cancer.
    (B) One will die needlessly because with present knowledge he could be saved.
    (C-D) Two will die because their cancers are of the types that science has not yet the tools to cure. However, in many cases, much can be done to ease their pain and prolong their useful lives.
21. About one-half the deaths from cancer in the United States are in those people under sixty-five years of age.
22. In the United States cancer today kills more children from three to fifteen years of age than any other disease.
23. In the United States there are about 160,000 children under the age of eighteen who have lost their fathers from cancer, and about 175,000 who have so lost their mothers.

Pituitary Hormone Role

In May of this year at a medical meeting in Atlantic City, Doctors of the Memorial Hospital and Cornell Medical Center, New York Hospital Groups reported that widespread breast cancer can be temporarily controlled by an operation to remove the pituitary gland at the base of the brain.

Of forty-three women with advanced breast cancer in whom the pituitary gland was removed twenty showed marked improvement, seventeen were considered failures and six were treated too recently to be evaluated. Fifteen of the twenty improved patients are still in remission at the present time. The longest remission to date has been twenty months.

Cancers of the breast that could not be removed by operation shrank, as did cancers that had spread to bone, bone marrow, lung, brain, spinal cord and skin. Patients were able to walk again, to breathe more easily and to return to normal activities. Bones broken because the cancer had destroyed bone tissue healed again. Patients felt good generally.

The results of the treatment, besides the new, if temporary, lease on life given the patients, suggest that hormones of the pituitary gland may play a hitherto unsuspected role in the growth of some kinds of cancer.

The Second Look Suggestion

Recent reports from one of the well-known and highly regarded clinics in the Midwest has stirred widespread interest in the second look concept.

Re-operations to remove asymptomatic, residual cancer of the stomach, rectum, or colon with lymph-node metastases are performed. Six months after the original operation with no clinical evidence of residual cancer, a second operation is performed and any residual cancer found is removed, if possible. If cancer is found at this second-look operation, third and fourth operations are carried out subsequently at similar intervals of time until no more cancer is found. In some of the one hundred twenty-four patients who had gastric, colic, or rectal cancers with lymph node involvement, further exploratory operations were performed after the second-look operation, so that in all, one hundred and seventy-five operations were done after the original one. Six patients with residual cancer at the second operation were finally found to be free from cancer at some subsequent operation. They are still alive and have no evidence of residual cancer. One of the six patients had cancer of the stomach; one, cancer of the rectum; and four, cancer of the colon. The second-look seemingly has greater promise in patients with colon cancer. The authors feel that sufficient time has not elapsed to establish or disprove their assumption that residual abdominal cancers may

(Continued on Page 1486)

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AMA Washington Letter

THE MONTH IN WASHINGTON

If advance signs mean anything, the Eisenhower Administration next year can be expected to ask Congress for substantially more money for medical research, both direct research by scientists on the U. S. payroll and grants to others.

Currently the federal government is spending more money on medical research than at any time in history—almost $98 million through the National Institutes of Health alone. In addition other millions are being spent on medical research in the Department of Defense, Veterans Administration and other agencies. Much of it is difficult to isolate in the federal budget.

A special committee named by the National Science Foundation at the request of former Secretary Hobby has been at work for some time on an appraisal of HEW's medical research programs. Its report, due before the reconvening of Congress, should be valuable to both the administration and the appropriations committees.

A few examples of what is happening this year:

National Cancer Institute has $24.8 million to spend, about three million more than last year, with two-thirds going out in grants to non-federal researchers. National Heart Institute also is working on a much more liberal budget, $18.7 million in contrast to last year's $16.6 million. Because of the spectacular publicity now being given to heart research as a consequence of President Eisenhower's illness, it is a foregone conclusion that next year this institute will get a great deal more money.

The Mental Health Institute is profiting by the largest single increase of any research operation, almost $4 million, from $14.1 to $18 million. Here again the prospects are for a substantial increase next year; problems of mental health are receiving much public attention, a situation that will not be ignored by Congress. Furthermore, the nationwide survey of mental health problems now about to get under way will point up the shortcomings in mental health research, and be an additional argument for more U. S. dollars.

All the other research institutes also shared in last session's Congressional generosity. The Institute of Arthritis and Metabolic Diseases has about $2.5 million more, $10.7 million instead of the $8.2 million of last year. The Institute for Neurological Diseases and Blindness went from $7.6 million to $9.86 million, the Microbiological Institute from $6.1 to $7.5 million, and the Dental Health Institute from $1.9 to $2.1.

As has been customary with recent Congresses Senate and House this year actually voted more money for medical research than the Bureau of the Budget permitted Public Health Service to request. That may not be the situation when appropriation bills come up next session. Secretary Folsom of the Department of Health, Education and Welfare did not take office until Congress was about to adjourn last summer, but since then he has repeatedly gone on the record in favor of even greater U. S. expenditures for research. In October Mr. Folsom declared:

". . . Today we find new problems and new opportunities. We find that heart disease, and cancer and arthritis, are taking an increasing toll. And so today as a nation we are changing our lines of battle to fight this increase in chronic and major diseases. All the facts point to one great need. It is the need for more research—to learn how these chronic diseases are started, so they can be prevented; to learn to detect them in the early stages, so they can be cured. . . ."

Again in November, addressing a conference on antibiotics, Mr. Folsom struck the same key, only this time more firmly. After noting that the U. S. now is spending over twelve times more on medical research than it was spending in 1946, he declared: "We must seriously consider making even more funds available for medical research to bring even greater benefits to humanity."

Notes

The Joint Congressional Committee on the Economic Report may have some health legislation to offer next year as a result of a study of the problems of the low-income family, including methods of paying hospital, physician and drug bills.

The medical and criminal problems connected with narcotic addiction have occupied the attention of two Congressional groups between sessions, subcommittees of the Senate Judiciary Committee and the House Ways and Means Committee. The latter is particularly worried over abuses it claims to have discovered in the use of barbiturates and amphetamines.

Dr. Frank B. Berry, assistant Defense Secretary for Health and Medical matters, in his annual report warns that the doctor procurement problem again may become acute, despite last summer's two-year extension of the act. He said the Department may not be able to obtain all the older physicians it needs because of the amendment barring the drafting of men over thirty-five if they have applied for a medical commission and been rejected on purely physical grounds. Also, Dr. Berry thinks the ratio of three physicians per 1,000 of troops may be too narrow a margin for safety.

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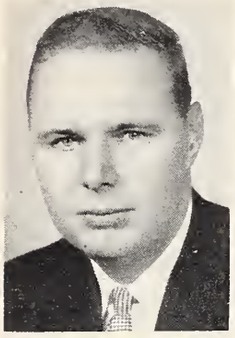
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METICORTEN,* brand of prednisone, Schering.
*T. M.

ML-J-59

PR REPORT

R. N. PHILLEO IS MSMS FIELD SECRETARY—The PR staff has been brought up to full strength with the appointment in October of Richard N. Philleo of East Lansing as Field Secretary.



Mr. Philleo

Mr. Philleo, or Dick as he prefers to be known, long has been active in legislative and political work. He has worked in the House of Representatives for many sessions and has a keen knowledge of the "legislative process." He is a member of East Lansing's Traffic Commission.

He attended MSU prior to his enlistment in the USAAF in 1942. During World War II, he served as a bombardier with the 8th Air Force in Europe, climaxed by eight months as a prisoner of war in Germany.

Dick is married and has two sons, Steve and Dave. Outside interests, beside politics, include photography and flying. He is a member of Lansing Lodge F. and A.M. 33.

His appointment fills the vacancy created in July by the death of Stuart A. Campbell of Grand Rapids.

SPECIAL SESSION GRINDS TO AN INCOMPLETE STOP—On November 1, after much preliminary study, the Governor called the Legislature into extra session in Lansing for the purpose of considering emergency measures covering three fields, namely: highway safety, teachers' salaries, and care for the mentally retarded children.

At the MSMS Annual Session in September, 1955, the House of Delegates anticipated this action and adopted two resolutions: one, "strongly endorsing the principle of state subsidy of student driver training," and the other recommending immediate action by the Legislature and the Governor to alleviate the mentally retarded children emergency without "impairing . . . the effective tuberculosis control program now in progress." These resolutions were forwarded to members of the Legislature; in addition, the PR staff has been in constant attendance at their daily sessions.

By week's end the members had passed, and the Governor had signed, measures providing for a state-wide speed law (65 m.p.h. days, 55 nights), driver education at local levels in conjunction with a traffic center at MSU, automobile safety belt standards and township licensing control over bicycles. Also agreed upon was a teachers' pay raise.

No agreement could be reached, however, on a program for the mentally retarded, and upon adjournment three days later, both houses were notified of a "second extra session" called for the Monday following, either to settle on (1) the "administration plan" for the lease of the old Fort Custer Station Hospital and purchase of one or both of the Oakland County Sanatorium and the Farmington Hospital, or (2) the "Senate plan" calling for the lease of Fort Custer facilities and the expansion of present facilities at Lapeer, Coldwater, Caro and Mt. Pleasant and "Family Care" and "Contract Patient" programs.

Several weeks later, at the time of going to press, the legislators and the Governor were as far apart as ever.

UNITED STATES BECOMES "MEDICAL MAGNET"

The United States has become a "medical magnet" for physicians in Europe, Asia, Africa, and Latin America.

More than 5,000 foreign physicians came to this country during the year 1954-55 for study, according to a survey by the Institute of International Education and the American Medical Association.

They came from eighty-three different countries for internship and residency training at hospitals in forty-two states, the District of Columbia, Hawaii, Puerto Rico, and the Canal Zone.

The survey of 1,177 hospitals, among those approved for internships and residencies by the AMA Council on Medical Education and Hospitals, indicated that there were at least 5,036 alien physicians in training. Not included in the study were immigrants and displaced persons.

Individual countries sending the most physicians were the Philippines, Canada, Mexico, Germany, and Turkey. Of the major geographical areas, the Middle, Near, and Far East had the largest representation.

Of the total, 620 (12.3 per cent) were women. In comparison, women made up only 5.2 to 5.7 per cent of American medical school graduating classes in the years 1952 through 1954. Over half of the women came from the Near, Far, and Middle East, with the Philippines sending the most.

More than 2,000 of the physicians were in the United States on their own resources. Others were sponsored by at least sixty-seven different agencies, including their own or the United States government, the United Nations, and religious, educational or philanthropic organizations. Many were sponsored by the hospitals in which they were training.

In addition to the large number of physicians in hospital internship-residency training, others visited this country as observers, professors, or guest participants in research. They represented 21.5 per cent of all foreign educators who visited the country during the year.

In comparison, only 3.6 per cent of all American educators visiting other parts of the world in 1954-55 were listed under medicine.

The survey was reported in the August 13 number of *The Journal of the American Medical Association* by Dr. James E. McCormack, associate dean of graduate studies at Columbia University College of Physicians and Surgeons, and Arthur Feraru, head of the Central Index and Census Division, Institute of International Education, both of New York.

The organisms commonly involved in

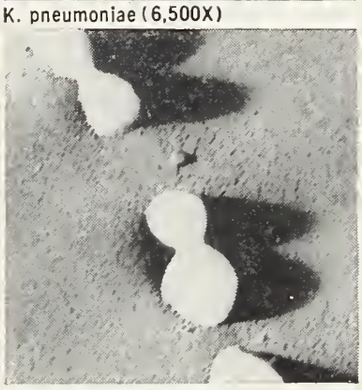
Pneumonia



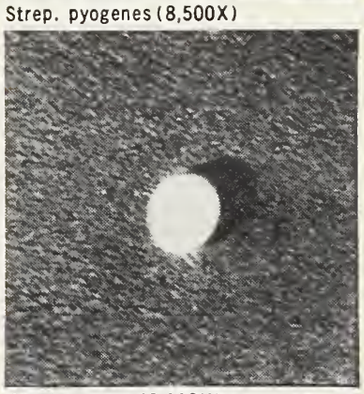
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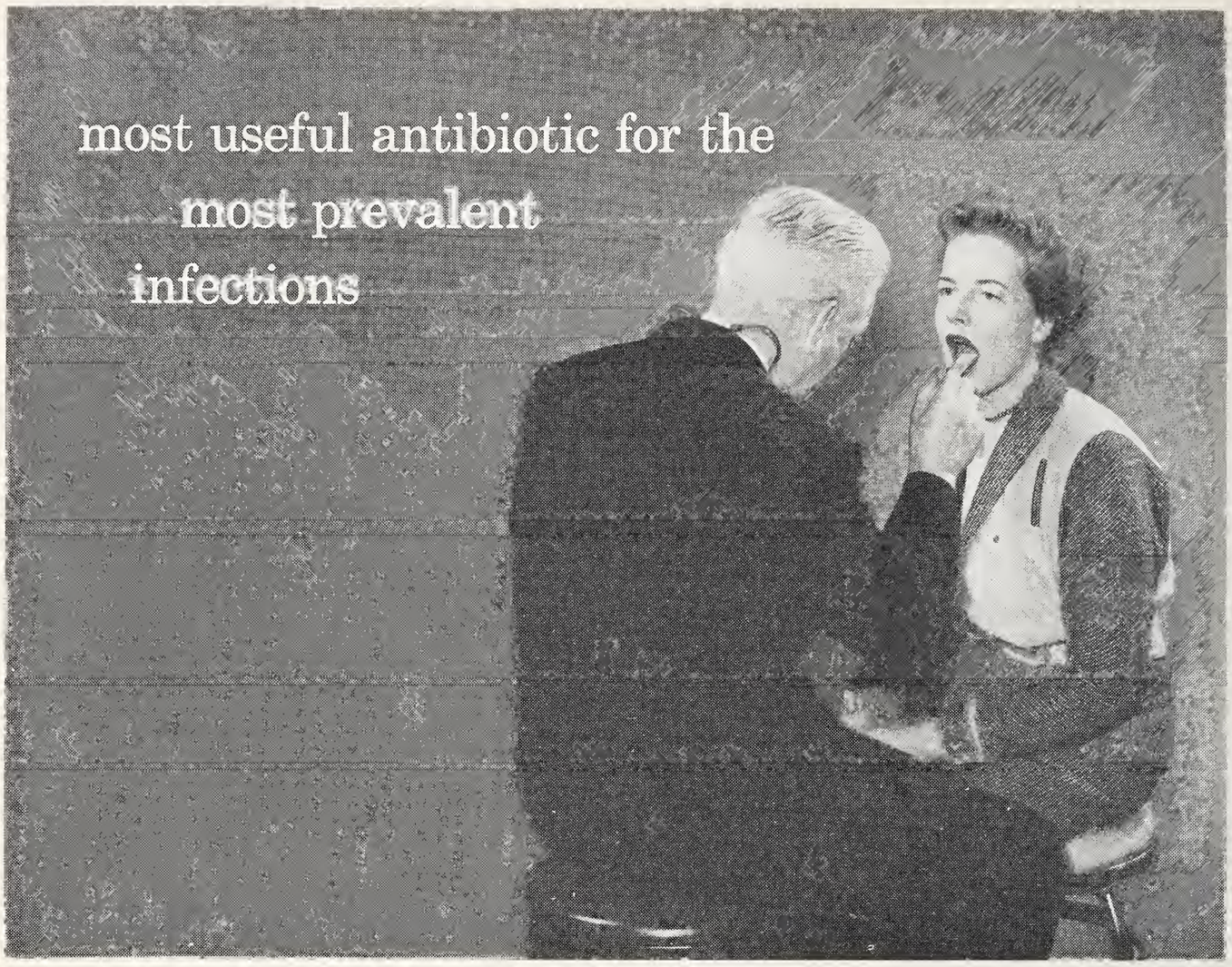
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The JOURNAL

of the Michigan State Medical Society

Issued Monthly Under the Direction of The Council

VOLUME 54 DECEMBER, 1955 NUMBER 12

Thrombotic Thrombocytopenic Purpura with Associated Afibronogenemia

Report of Case

By Robert C. Dickenman, M.D.,
Howard J. Brown, M.D.,
Tomiharu Hiratzka, M.D., and
Gunner Vetne, M.D.

Detroit, Michigan

SINCE first described in 1924 by Moschowitz,[9] fifty-five cases of thrombotic thrombocytopenic purpura have been reported. However, several of these may not be true examples of the condition. The syndrome is characterized by hemolytic anemia, thrombocytopenic purpura and variable neurologic manifestations. Recent studies indicate that the basic lesions are multiple aneurysmal dilatations of capillaries and arterioles, irregular segmental amorphous hyaline-like thickenings of the walls of these vessels and proliferation of endothelial cells.[8,10] There is secondary formation of platelet thrombi at some of the involved sites. In addition a few cases have been reported in which there were vegetations on the valves of the heart.[2,3,4,5,8] The literature has been reviewed by Barondess[2] and Symmers[14] in 1952.

This case is presented to describe further the endocardial vegetations and to report a case in which there was afibrinogenemia and thrombosis of large vessels.

From the Departments of Medicine and Pathology, City of Detroit Receiving Hospital and Wayne University College of Medicine.

Report of Case

Clinical Data.—The patient, a thirty-nine-year-old Negress, mother of six children, was admitted to the medical service of Detroit Receiving Hospital on August 2, 1953.

She had been in good health until twelve days before admission when she had experienced a sudden onset of unconsciousness, weakness of the right arm and leg and slurring of speech. She was admitted to another hospital at that time and recovered rapidly. On the day before this admission she developed left hemiplegia and consequently was brought to the hospital.

In 1951 the patient had received x-ray and radium therapy for carcinoma of the cervix uteri. In October, 1952, the pelvic examination was negative except for scarring in the base of the right broad ligament. A mass in the posterior pelvis was demonstrated by intravenous pyelograms; biopsy of the cervix was negative for carcinoma. Treatment for the past eight months had been for swelling of the right leg, thought to be due to old thrombophlebitis.

Admission physical examination revealed a euphoric, obese Negro woman. The blood pressure was 150 systolic, 80 diastolic, temperature 98° F. and other vital signs normal. Head, eyes, ears, nose and throat were normal. There was neither jaundice nor purpura. Chest wall, breasts and lungs were normal. The heart was not enlarged and no murmurs were heard; the rhythm was regular sinus. Examination of the abdomen was negative and the pelvis was unchanged from the above examination. There was paresis of the right seventh nerve, impaired movement of the uvula and palate and weakness of the left arm and leg. The muscle stretch reflexes were equal and hyperactive throughout and the Hoffman's sign was bilaterally positive. The Babinski was negative. The patient was unable to co-operate for a sensory examination.

Laboratory Data.—Urinalysis with a specific gravity of 1.027 was negative. Hemoglobin 10.6 gm./100 ml., the white cell count. 10,000 per cu. mm., and a differential of 68 per cent neutrophiles, 21 per cent lymphocytes, 8 per cent monocytes, and 2 per cent each of eosinophils and basophils. The blood urea nitrogen value was 16 mg./100 ml.; prothrombin time (Quick)

19.7 seconds (control 13.3 seconds). Spinal fluid protein was 4 mg./100 ml.; sugar 48 mg./100 ml., and chlorides 114 mEg./liter. Blood and spinal fluid Kline tests for syphilis were negative.

Because of a history of urinary difficulty two years before, fluctuating neurological signs and euphoria, the initial impression was multiple sclerosis.

The patient's condition remained unchanged, except for occasional vomiting unrelated to eating, until four days before death. Upper and lower gastrointestinal series and cholecystograms revealed no cause for the vomiting. Except for occasional elevations of temperature to 99.2° and 99.6° F. the patient was afebrile. The hemoglobin on August 10 was 10.3 gm./100 ml. and the white count was 18,300 per cu. mm. with a normal differential. Repeat white count on August 14 was 14,300 per cu. mm.

On August 19 the patient had an onset of pain and swelling of the left leg thought to be due to thrombophlebitis. Clotting time by the Lee-White method, after this episode, revealed no clot formation in four hours. Six hours later, in spite of an inadvertently given dose of dicoumarol (150 mg.) and heparin 50 mg., the clotting time was 6 minutes.

The next day, August 20, occlusion of the left femoral artery was noted. The prothrombin time was 20.1 seconds (control 11.2 seconds) and there was no clot formation by the Lee-White method. Later that day the clotting time was four minutes.

On the morning of August 21 there was occlusion of the right brachial artery. Again the blood did not clot by the Lee-White method. The hemoglobin was 8.7 gm. per 100 ml., erythrocyte count 3.7 millions per cu. mm., hematocrit 35 vols. per cent and platelet count 37.000 per cu. mm. Bleeding time was three minutes. The prothrombin concentration was 14 per cent by the Owren method and the prothrombin time 87 seconds by the Quick method. Again in the afternoon the clotting time was four minutes. Total serum proteins were 7.2 gm. per 100 ml. with 4.5 gm. per 100 ml. of albumin. Tests for cryoglobulins were negative.

During the last two days of life, while these thrombotic episodes were occurring, the patient had blood pressures ranging from 70/50 mm. Hg to 0/0 and a temperature elevation up to 101° F. There were still no cardiac murmurs and the electrocardiogram was normal. There was no jaundice or purpura, but the patient did have an emesis of coffee ground material on the last day of life. Attempted ganglionic blocks of the extremities were unsuccessful and priscoline was used until shock supervened. Despite a blood transfusion and nor-epinephrine by infusion the patient expired on August 22, 1953. On the day of death the hemoglobin was 7.9 gm. per 100 ml., red count 2.94 millions per cu. mm., white count 24,900 per cu. mm. and platelet count 70,560 cu. mm. The clotting time decreased from four to one minute before death.

In summary, during the terminal phase of the patient's illness, multiple occlusions of arteries and veins were the prominent features. There was no source clinically apparent for multiple emboli. Thrombotic thrombocytopenic purpura was suggested by the low platelet counts, neurological findings and the anemia, but the occlusions of large vessels and the lack of purpura were felt to exclude this disease.

Pathologic Findings

Necropsy.—The body was that of a well developed, well nourished colored woman weighing 70.4 kg. and 146 cm. in length. There was no jaundice, cyanosis or petechiae of the skin. In the brain was found a ragged area of softening involving the left motor cortex and the subjacent white matter. The neck, breasts, pleural cavities and mediastinum were essentially unchanged. The left lung weighed 520 gm., the right lung weighed 370 gm. and there was hypostatic congestion in the posterior and inferior portions of both. There was an embolus, measuring 4 cm. in length and 3 mm. in diameter, partially occluding a small branch of the pulmonary artery to the right lower lobe. There was no pulmonary infarction.

The pericardium was normal. The heart weighed 255 gm. and there were scattered petechiae on the epicardial surface. Both right and left ventricles were slightly dilated. The myocardium was red brown and there were multiple small widely scattered foci of fibrosis. The tricuspid and pulmonary valves were normal. Attached to the cusps of the aortic and the leaflets of the mitral valve there were vegetations which individually measured 1 to 4 mm.; the total aggregate vegetation on a single cusp measured up to 1.0 to 1.5 cm. in diameter. These were on the ventricular surface of the aortic valve 0.5 cm. from the edge of the valve, and at the line of closure of the mitral valve leaflets. There was no stenosis or dilatation of the valve orifices. The coronary arteries were normal. The foramen ovale and ligamentum arteriosum were closed.

The peritoneum, pancreas, gall bladder and adrenals were normal. The spleen weighed 120 gm. and was dark red and firm; the trabeculae and follicles were normal. The liver weighed 1700 gm. and the contour and consistency were normal. In the gastrointestinal tract there were a few serosal and mucosal petechial hemorrhages. The left kidney weighed 120 gm., the surface was pale, the consistency was soft, and the capsule stripped with ease. On the surface were many petechial hemorrhages. The right kidney weighed 70 gm. and was similar to the left kidney. The bladder was normal.

The cervix and corpus of the uterus were atrophic, but otherwise unchanged. The right psoas muscle was hard and in the upper two thirds cut with difficulty. On section the muscle was divided by septa of white firm tissue.

The left leg was swollen, discolored and the skin was easily rubbed off. There was thrombosis of the femoral artery and vein and all vessels distal to these with gangrene extending from the lower third of the thigh and including all of the leg and foot. Similar changes were noted in the right arm and forearm, but these vessels were not examined. In the right iliac artery there was a firm pedunculated thrombus measuring 2 cm. in length and 0.7 cm. in diameter, partially occluding the lumen of this artery 4.0 cm. from its origin.

Histologic Examination.—There was pulmonary edema and hyperemia. A few of the pulmonary arterioles were involved by segmental hyalin thickening of the walls and there were a few small thrombi in the arterioles and capillaries. The mitral and aortic valves were slightly

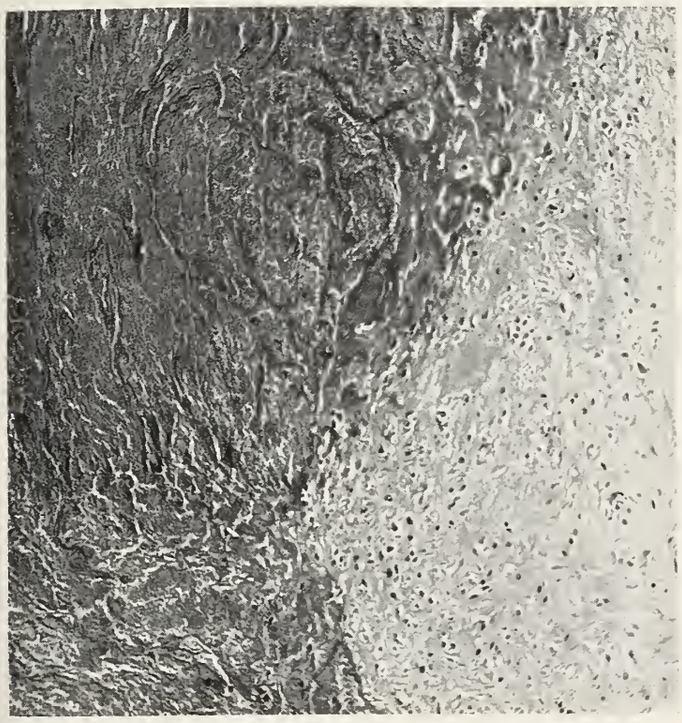


Fig. 1. Line of attachment of amorphus vegetation to a cusp of the aortic valve. Hematoxylin and eosin stain. x 80.

thickened and attached to the surfaces of these valves, with a sharp line of demarcation from the valves, there were vegetations which with hematoxylin and eosin stain were homogeneous, amorphous and eosinophilic. There were extremely few inflammatory cells and no bacteria in the vegetations. These vegetations were periodic acid Schiff positive; with Van Giesen stain they were yellow-green, no elastic fibrils being seen; with silver stains there were no elastic or silver positive fibrils (Fig. 1).

Throughout the myocardium there were small recent and old infarcts. There was segmental aneurysmal dilatation of some of the arterioles demonstrated by serial sectioning, and in some areas the walls of the arterioles were irregularly thickened by amorphous eosinophilic hyalin-like material with loss of the normal components of the arteriolar wall at that point (Figs. 2 and 3). This material was covered by plump endothelial cells. In some of the involved arterioles there were small thrombi, some of which were covered by endothelial cells. These thrombi were amorphous, eosinophilic, homogeneous masses, periodic acid-Schiff positive, yellow-green with Van Giesen's stain and were negative for fibren with positive phosphotungstic acid stains. There were no bacteria. There were similar capillary thrombi. The thrombi in the arterioles and capillaries of the lungs, kidneys, spleen and other organs had similar staining characteristics.

In the spleen there was marked passive hyperemia and changes in some of the arterioles. Hemosiderin containing macrophages were scattered throughout the spleen. In the liver there was moderate hyperemia characterized by dilatation of the central veins and the sinusoids surrounding these, with slight degeneration and

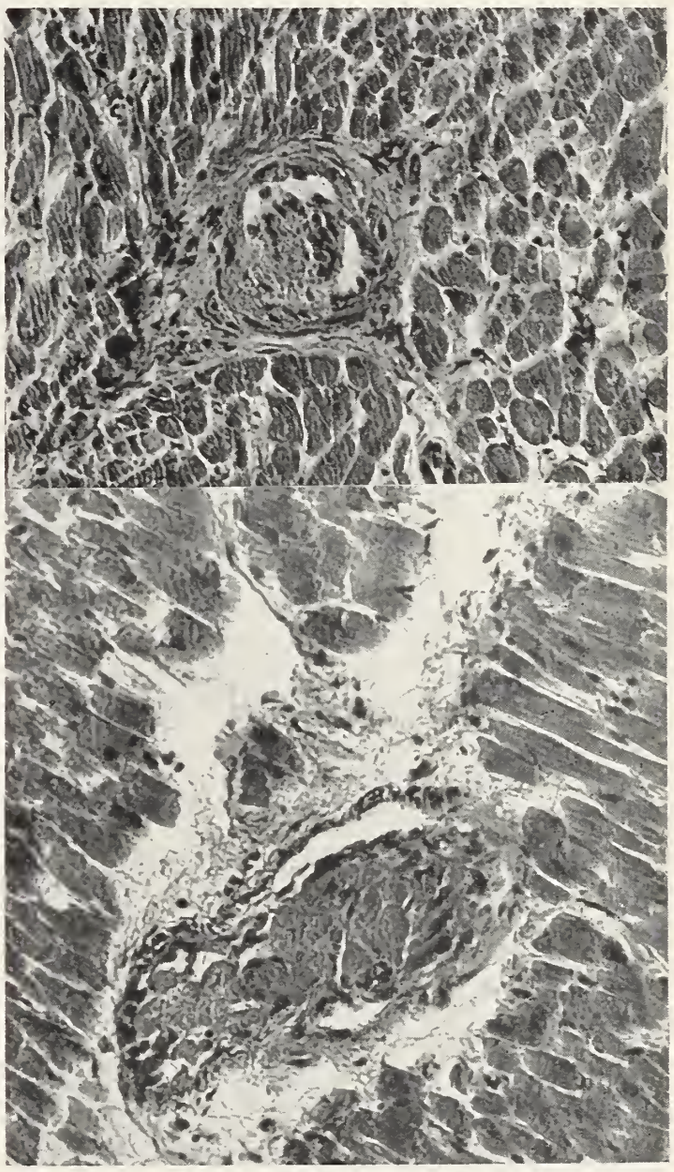


Fig. 2. *(above)* Platelet thrombus partially occulting arteriole of myocardium. Note focal destruction of arteriolar wall. Hematoxylin and eosin. stain. x 225

Fig 3. *(below)* Aneurysmal dilatation of an arteriole of the myocardium with an amorphus endothelial covered thrombus. Hematoxylin and eosin. stain. x 225.

regeneration of the hepatic cells in these areas. In the pancreas there were arteriolar lesions similar to those described in the heart. In the kidneys there were small healed infarcts and recent small infarcts; there were scattered, hyalinized glomeruli with thickening of the basement membrane of the glomeruli. Lesions of the arterioles and capillaries similar to those seen in the heart were present.

In the right psoas muscle and right broad ligament there were nests of well differentiated squamous cell carcinoma which had invaded and destroyed the muscle

with resultant fibrous replacement and had also invaded lymphatics and veins. Many of the veins contained thrombi composed largely of fibrin. The uterus was atrophic. The cervix was atrophic and no demonstrable carcinoma present.

The adrenals were normal except for slight nodular hyperplasia of the cortex. There was thrombosis of the popliteal vein and artery of the left leg and gangrene of surrounding tissue. The thrombi were not Schiff positive and were composed mostly of fibrin, red blood cells and platelets. The bone marrow was moderately hyperplastic. In the brain there were lesions of the cerebellar arterioles which stained the same as those described above in the myocardium. There were multiple microinfarcts, especially prominent in the frontal lobes. A small arterial embolus was demonstrated in the left frontal lobe.

Discussion

The significant lesions in this case were arteriolar and capillary thromboses with microinfarcts, vegetations of the aortic and mitral valves and occlusions of the major vessels of the right arm and left leg. An incidental finding was carcinoma of the cervix, metastatic to the right psoas muscle and the right broad ligament.

The arteriolar and capillary lesions presented similar histologic and histochemical reactions to those reported by Meacham,[8] Gore[6] and others. These were aneurysmal dilatations of the involved vessels of the heart, segmental subendothelial amorphous thickenings of the walls, proliferation of endothelial cells and small amorphous thrombi, some covered by endothelial cells. These lesions were periodic acid-Schiff positive, phosphotungstic acid negative for fibrin, an amorphous yellow-green with Van Giesen's stain and acidophilic with H. and E. stains. The authors feel that the primary change is in the vessel wall with subsequent deposition of platelet thrombi.

The majority of the microinfarcts in the myocardium were moderately old with only a few recent lesions. However, in the kidneys most of the lesions were recent, with a relatively few older infarcts. We believe that this is additional evidence that the lesions occur in crops.

There was evidence of mild old rheumatic involvement of the mitral and aortic valves, characterized by small nodular hyalin thickenings, but there were no perivascular infiltrations or Aschoff bodies to indicate recent activity.

Because of the histologic structure and histochemical characteristics of the vegetations, the authors believe that these were composed primarily of platelets, with a small amount of fibrin also present.

In most of the cases in the literature in which these vegetations have been described complete staining characteristics have not been listed. They have been described as non-bacterial thrombotic endocarditis or as verrucous endocardosis. Since these are described as fibrinoid degeneration of the valve,[1,7] the vegetations in this case do not fit into this classification. Microscopically the lesions of verrucous endocardosis described by Allen and Sirota[1] are poorly demarcated from the valve, are composed by red blood cells, fibrin, and platelets, and loosened and fragmented collagen fibers. With silver stains, the lesions of verrucous endocardosis are shown to contain silver positive fibers. Therefore we conclude the vegetations in the case of thrombotic thrombocytopenic purpura are not identical with those of verrucous endocardosis.

The infarct of the left motor cortex was larger than those occurring in thrombotic thrombocytopenic purpura and represents an embolic phenomenon, probably from a dislodged portion of one of the vegetations. The mental changes and transient neurologic findings were no doubt due to the arteriolar lesions and the resultant microinfarcts, which were most pronounced in the frontal lobes. The euphoria was similar to that seen after prefrontal leukotomy.

Unfortunately blood studies were incomplete; however, some were so interesting that a discussion of these is justified.

On the day before death, the patient's clotting time was indefinite, i.e., more than twenty-four hours, and the prothrombin time by Quick's method was more than 80 seconds (less than 2 per cent "prothrombin"). Prothrombin determinations with Owren's P. and P. method were 16 per cent. To a portion of the patient's plasma was added large amounts of thrombin to induce clotting. No clot or fibrin threads were obtained, indicating a lack of fibrinogen in the patient's blood. As fibrinogen is added to the coagulation system in Owren's test but not in Quick's, this explains the discrepancy in the two results. The patient was inadvertently given 150 mg. of dicoumarol two days before, and this fact explains the reduction of prothrombin found by Owren's method.

The amount of antithrombin and fibrinolysin in the patient's plasma was not determined, but it is

not possible to explain the complete lack of clotting of the patient's plasma when thrombin was added by increased amounts of one of these substances. Since no clot was formed, we were unable to measure the amount of fibrinogen in the patient's plasma. According to a study by Schneider,[13] the amount of fibrinogen under such circumstances is less than 60 mg. per 100 ml. of plasma.

On the day the blood was found to be depleted of fibrinogen the patient had developed an occlusion of the right brachial artery; thirty hours previously she had had an occlusion of the left femoral artery. The reduction in the fibrinogen might be possibly explained as a result of "fibrin embolism" which has been reported in cases with placenta abruptio.[12] Fibrinogen is usually reproduced rapidly by the liver, and this was also evidently true in this case as the clotting time just before death was normal. At necropsy thrombi with many fibrin threads were found in the left femoral artery and vein. The question arises as to whether in thrombotic thrombocytopenic purpura there is depletion of fibrinogen and "fibrin clots." Fibrinogen levels in cases of thrombotic thrombocytopenic purpura have not been reported.

The finding of "fibrin embolism" in patients with placenta abruptio is thought to be caused by massive release of active thromboplastin from the placenta into the blood stream. In thrombotic thrombocytopenic purpura there apparently is disintegration and degeneration of platelets. It is possible, theoretically, that large amounts of platelet thromboplastin might be released under such circumstances. Platelet thromboplastin experimentally does not induce massive thrombosis or "fibrin embolism" even when injected in large amounts in the blood stream of animals.[11,13] However, the effect in humans might be different from that in animals.

Summary

An unusual case of thrombotic thrombocytopenic purpura is presented with endocardial vegetations, embolic phenomenon, lesions of the capillaries and arterioles and afibrinogenemia associated with thrombosis of major vessels. The authors believe that the latter may be secondary to the release of thromboplastinogen activating substance from the platelet thrombi.

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OLD MEN AMONG WORLD LEADERS

The world just doesn't seem to be able to get along without its old men.

Winston Churchill, for example, gave up his job as prime minister of Great Britain last April 5 because of his advanced age.

But today, at 81 reports are coming from London that his conservative party cannot get along without him.

There is chancellor Konrad Adenauer of the federal republic of West Germany. Adenauer will be 80 on January 5.

There is President Syngman Rhee of South Korea. Rhee admits to being 80 years old.

President Juho Paasikivi of Finland was 85 years old on November 27.

King Haakon VII of Norway should not be forgotten either, though he is not a leader in the political sense. Haakon was 83 last August 3.—*United Press.*

Physical Medicine and Rehabilitation: A Medical Care Specialty

I. Its Background, Scope and Philosophy

By Kathryn McMorrow, M.D., M.P.H.
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REHABILITATION has become a magic word in the past five years. There are rehabilitation centers, committees, physicians and lay people alike whose special avocation is rehabilitation. Within the medical profession itself, many orthopedists, some internists and others lay vociferous and often highly charged emotional claim to the term. Therefore it is necessary that the physiatrist, whose vocation is physical medicine and rehabilitation, define the term rehabilitation concretely and dispel the magic read into it by subjectively oriented enthusiasts.

Too many of the general profession are totally unaware that there are fundamental differences between the physician who is certified by the American Board of Physical Medicine and Rehabilitation and other physicians who use the term loosely in describing themselves. There are also fundamental differences in the practice of medicine by the physiatrist and others rendering patient care.

Because the physiatrist has failed to point out these differences from the beginning to the profession, he has allowed a very serious ethical problem and a definite economic danger to arise within the general profession. Both have grown out of the irresponsible use of rehabilitation as a magic bagatelle.

Rehabilitation is that mechanism in the therapeutic process by which the therapeutic process may be hastened and the therapeutic goal extended through the objective use of paramedical persons. There is no magic in catalyzing the progress of a patient toward independence. It is hard and often laborious work over a period of months and years to restore a patient to the fullest physical, mental, emotional, social and vocational independence of which he is capable. Rehabilitation is not the restoration of the patient to his final capacity. It is the mechanism whereby such restoration is accomplished.

The physiatrist differs from other physicians only in that he objectively recognizes the fact that rehabilitation is a mechanism in the therapeutic process, and that the mechanism can be catalyzed by the objective use of paramedical persons. The basic physiatric technique which he learns in three years of residency and fellowship is the ability to write precise, accurate, detailed individual prescriptions for his patient to be filled by the paramedical person. No other practitioner of medicine is so trained. This includes the psychiatrist who was the first to recognize the mechanism in healing called rehabilitation, but who still, in the majority, uses the occupational therapist subjectively on a referral basis to render medical care to his patient. It also includes the orthopedist who has been most vehement in his demand that the physiatrist relinquish the term rehabilitation. The basis of his demand lies in his thorough familiarity with the physical therapist. He, however, is not trained in physical therapy techniques, and he certainly has not been taught the objective prescriptive use of the occupational therapist, speech and hearing therapist, the clinical psychologist, social case worker and vocational counsellor. In fact, he who most angrily denounces the physiatrist is least likely ever to have read the requirements which the American Board of Physical Medicine and Rehabilitation expects the physiatrist to fulfill.

This does not mean, and this must be stressed, that the physiatrist is egregious. He never has nor could claim that no other physician can prescribe accurately for anyone or several of the paramedical persons involved in the mechanism of rehabilitation. He must state his certification in his specialty indicates that he can prescribe accurately for a patient in need of any or all of the services of these paramedical persons. It is his trademark, his vocation, his specialty.

This brings into focus the serious ethical problem which faces the general profession and the economic threat to the profession. Through ignorance and by default, the physician has (and will for some time to come) referred a patient for medical care services to a person not trained or licensed to practice medicine. There are two chief reasons which account for this breach in ethics: (1) The physician (by reason of medical school training and community practice) discounts the value of, e.g., "physiotherapy." (2) He is overwhelmed (by reason of medical school training

and community practice) by the technical knowledge of, e.g., "clinical psychologist." Unfortunately, both these groups and others in a similar category are (1) hurt because the physician discounts their special training and (2) disdainful because the physician displays such obvious ignorance. It is most human to arrive at the conclusion that they in isolation are much more important than the physician in treating the patient. It is then very easy to persuade the patient toward their subjective belief. We then have the unethical phenomenon of a person practicing medicine without a license, with the physician contributing to this unethical practice.

Simultaneously there arises a most vicious practice which threatens the entire American people here and now. It is both a matter of ethics and of economics. Again it is most human to ignore the former and endorse the latter when an individual or a group is threatened. It is imperative that the general profession adhere to the former if it is to survive the economic threat of third party payment.

Each and every physician in private practice today has had experience with fee for service paid him from the three sources of funds for medical care today: tax funds, eleemosynary funds and assurance funds. Few have escaped an occasional twinge of anxiety and some of us have become deeply concerned with the increasingly widespread attitude in which the administrators of these funds tend to become protectors of a business rather than a liaison between directors and trustees and the medical profession.

The practice of medicine includes both a professional (ethical) area and a business (economic) area. The professional part of medical practice is basic. Illness makes a patient dependent on his physician for help back to health. Only a properly trained and licensed person can give this help legally and ethically. The business part of medicine is divided in two: the fee for service which is the source of livelihood for the physician and his family, and the cost of the materials and facilities which he must use in managing his patient. It is necessary that the physician have control of both.

However, many a general practitioner today is acutely aware that he does not have control of necessary facilities particularly when he needs a bed for his patient. It is not at all uncommon in metropolitan areas for him to be entirely unable to secure a bed in hospitals where special rules allow him only to refer to a specialist. But bad feeling is created in the mind of the specialist when the general practitioner refuses to make a house call half-way across the city for the specialist. There is danger in condoning this situation wherever a third party interferes with the professional practice of medicine. Too often the specialist forgets that his livelihood depends on referrals from the general practitioner and assumes the irrational role of liaison officer between the profession and the hospital administrator, rather than using his influence in bringing about the more rational situation in which the hospital administrator acts as a liaison between the civic-minded members of the board of trustees and the equally civic-minded members of the general profession.

It is small wonder today that patients are confused, when we day after day continue to foster situations which compound the confusion. It is vital that the profession take back its prerogatives lost in the growth of organizations dependent on third party payment.

In conclusion, this appears to be a far cry from physical medicine and rehabilitation as a medical specialty. However, the physiatrists form a hard core of physicians who are in daily contact with patients, other physicians, paramedical people, executive directors and administrators of tax, eleemosynary and assurance funds, and with the civic-minded businessmen who control expenditures. We know it is our duty to point out to the general profession that its business is with the trustees of the hospital, insurance company and social agencies and not with the executive directors of these organizations. Let the executive director return to his traditional role of executing policy rather than forming policy. Formation of policy is the business of the board, and policies will be rational once the profession resumes its responsibility for keeping the various civic-minded individuals informed regarding the need of facilities for patient care. These facilities all are eventually paid for by the people and all physicians are licensed to practice by the people.

The physician-organization problem can be resolved in the best interest of the public by a logical approach with fact and reason. All members of our profession can render patient care in,

(Continued on Page 1432)

Treatment of Rheumatoid Arthritis and Osteoarthritis with Succinate-Salicylate

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THE primary purpose of this study was to evaluate the therapeutic results of succinate-salicylate therapy in cases of early active rheumatoid arthritis and osteoarthritis over a protracted period.

Thirty cases in each of the two groups were treated and observed over a two-year span. All patients in both groups were given a trial of massive acetylsalicylic acid therapy (80 grains per diem) for three months, resulting in drug toxicity in a major or minor degree without accomplishing objective improvement. A few patients had undergone ACTH-cortisone therapy previously without permanent objective results.

In the treatment of various types of arthritic conditions it has long been known that salicylates, administered in massive dosage, frequently cause undesirable side effects. Gastrointestinal disturbances, tinnitus, and rashes are commonly observed. While not of a serious nature, these side effects have proved a serious deterrent to the wider use of salicylates in massive and adequate dosage.

Recent findings of investigators in this country and abroad offer conclusive evidence that the action of salicylates in arthritic conditions is similar to that of ACTH-cortisone.[1,12,18]

Hailman[12] has summarized and tabulated the extensive medical literature bearing on the biologic similarities between ACTH-cortisone and salicylates.

Bach, in England, states that "similar chemical and biochemical changes occur with the administration of salicylates, ACTH, and cortisone. Rheumatic activity is suppressed. Salicylates exert their pharmacological activity by engendering adrenocortical excess."[1]

There is also evidence that salicylates and ACTH-cortisone act similarly to suppress experimental arthritis,[18] suppress skin sensitivity reactions,[8,24] suppress inflammation,[9] suppress allergic disorders and serum vascular disease,[7,10,20,25,27] protect against anaphylactic shock,[6,19] depress gamma globulin and antibody formation,[15,16] increase 17-Ketosteroid excretion,[2,30] deplete adrenal cholesterol and ascorbic acid,[3,14,22,29] cause fall in blood eosinophiles,[17,23] increase uric acid excretion,[28] cause negative nitrogen balance,[21] inhibit spreading effect of hyaluronidase.[11]

The similarities of the salicylates and the cortical hormones are especially noteworthy with regard to their therapeutic action in arthritic and rheumatic disorders. In selecting a program of treatment for the arthritic patient, however, it must be borne in mind that, as Hench points out,[13] cortisone is not justified in patients with active tuberculosis, psychoses or severe psychoneuroses, cardiovascular or renal disease, diabetes mellitus, osteoporosis, peptic ulcer, or convulsive disorders. Furthermore, as concluded by Brown et al,[4] cortisone is difficult to justify in the treatment of osteoarthritis.

On the premise that salicylate therapy is preferable to cortical hormone therapy in a long-term program, but mindful that ordinary salicylates, administered in adequate dosage, are apt to cause a high frequency of toxicity, this study undertook to evaluate a combination of succinate-salicylate* which a group of investigators in 1954 had found highly efficacious and considerably less toxic than ordinary salicylates.[5]

Rheumatoid Cases

All thirty cases of rheumatoid arthritis were clear-cut and had at least a two-year follow-up. The Therapeutic Criteria in Rheumatoid Arthritis established by the American Rheumatism Association in 1949 was used. Questionable cases were omitted. No cases of rheumatic fever, rheumatoid-like disorders, and gout were included.

The cases were predominately females; 75 to 80 per cent were between the ages of forty-one and fifty-one years of age. All cases were acute, polyarticular with fusiform joint swelling, pain, stiffness, and warmth to the affected joint. Only four patients had muscular atrophy adjacent to the affected area. None had subcutaneous nodules.

The majority of patients appeared acutely ill (93 per cent) with general malaise, fever, and tachycardia, but to a minor degree. Onset of symptoms occurred within one week and subsided after two weeks of therapy. Temperatures varied from 99.0° to 101°, the majority having temperatures of

*Ber-ex tablets furnished by Pan Pharmacals, Inc., New York, N. Y.

TABLE I. CLASSIFICATIONS OF RHEUMATOID PROGRESSION IN 30 CASES IN STUDY[26]

Stage	Roentgenologic Signs	Muscle Atrophy	Extra-Articular Lesions (Nodules Teno-Vaginitis)	Joint Deformity	Ankylosis
I	Osteoporosis (no destructive changes)	0	0	0	0
	25 cases (83.3%)	0	0	0	0
II	Osteoporosis (slight cartilage or subchondral bone destruction were present)	Adjacent	May be present	0	0
	5 cases (16.7%)	4 cases (13.2%)	0	0	0
III	Osteoporosis (cartilage destruction, bone destruction)	Extensive	May be present	Subluxation, ulnar deviation, and/or hyperextension	0
	No cases				
IV	Same as III with bony ankylosis	Extensive	May be present	Same as III	Fibrous or bony ankylosis
	No cases				

TABLE II. CLASSIFICATION OF FUNCTIONAL CAPACITY IN 30 CASES IN STUDY[26]

Class	Before Therapy	After Therapy
I	Complete Ability to carry on all usual duties without handicaps No cases	25 cases (83.3%)
II	Adequate for Normal Activities Despite handicap or discomfort or limited motion at one or more joints 25 cases (83.3%)	5 cases (16.7%)
III	Limited Only to little or none of duties of usual occupation or self care 5 cases (16.7%)	None
IV	Incapacitated, Largly or Wholly Bedridden or confined to wheelchair; little or no self care No cases	No cases

100.2°. Their joints were painful, stiff, swollen, and warm to palpation. Limitation of motion varied from 10 to 30 per cent by goniometer and tape measure recordings.

All cases had elevated erythrocyte sedimentation rates (Winthrop) from twenty-four to fifty which fell to normal in thirty days with therapy.

Routine complete blood counts were done in all cases. All had leukocytosis varying from 9,500 to 12,500. The majority had a white-cell count of 10,400. This returned to normal after two weeks of treatment with succinate-salicylate and remained so for two years. Red blood cells varied from 2,560,000 to 3,950,000 at the onset. Correction with iron therapy resulted in three months.

Routine urines checked initially and at monthly intervals were always negative. Prothrombin rates were normal at the onset and remained so during the two-year period of therapy. They were also checked at monthly intervals.

Routine blood sugars initially were slightly elevated in only two cases and were normal after one month of therapy. Basal metabolic rates, done where indicated, revealed no abnormalities.

Roentgenograms were taken in all cases of the involved joints and only five (about 17 per cent) showed changes. There was only slight haziness and narrowing of the interarticular spaces in all of these patients. They were unchanged over two years, as shown by roentgenograms.

Distribution of the rheumatoid arthritic joints were as follows:

Fingers and knuckles	86%
Knees	7%
Shoulders	7%

In all cases more than one joint was involved.

Joint mobility was increased in all patients according to goniometric and tape measure recordings. Using 100 per cent as normal range of motion, the following table was compiled.

JOINT MOBILITY IMPAIRMENT

Per cent of Impairment	Impairment at Onset	Impairment after 14-days of Therapy
10%	32%	0%
20%	60%	0%
30%	8%	5%

Thus two weeks of therapy did a great deal to improve limited motion of the involved joints.

Dosage

Succinate-salicylate (Ber-ex) contains per tablet, calcium succinate 2.8 grains, acetylsalicylic acid 3.7 grains. Succinate-salicylate tablets (Ber-ex) were administered to all cases of rheumatoid arthritis in the dosage of twenty-four tablets daily (6 q.i.d.) before meals for twenty-one days; then sixteen tablets (4 q.i.d.) for thirty days, or until a remission in the rheumatoid joints occurred; then twelve (3 q.i.d.) for thirty days, and a maintenance prophylaxis dose of four tablets daily. Mild relapses occurred in only two cases, and then the tablets were increased to twenty-four daily for only one week, following which dosage was accordingly stepped down.

Toxic symptoms were minimal.

TOXIC SYMPTOMS

Nausea	Vertigo	Emesis	Rash
21%	7%	3.5%	0%

TABLE III. RESPONSE OF RHEUMATOID ACTIVITY TO THERAPY IN 30 CASES AFTER SUCCINATE-SALICYLATE THERAPY FOR TWO YEARS[26]

Grade	Systemic Signs	Signs of Joint Inflammation	Signs of Extra Articular Activity	Remaining Impairment of Joint Mobility	Articular Deformity	Erythrocyte Sedimentation Rate	Roentgenologic Signs
I. Complete Remission	28 cases (93%) prior to therapy. No cases after 2 weeks of therapy for 2 years.	30 cases prior to therapy. No cases after two years of therapy.	No cases	Due only to irreversible changes. 4 cases (13%) after therapy for 2 weeks.	Due only to irreversible changes. No cases	30 cases had an elevated sed. rate which fell to normal after 2 weeks and remained normal.	All 30 cases. No progression.
28 cases							
II. Major Improvement	Elevated erythrocyte sedimentation rate and/or vaso-motor imbalance permissible.	Only minimal residual joint swelling (no new sites)	Minimum (no new sites)	Only consistent with minimal residual activity	Due only to irreversible changes	May be elevated	No progression
2 cases	2 cases (7%)	No cases	No cases	Mobility reduced—2 cases (7%)		No cases	No cases
III. Minor Improvement	Decreased	Only partially resolved (no new sites)	Decreased (no new sites)	In relation to residual inflammation	May be present	May be elevated	No progression
	No cases	No cases	No cases	No cases	No cases	No cases	No cases
IV. No Improvement	Undiminished	Same or worse	Same or new sites or exacerbation*	Same, better or worse	Present or not	Any rate	Changes indicative of progression
	No cases	No cases	No cases	No cases	No cases	No cases	No cases

Where nausea occurred one aluminum hydroxide tablet with each dose of succinate-salicylate was given, with a snack of crackers at bedtime. Where emesis occurred this was eliminated when the dosage was changed to after meals. Vertigo was controlled with mild laxatives and a glass of hot water on arising. As a result toxicity was low and the dosage of drug did not have to be altered in any case.

To avoid any confusion, cases of co-existing stages in the same patient were included in the Tables I, II and III. The joint with the most involvement was used as the basis of classification as recommended by the "Therapeutic Criteria for Response of Rheumatoid Arthritis," by the American Rheumatism Association in 1949.[26]

Thus of the thirty cases of acute active rheumatoid arthritis, twenty-five cases fell in Stage I, and five cases in Stage II; twenty-five cases in Class II prior to therapy advanced to twenty-five cases in Class I after therapy; five cases in Class III prior to therapy advanced to five cases in Class II after therapy.

In response to therapy, twenty-eight of the thirty cases revealed complete remissions; two cases had relapses, each lasting for a period of one week after one year of therapy. In both relapsed cases the joint mobility was improved markedly. There were no signs of joint inflammation, extra-articular activity or deformity, and the erythrocytic sedimentation rates were normal. No changes were shown by roentgenograms.

Successful therapy for two years maintained these thirty cases of rheumatoid arthritis with only two relapses. Drug toxicity was minimal and symptomatic and objective improvement was dramatic.

Osteoarthritis Cases

All of the thirty cases of early osteoarthritis were followed for at least two years. Cases in this study were limited to those showing joint involvement of the extremities. Patients showing roentgenological questionable or definite spinal involvement were eliminated for clarity of data presentation.

Females predominated this series also: 75 to 90 per cent between the ages of fifty-one and seventy years. In all patients, the onset was insidious with symptoms and signs of arthritis persisting for at least a three-year period. All were well nourished, but 7 per cent were obese. Symptoms consisted of joint stiffness in both large and small joints, pain, swelling, and limitation of motion. These osteoarthritic patients also complained of general fatigue. All were afebrile. Acute symptoms subsided after two weeks of therapy. Limitation of motion varied from 10 to 30 per cent by goniometer and tape measure readings.

All cases had erythrocyte sedimentation rates (Winthrop) which were normal with the exception of two cases which showed a 10 per cent elevation that fell to normal in twenty-nine days. All cases checked bi-monthly remained normal.

Routine complete blood counts done in all cases

were normal as well as complete urine examinations at monthly intervals.

Prothrombin rates were normal at onset and remained so during the entire two years of follow-ups at monthly intervals.

Blood sugars were elevated slightly (140 mg. per cent) in three cases but returned to normal after one month of therapy; basal metabolic rates (Jones) were done where indicated but were normal except for one obese patient who had a —15 reading and was treated symptomatically, resulting in a normal reading in six months.

Roentgenograms taken in all cases of the involved joints revealed some lipping and spur formation in six cases. The rest were normal.

DISTRIBUTION OF DEGENERATIVE JOINTS

Knees	52%
Shoulders	30%
Fingers	10%
Hips	8%

The knees were the joints predominantly involved. In most cases more than one joint was involved and mobility was decreased. Using 100 per cent as normal range of motion the following table was compiled. All patients were measured by goniometric and tape measure recordings.

JOINT MOBILITY IMPAIRMENT

Per cent of Impairment	Impairment at Onset	Impairment after 14 Days of Therapy
10%	30%	0 %
20%	60%	14 %
30%	10%	3½%

Thus, fourteen days of treatment improved joint mobility considerably and this improvement remained for two years of follow-up.

Dosage

The same dosage schedule was used in all cases as in those of rheumatoid arthritis.

TOXIC SYMPTOMS

Nausea	Vertigo	Emesis	Rash
14%	3½%	0%	0%

Toxic symptoms were rare in this group also. Where nausea occurred same procedure was followed as with the rheumatoid cases, and toxicity was eliminated.

Symptoms of pain, stiffness, and swelling were based on degree from one to four plus.

OSTEOARTHRITIS (30 CASES)

	Initial Severity	Final Severity	Days until Maximum Change
Pain 30 cases	3+	0	10 days
Stiffness 30 cases	4+	24 cases—0 6 cases—1+	16 days
Swelling 30 cases	1+	0	6 days

Relief of symptoms and restoration of mobility were dramatic on maintenance dosages for the two year period with complete functional capacity, except for the six cases showing x-ray changes where damage was irreversible as proven by follow-up x-rays at the end of the two year period. There were no cases of muscle atrophy or severe joint deformity in the series. Twenty-four cases could be classified as Class II or adequate for normal activities despite the handicap of discomfort and limited motion of their joints, prior to therapy. They became Class I after two weeks of therapy and remained thereafter in this class. Six cases in Class III advanced to Class II after two weeks of therapy and remained in that classification for two years.

CLASSIFICATION OF FUNCTIONAL CAPACITY IN 30 CASES OF OSTEOARTHRITIS[26]

Class		Before Therapy	After Therapy
I	Complete Ability to carry on all usual duties without handicaps	No cases	24 cases (79%)
II	Adequate for normal activities Despite handicap of discomfort or limited motion at one or more joints	24 cases (79%)	6 cases (21%)
III	Limited Only to little or none of duties of usual occupation or self care	6 cases (21%)	None
IV	Incapacitated, largely or wholly Bedridden or confined to wheelchair; little or no self care	No cases	No cases

Functional capacity was greatly increased. Maintenance dosage controlled improvement with no flare-up of joints. Drug toxicity was minimal and both symptomatic and objective improvement resulted in this series of cases.

Comment

Results of this study of sixty cases of early arthritis (thirty rheumatoid, thirty osteoarthritis) were excellent over a two-year follow-up period. Patients responded well to therapy with immediate relief of symptoms and excellent objective improvement of their joints. Toxicity was minimal. Salicylate toxicity was obviated. The administration of succinate salicylate was uncomplicated.

It must be remembered, however, that all cases studied were in these early stages of these arthritic disorders. All had failed to tolerate large doses of acetyl-salicylate and, for a three-month period on this therapy, had failed to show objective improvement.

The combination of calcium succinate and acetylsalicylic acid (Ber-ex) proved far superior to acetylsalicylic acid alone not only as regards to toxicity but therapeutic results as well.

With this combination swelling was reduced as rapidly as impaired joint mobility and pain. Follow-up therapy could be maintained on a small dosage effectively. There were only two cases of relapses in the rheumatoid group in two years and response to resumed massive therapy was more rapid than originally.

Summary and Conclusions

1. Succinate-salicylate proved to be an excellent therapeutic agent in correcting the signs and symptoms in both osteoarthritis and rheumatoid arthritis in two weeks.

2. Succinate-salicylate therapy was notable for low toxic manifestations.

3. Prevention of probable relapses appears to have been made possible by the use of succinate-salicylate.

4. Fewer and milder side effects than with acetylsalicylic acid were obtained.

5. Sedimentation rates in rheumatoid cases rapidly became normal and remained so.

6. Prothrombin rates did not change.

7. Results were lasting and apparently affected the disease process itself over this two year follow-up.

8. Succinate-salicylate did not require excessive supervision required of other therapy as ACTH, cortisone, gold, et cetera, physical therapy, rehabilitation, psychotherapy and orthopedic corrections.

9. Succinate-salicylate proved to be a drug of choice in early arthritis where salicylates are indicated.

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PHYSICAL MEDICINE AND REHABILITATION:

A Medical Care Specialty

(Continued from Page 1427)

and work with, any organization providing medical care facilities. The physician must be allowed to control his practice directly and through the code of ethics of the American Medical Association and his county society. If he does not exercise his privilege as granted through his license to practice, eventually his profession, including his livelihood, will attract only second rate minds and persons, with lowered standards of care for the people who consult with him for relief.

Infectious Hepatitis in Washtenaw County, Michigan

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AN unprecedented increase in the number of infectious hepatitis cases reported to the Washtenaw County Health Department during the spring and early summer of 1953 indicated the need for an epidemiologic investigation to search for relevant and remedial factors. This report presents the procedures followed in the investigation and pertinent findings.

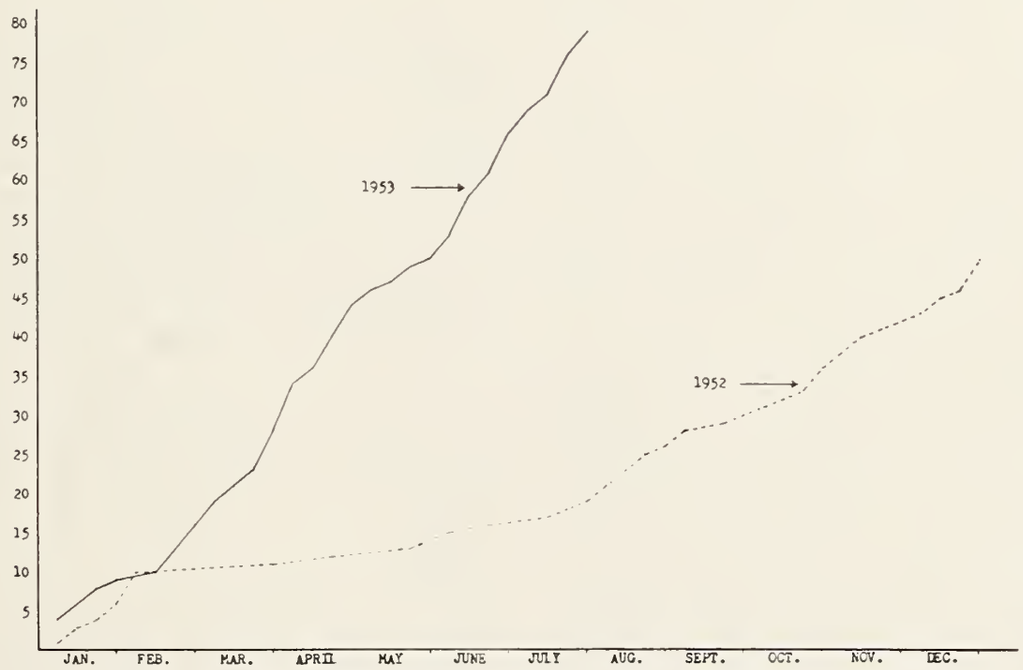


Fig. 1. Cumulative cases of infectious hepatitis in Washtenaw County.

Procedures

The first was that of determining, as accurately as possible, the extent of infectious hepatitis in Washtenaw County and two measures were chosen to obtain the desired information. First, by prior arrangement, lists were secured of all infectious hepatitis patients hospitalized at St. Joseph's Mercy Hospital, University Hospital, and Beyer Memorial Hospital during 1952 and the first three months of 1953. These three general hospitals comprise almost all of the hospital facilities of Washtenaw County. The hospital records were reviewed for age, sex, race, address, occupation and any pertinent facts in the recorded history related to the etiology and epidemiology of the patient's infection. Secondly, a list of all reported cases was compiled up to August 1, 1953. To enlist the co-operation of the physicians of Washtenaw County in this project, a letter was sent to each doctor explaining the study and its purpose.

These approaches disclosed 129 diagnosed cases of infectious hepatitis in Washtenaw County from January 1, 1952, to August 1, 1953. Of the 129 cases, seventy-nine of them occurred from January 1, 1953, to August 1, 1953. The corresponding period of 1952 revealed only nineteen cases. This represents an increase of 316 per cent in 1953, over the same chronological period of 1952. A comparison of rate of transmission for 1952 and 1953 is shown graphically in Figure 1. The curve showing 1952 cases definitely leveled off from February to June and indicated increasing incidence again in the latter part of June. The 1953 curve plotted out almost a straight line indicating a constant rate of transmission. The etiologic agent appears to have run the gamut without any notable interference. Havens and Paul[1] state that in certain parts of the world the disease follows a distinct seasonal trend, a sudden rise occurring in the autumn, reaching epidemic proportions in the winter and declining in the spring. While the 1952 curve presents this general pattern, the 1953 curve differs significantly.

In order to establish their distribution the recorded cases were plotted on county maps ac-

TABLE I. CASES PER 100,000 POPULATION
1952-1953

Community	Population	No. of Cases (first 7 mos.)		No. of Cases per 100,000 pop.	
		1952	1953	Jan. 1 to Aug. 1, 1952	Jan. 1 to Aug. 1, 1953
Rural area (Washt. Co.)	45,981	12	25	26.10	54.37
Ann Arbor	48,251	4	19	8.29	39.38
Ypsilanti	18,302	2	4	10.93	21.86
Willow Run Village	11,365	1	12	8.80	105.59
Chelsea	2,580	0	2	0	77.52
Dexter	1,307	0	6	0	459.07
East Ann Arbor	1,826	0	0	0	0
Milan	2,073	0	6	0	289.44
Saline	1,533	0	5	0	326.16
Manchester	1,388	0	0	0	0
Washtenaw County (Total)	134,606	19	79	14.12	58.69

cording to location. These maps did not demonstrate a well-defined pattern but rather a shot gun distribution. The population of Washtenaw County and the individual cities within the county in relation to the number of cases per 100,000 population for 1952-1953 (first seven months) is given in Table I.

Of the total cases, 37 per cent of those during 1952-53 occurred among rural inhabitants, who comprise 34 per cent of the total Washtenaw County population, while 63 per cent of the cases appeared in the cities and incorporated villages which make up 66 per cent of the county census. Other calculations revealed that 63 per cent of the total number of cases of infectious hepatitis for the first seven months of 1952 occurred in the rural areas. Infectious hepatitis among rural inhabitants accounted for only 32 per cent of the cases reported during the corresponding period in 1953.

The next phase of this study involved interviewing those persons who were reported as cases. Thus epidemiologic data were obtained by talking with patients and their families and observing their home environment. Since more accurate information would be procured by interviewing the more recent cases in preference to those with an earlier onset and because of time limitations, the interviews were limited to the 1953 cases. The group of patients interviewed consisted of twenty males and twenty-one females. No criteria of selection were used for patients to be interviewed and this group of forty-one represents those which could be contacted within the time limitations.

After determining what information was desired a series of questions was formulated. The same questions were asked of each patient and the answers recorded on master charts to facilitate study and analysis. The resulting information consisted of the following: Name and address of the patient, age, sex, race, date of onset, attending physician; contacts with known infected persons; condition of other members of the household; school or place of employment; source of water, milk, and food; type of sewage disposal; dates of transfusions, venapunctures, and inoculations; other possible exposures to infection, and date of administration of gamma globulin to the patient, if any.

Summary of Data

The subsequent sections are devoted to a summary of the data based on detailed studies of forty-one patients.

1. The localities in which the interviewed patients resided is shown in Table II.

TABLE II

Community	*No. of Patients*
Ann Arbor	16
Dexter	4
Milan	4
Saline	5
Ypsilanti	1
Rural or small residential areas of Washtenaw County	11

2. The ages of the patients ranged from three to fifty-eight years. Table III shows the number of cases according to age groups.

TABLE III

Age in Years	*No. of Patients*	*Per Cent of Interviewed Patients*
3-10	12	29.3
11-20	15	36.6
21-30	10	24.4
31-40	3	7.3
Over 40	1	2.4

Havens and Paul[1] state that most epidemic cases fall in the age group of five to seventeen years but that it is also common in young adults. The findings are in agreement.

3. On the basis of the cases reported, the etiological agent manifested no predilection for one sex over the other.

4. The matter of racial susceptibility or resistance to infectious hepatitis was not given special consideration. However, a review of the complete record for 1952-53 has shown that there have been 127 cases among the white population as compared to two in the colored. Population ratios of Washtenaw County are about thirteen white to one colored.

5. Table IV shows by month, the total cases and the cases included in this study.

TABLE IV

Onset (1953)	*No. of Cases Studied*	*Total Cases Reported*
January	2	9
February	1	7
March	7	12
April	7	16
May	3	6
June	13	15
July	8	14

6. While discussing possible contacts with infected persons, nineteen patients gave a history of association with one or more persons who had had infectious hepatitis within a month prior to their own illness. Table V shows the number of patients by type of contact. A definite contact is considered one who had had jaundice and was closely associated with the patient, whereas possible contact is defined here as meaning that the activities of the patient had placed him in an evironment where previous cases of hepatitis had occurred.

TABLE V

Contacts with Infected Persons	*No. of Patients*	*Percentage*
Definite intra-family contact	11	26.8
Definite extra-family contact	8	19.5
Possible extra-family contact (school)	6	14.6
No known contacts	16	39.0

Six patients are listed as having had possible extra-family contact. They were pupils at a particular school in which there had been cases of infectious jaundice. However, specific contacts of this group of six could not be verified.

7. The query pertaining to school or place of employment revealed that eleven of the interviewed patients attended the same parochial school in Ann Arbor. This situation is discussed in a subsequent section dealing with special group studies. The other thirty responses to this question appear insignificant since there were as many different employers and schools mentioned as there were patients.

8. Table VI gives the different water sources and the number of patients using each source.

TABLE VI

Water Source	*No. of Patients*	*Percentage*
Private well water	9	22
Community well water	3	7
Municipal water supply	29	71

Water samples from several of the wells were taken and tested for the presence of coliform bacteria. These tests established that the samples were free of colon bacilli. There was no recourse to practical laboratory procedures to determine the presence or absence of viruses. Persons receiving water from community wells had the water piped directly into their homes.

9. All of the patients, with the exception of one, purchased pasteurized dairy milk. The one patient used raw milk from the family cows. The names of the dairies patronized by patients accounted for ten different dairies supplying these people with milk and milk products. This finding indicated that there was little probability that any one or two sources of contaminated milk or other related products were the responsible entities in transmission, of the infection in this study. Food for the patients came from a variety of stores. Large chain stores were mentioned most frequently although a number of smaller, independent stores were patronized. There was no exploration of particular foods consumed with the exception of dairy products as stated.

10. That the feces of infectious hepatitis patients contain the virus has been confirmed. "The virus is readily recovered from the blood and feces of patients in the acute, preicteric, or early icteric phases of the disease, and may be transmitted to human volunteers by feeding or by parenteral inoculation of infectious materials."[1] Table VII shows the number of patients and percentage of the forty-one persons interviewed by type of sewage disposal.

TABLE VII

Type of Sewage Disposal	*No. of Patients*	*Percentage*
Community	28	68.3
Septic Tank	8	19.5
Privy	5	12.2

Several of the families informed us that they had had some difficulty with proper drainage of sewage by their septic tank systems. The relation of inadequate functioning systems to the incidence of this series of cases of hepatitis has not been determined.

11. A distinction must be made between infectious hepatitis and homologous serum hepatitis since both have very similar symptoms and clinical findings. The incubation period is one point of difference. Whereas the incubation period for infectious hepatitis is 10 to 40 days, it varies from two to six months for homologous serum jaundice. Therefore, the dates of any transfusions, venapunctures, or inoculations were important in considering the possibility of serum jaundice. Table VIII consists of each case who had received inoculations, frequency of inoculations for each patient, and the approximate time lapse from the inoculation to the onset of the hepatitis.

TABLE VIII

Case	*Frequency of Inoculations*	*Time Lapse from Inoculation to Onset*
1	1	1 month
2	1	1½ months
3	3	3½, 2½, 1½ mos.
4	1	15 days
5	2	2½, 2 months
6	1	1½ years
7	2	2½ months
8	1	3 months
9	2	3.2 months
10	1	1½ months
11	1	5 days
12	1	5 months

Twenty-nine of the forty-one patients had received no inoculations at all. In only six of the inoculated patients was there a sufficient time lapse from inoculation to onset to suggest the possibility of homologous serum jaundice. Since most cases reported no transfusions, venapunctures, and inoculations the conclusion was reached that the bulk of these cases were a part of an epidemic of infectious hepatitis.

12. The information obtained concerning other possible exposures to infection was extremely varied and also difficult to interpret in terms of importance as potential sources of infection. Eleven of the forty-one patients attended the school previously referred to and four of the eleven also lived in rural areas. Four of them had been on trips outside of Michigan visiting and stopping in rural areas in route and each of these patients became ill within a month following their trip. Five lived in rural areas where they had well water and septic tanks. Five had visited rural areas in Washtenaw County within a month prior to their illness.

13. No attempt was made to evaluate the effectiveness of gamma globulin by this study because none of the persons interviewed had received the gamma globulin before his illness.

Specific Group Studies

During the course of the survey there appeared three specific groups of cases which warranted special attention. The first situation involved a school. The first case appeared in the sixth grade on April 26, 1953, and a second case followed two days later. Both boys lived in rural areas, one southwest and the other north of Ann Arbor. The incidence gradually but steadily increased until a total of thirteen cases had been recorded by July 24, 1953. For purpose of comparison, the other fifteen Ann Arbor schools were surveyed for 1953 infectious hepatitis cases; the results are given in Table IX.

TABLE IX

Elementary School	*Enrollment*	*Number of Cases*
A	248	0
B	216	0
C	694	0
D	128	1
E	353	0
F	258	0
G	411	0
H	757	1
I	638	0
J	516	0
K	828	0
L	156	0
M	150	0
High School		
A	1151	0
B	255	1
Combined Elementary and High School		
A	574	13

A check of the distribution within the school revealed that the majority of the cases occurred in the lower grades, as is evident in Table X.

TABLE X

Grade	*Number of Cases*
2nd	2
4th	2
6th	5
8th	1
9th	1
10th	1
12th	1

The rate of progress through the school is illustrated graphically in Figure 2. The graph shows both accumulative cases and the number of cases per week. After the interviews it was evident that close association of the patients outside of school was unlikely. Homes and play areas were widely separated. These children were the first in their families to be diagnosed as having infectious hepatitis, as confirmed by personal interviews with the parents. Two of the cases were not interviewed because the families could not be contacted.

The interviews resulted in sufficient information to conclude that certain conditions existed in the school which could well have been the source of transmission. Some of the practices regarding the cafeteria and rest rooms were to be more carefully investigated. Some of the children worked in the cafeteria during lunch hours. One of the infected girls, subsequently diagnosed infectious hepatitis, had been assigned to a service squad to assist the younger children with eating such as removing caps from bottles of milk and cutting their meat for them. The cafeteria did not supply straws and the children drank directly from the pouring lip of the milk bottle. In addition, the half pint bottles of milk were not hooded and the cases were placed where they were easily accessible to the children. Another infected pupil sold candy in the school

before diagnostic symptoms appeared. On June 1, 1953, the school held a field day for the first eight grades and some of the children worked in the food concessions.

The younger classes were lined up at specified times to use the rest room. One of the girls stated that several girls would use a washbowl at the same time and that often there was not enough soap. Another pupil said that, although they used the flush method for washing, the bowls drained slowly so that other girls would wash their hands in the water remaining in the bowls. This information was acquired from interviews with the patients and not from the writer's inspection of the school facilities since school was closed at time of the investigation.

As stated previously, the first cases were children from rural areas whose homes were located a considerable distance from those of their schoolmates. It is conceivable, therefore, that once the infection gained entrance into the school, conditions existing there perpetuated it. Final conclusions were deferred pending completion of this study.

The second group encountered was that found in Milan. The first case appeared on March 1, 1953, in a sixteen-year-old boy who attended Milan High School. Since there had been no previous reported cases in Milan in 1952-53, we attempted to ferret out the source of his infection by talking with the family. The only information obtained was that the boy worked on his uncle's farm near Saline on weekends and was a member of the Saline 4-H Club. One family living about two miles from the farm where the boy worked, had had three cases of infectious hepatitis (the mother and two children). The first of this family's cases occurred about two weeks before the boy became ill. The boy was not acquainted with the family and had never had any known contact with them.

The boy's fourteen-year-old sister contracted the same infection with the onset appearing about April 1, 1953. Another Milan boy had occasional contact with the girl and became ill on June 1, 1953. During this period five other cases occurred in Milan. Of these seven patients, five attend Milan High School and two are pupils at Milan Elementary School. Any contact among the last four patients and the first three could not be verified. Personal contact, directly or indirectly, might have been responsible for the transmission.

In the Saline area the majority of infectious hepatitis cases were found in three families, all of whom were related. To simplify discussion a letter is used to designate each of the families—A, B, and C. Madames A, B, and C are sisters and each

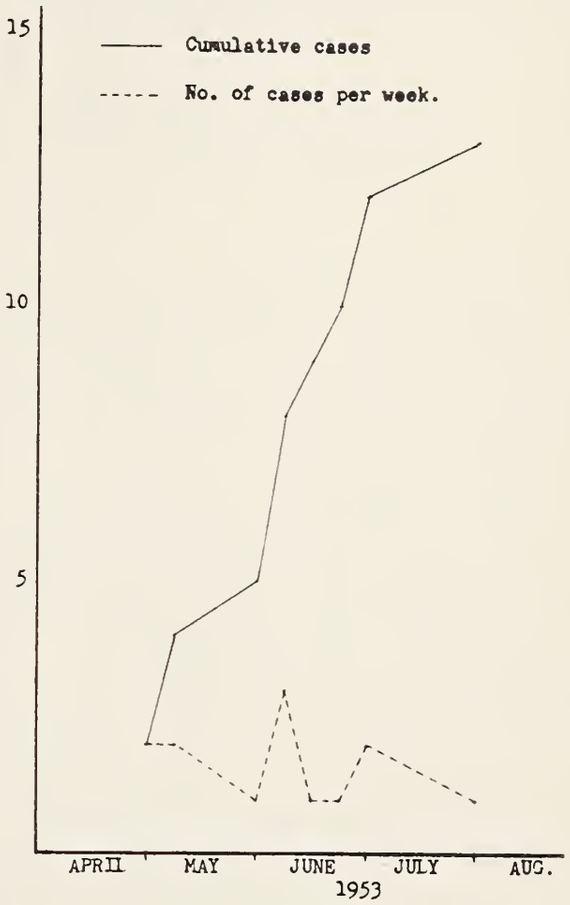


Fig. 2. Infectious hepatitis cases in combined elementary and high school A.

one has her own family. The A family lives north of Saline and the B and C families reside in the city of Saline. A brother-in-law of the sisters, who lives south of Milan in Monroe County, had the onset of infectious hepatitis January 1, 1953. The three sisters visited him on several occasions during his illness. On February 15, 1953, Mrs. A became ill with infectious jaundice and within five days two of her children also had the infection. Mrs. A remained at home, Mrs. B took care of her. Mrs. B became ill on March 15, 1953, and was confined to her home. Then Mrs. C cared for Mrs. B, only to contract infectious jaundice one month later, April 19, 1953. Within a span of twenty days, Mr. C and their two children became afflicted by the same disease. These cases, too, might have been the result of person-to-person transmission through close association.

(Continued on Page 1442)

Inguinal Shutter Herniorrhaphy

A Twelve-year Study of Related Factors and Results

By Earl G. M. Krieg, M.D.
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THE material published in January, 1953, pointed out that the problem of inguinal hernia was not a simple one.[2] We have found that a change in approach to the problem has resulted in a considerable reduction in unsatisfactory results.

We have brought together here all factors found inside and outside of the operating room, with which we were familiar, that have contributed to a successful operation. Certain clinical conditions were found that influenced the choice of technical procedures. The repair of defects in the anatomy of the entire inguinal area, and the decision to reinforce tissue layers, were problems that demanded individualization. In contrast, the fixation of the inguinal shutter was a routine procedure.

Our methods are presented in the order that they appeared in the management of our cases.

1. Preoperative Evaluation

It was evident that clinical observations could be used to advantage that were obtained by no other form of examination.

A thorough history, a careful examination, and all necessary laboratory work were important and, on occasion, revealed an unrelated state that precluded operation at that time. Our principal concern in the aged was the condition of the cardiovascular-renal system. The clinical findings influenced the choice of anaesthesia; spinal and local infiltration were preferred. Details of the local examination need not be discussed here; we preferred the standing position and carefully searched the opposite side for unsuspected pathology. Recently, Knott[1] has emphasized the possibility of occult hernia on the opposite side due to developmental symmetry. In our dissections for bilateral hernia, it was often noted that the anatomical and pathological conditions were identical on each side.

Habitus offered an advanced clue to inherent tissue strength. The individual of hypersthenic habitus had heavy tissue planes that infrequently required more than formal reparative procedures. Comparatively, the individual of hyposthenic habitus often exhibited thin structures that not infrequently required reinforcement, especially when associated with other factors noted in Part 4.

The physiological age of the older individual was often a barometer of tissue strength and reaction to operation. The eighty-year-old person who came into the office like one of fifty or sixty years of age usually had tissues and recovery powers of superior quality to that of the apathetic patient who had the appearance and actions of one twenty years older.

Senile changes in tissue layers were expected in all patients over forty years of age and were best evaluated grossly during the stage of dissection. In association with Dr. C. I. Owen, pathologist of Grace Hospital, 100 cases of all ages had local biopsies of muscle and fascia. He was unable to demonstrate microscopically any relationship between hernia and tissue changes due to congenital, traumatic or senile causes. This disappointing study indicated that biopsy would not evaluate tissue strength.

Lowered powers of tissue healing were roughly ascertained by studies of the blood serum protein and ascorbic acid levels when the history suggested any change from the normal. This condition was found most often in chronic disease of any nature and more specifically in chronic alcoholism, diabetes, dietary deficiencies, hypothyroidism, physical inactivity, senility and recurrent hernia noted shortly after operation.

The degree of physical effort expended at work and/or play was an important determinant among those reviewed when reinforcement of tissue planes was believed to be necessary (see Part 4).

Allergy due to suture materials occurred infrequently, but there were disturbing instances due to cotton, silk and stainless steel. If the patient had had a previous operation, the behavior of the wound after operation might be informative. We have used metal sutures for herniorrhaphy for the last ten years, and only three cases developed tissue reaction. In one of these it was necessary to completely remove the wire. A decided advantage of metal sutures was that they remained *in situ* in severely infected wounds.

2. Technical Considerations

Proper exposure, demonstration, and evaluation of the defects that may be present were made only through an adequate incision and by thorough dissection of the various components of the inguinal region.[2]

All defects were corrected so that the inguinal region was restored to as normal a condition as possible. The indirect sac was removed. The direct sacs (inguinal, interstitial and Spigelian) were inverted and the apertures closed. The triangular fascia was reattached to the rectus fascia which restored the inguinal floor and internal hiatus. The femoral canal was closed when necessary. Theoretically these reparative procedures would seem sufficient but they only prepared the field for the maneuvers described in Parts 3 and 4 which were basically designed to prevent recurrences. This statement contains the philosophy of our approach to the entire problem.

At this stage the surgeon must have correlated and appraised all clinical, anatomical and pathological factors related to the patient's problem. The sum total of these factors were translated into, first, whether or not a patch was indicated, and, second, the method of closure to be used.

3. Reinforcement of Tissue Planes

The approach to the problem of patches became clearer to us through studies in anatomy and tissue changes due to congenital, traumatic and the normal aging processes. All three changes may be present. Hitherto, the patch had been considered as an additional technical maneuver which made for a "better operation," and the indications for its use were rather vague. Now, the patch was used objectively to reinforce specific weaknesses in tissue planes. Several facts became evident. First, it would be necessary to formulate definite indications for the use of a patch. Second, clinical factors made their appearance which were evaluated outside the operating room. Third, the decision to use a patch advanced in geometrical ratio to the number of faults that were present. Fourth, these deliberations posed a problem in clinical judgment which improved with experience.

The following conditions, up to the present writing, were considered as indications for possible tissue plane reinforcement. On occasion one of these conditions alone was sufficient but usually a variety of combinations determined when the patch should be used.

1. Hyposthenic habitus.
2. Congenital hypoplasia or aplasia of the local tissues.
3. Heavy labor and/or violent exercise of any description.
4. Senile atrophy of the local tissues.
5. Trauma due to a large hernia or a previous operation.
6. Unilateral multiple hernias, particularly of the direct variety.
7. Bilateral hernias.
8. Local tissue atrophy due to a truss.
9. Pain following a successful repair (rare).
10. When clinical experience cast the least doubt as to tissue strength.

The Myers' operation provided the ideal foundation for the patch which was fashioned to cover the entire inguinal area. It extended over the symphysis pubis for a short distance for greater "purchase" and often measured 3 by 7 inches in area. At the point of emergence of the spermatic cord, a slit was made that corresponded in length to the cord's diameter and a suture was placed that closed the lower end of the slit, anchored it to the inguinal ligament and snugly enclosed the cord (Fig. 2). For the purpose, we used No. 35 or 36 gauge wire and plastic needles to avoid fraying the patch.

4. Closure of the Inguinal Region

Closure of the inguinal canal and the internal hiatus was routinely employed regardless of the type of hernia. This eliminated the shutter action completely. There were three variations of this method of closure, each designed to satisfy gross anatomical variations. The reader should note the extent of repair beyond (laterally) that accomplished by the classical methods of Bassini, Halsted, Ferguson and McVay. This point is of extreme importance.

Certain technical details were deemed necessary to fulfill a successful operation. (1) All anchoring sutures must be of non-absorbable materials. (2) Fascia to fascia approximation must be accomplished; on occasion, the minor division of the internal oblique muscle (above canal) was excised to accomplish this; aplasia of the rectus fascia was the only condition in which this was not possible. (3) Placement of sutures in the rectus fascia must be 1 or 2 centimeters above its lower border (Bassini). (4) The cremaster muscle should be sectioned at its origin. (5) Relaxing incisions in the rectus fascia should be made at the line of insertion of the external oblique aponeurosis at the least

sign of tension. (6) The suture which closed the leaves of the external oblique aponeurosis should bite into the tissues below to form a more solid wall; this was not necessary when a patch was used. (7) The spermatic cord should project through the wall at the level of the femoral vessels and reside in the subcutaneous tissues.

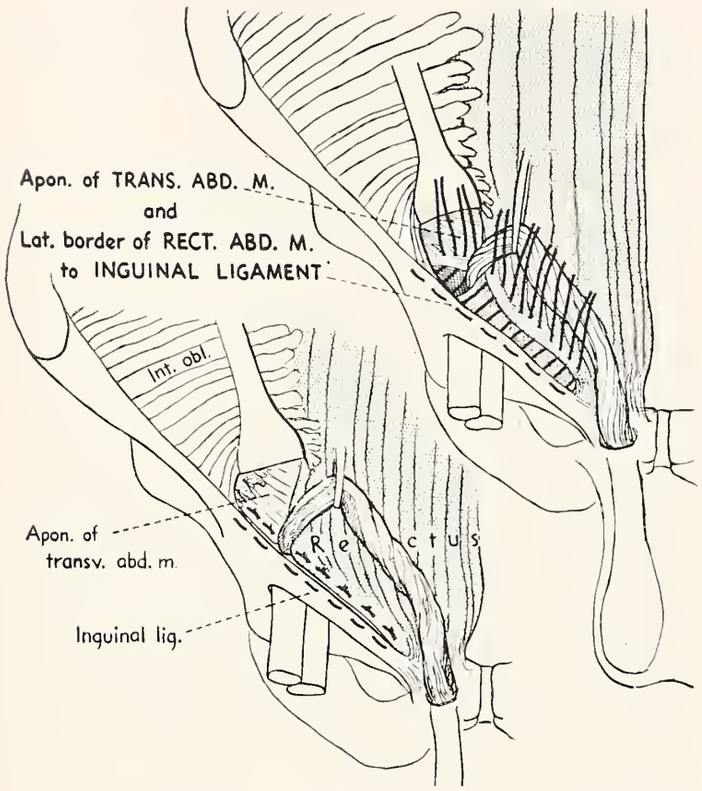


Fig. 1. The rectus fascia is anchored to the inguinal ligament from the pubis to the level of the femoral vessels above which the spermatic cord makes its exit. The transversus abdominis aponeurosis has been exposed, and it is fixed to the inguinal ligament behind the internal oblique muscle, completely closing the internal hiatus; this line of sutures may reach the ilium. The cord is snugly surrounded.

Variation One (McLaughlin).[3]—This method disturbed the normal anatomical relationships the least. Its use was limited, (a) to patients with well developed tissue layers, (b) when the transversus aponeurosis was well developed and at least two centimeters in length and (c) when no patch was required. Most patients in this class were under forty years of age and of hypersthenic habitus. A large number of our early cases were routinely repaired by this method (Fig. 1).

Variation Two (Myers).—This method was indicated (a) when reinforcement by a patch was required, (b) when previous operation precluded definitive dissection and (c) when the transversus aponeurosis was inadequate or absent (Fig. 2).

Variation Three (Krieg).—This method was devised for those patients whose inguinal ligaments in the canal region were absent, deficient or frayed during previous operations. It was imperative to expose the femoral vessels and nerve to direct vision before a single suture was placed. We have found four cases in which these vessels were next to the symphysis pubis (Fig. 3).

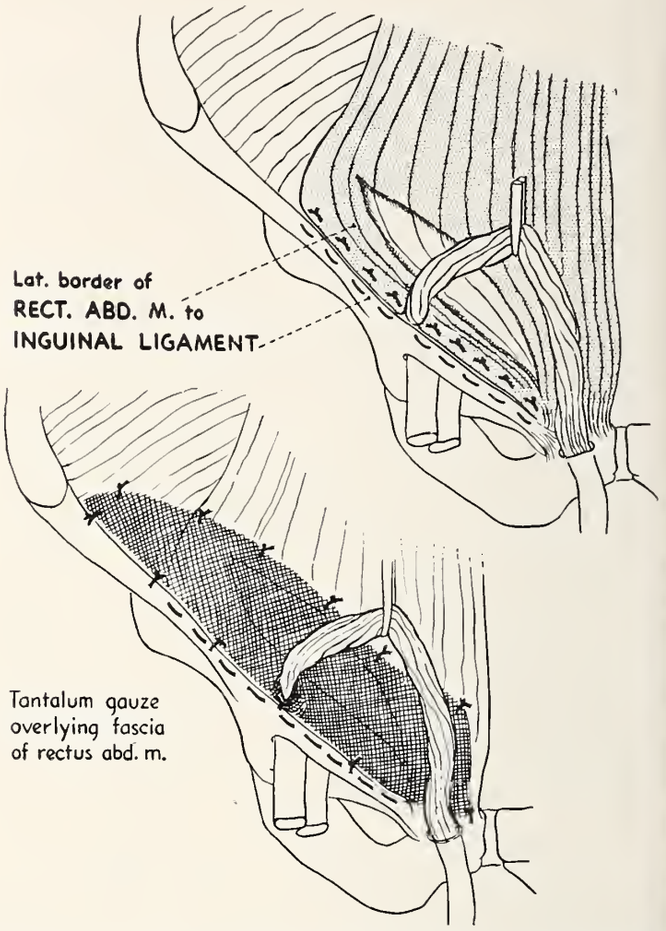


Fig. 2. The rectus fascia is anchored to the inguinal ligament from the pubic spine to within 1 or 2 centimeters of the iliac spine. A relaxing incision of adequate length may be needed as shown here; the rectus fascia is incised at its junction with the external oblique aponeurosis; when the sutures are tied, the internal oblique muscle disappears behind the line of repair.

The lower drawing illustrates a patch of proper size; it extends medially over the symphysis for 1 or 2 centimeters, laterally to the region of the ilium and superiorly as high as possible. The exit of the spermatic cord is well illustrated.

5. Post-Hospital Care

Routine exercise was begun immediately following hospitalization. We placed particular stress on this part of the management of each patient because it improved local muscular tone and general well being. The patient was asked to maintain a

schedule of walking at specific times twice daily for at least two weeks, preferably longer. Each day the distance was increased subject to his physical ability.

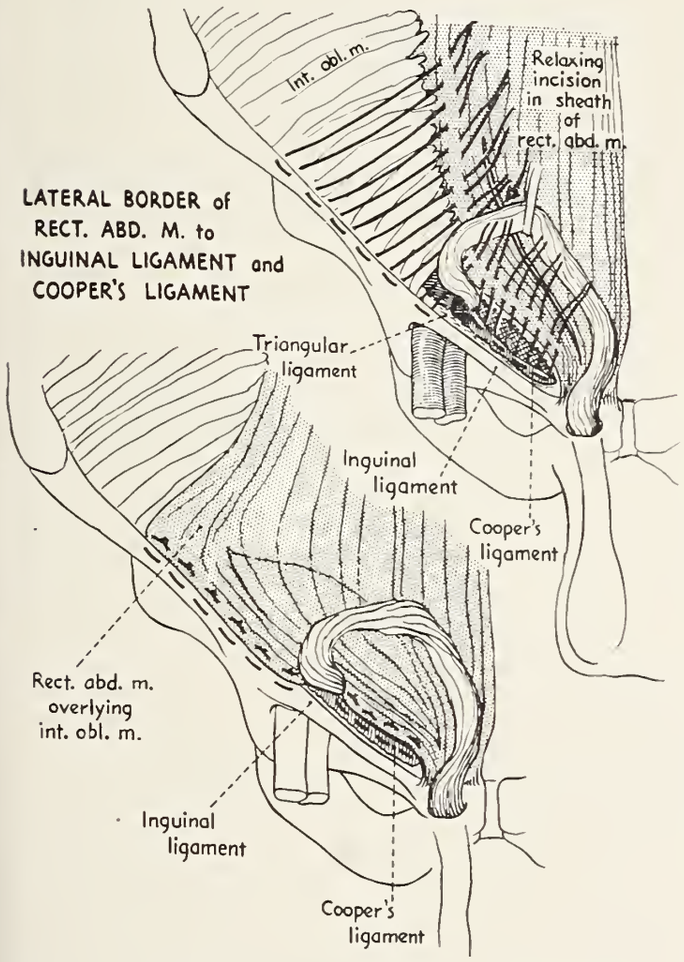


Fig. 3. Under direct vision, the rectus fascia is sutured to the superior pubic ligament (Cooper) as close to the femoral vessels as possible. Above the vessels and spermatic cord, the rectus fascia is sutured to the inguinal ligament, as shown here, which is similar to Variation Two, or the transversus aponeurosis may be used as in Variation One.

An elastic athletic supporter with a 6-inch belt often gave comfort. A hot tub bath just before retiring was beneficial, especially to the older group.

Return to sedentary work was permitted at any time; to heavy labor, in six weeks.

Statistics

Our follow-up, which was completed in January, 1954, has included all cases; none was included that had been operated upon for less than two years. There were 651 hernias; no women or children were included. Three patients had died.

The ages at the time of operation varied from twenty to eighty-seven years; 58.75 per cent were over fifty years of age.

Single hernias appeared on the right in 53.5 per cent and on the left in 46.5 per cent. Bilateral hernias were repaired in 118 cases (19.6 per cent) in the combined groups.

Sixty-two patients (10 per cent) came to us with recurrences who had been operated upon elsewhere. Eight had had bilateral repairs followed by recurrences on one side (right, five; left, three). Twenty-nine had had one previous repair on the same side (right, twelve; left, seventeen). Three patients had had two previous repairs and two had had three previous repairs on the same side (right). Fourteen patients had had bilateral recurrent hernias; seven had had a single hernia repaired before the first bilateral repair. Nine patients had had one side repaired with subsequent appearance of a hernia on the opposite side. There were twenty-nine cases (almost one-half of the whole group) that exhibited the recurrent indirect variety; eight of these were sliding hernias and three had large lipomata projecting through the hiatus.

Comment.—A review of the individual problems of the patients presented in this maze of statistics bolstered our belief still more that the major aspect of the problem resolved itself into two main issues: (1) recognition and prevention of the breakdown of inadequate tissues, and (2) complete closure of the inguinal region which included the internal hiatus. This latter procedure eliminated the recurrent indirect hernia in our series.

Results

Our results are reported in two groups. The patients in Group 1 were largely industrial workers who had had 540 hernias repaired between September, 1942, and June, 1948. Surgery comprised the repair of local defects enumerated in Part 2 and the closure of the inguinal shutter described in Part 4. Bilateral hernias were repaired ninety-four times (16 per cent) in this group. There have been nine recurrences, four were single direct hernias which appeared after bilateral repair and five appeared after single repair. The total recurrence rate for this group has remained at 1.5 per cent, and none has recurred thus far that was repaired after 1946. In a critical review of these recurrences we believed that these cases were examples of direct recurrences due to breaking down of inadequate tissue layers that should have been reinforced by a suitable patch. Experience suggest-

ed that an occasional recurrence should still be expected in this series.

The patients in Group 2 were all private patients who were not comparable to those of Group 1 in many instances due to sedentary occupations. They had had 111 hernias repaired between June, 1948, and June, 1952. They marked the beginning of definitive, routine evaluation of tissue layers according to our methods and the application of a patch when necessary; the repair of local defects and the closure of the shutter was done as before. Bilateral hernias were repaired in twenty-four cases (22 per cent). Patches were inserted in fifty-seven sides; tantalum mesh, forty-six times; stainless steel, eight times, and full thickness cutis grafts, three times. No recurrence has occurred in this group thus far.

Conclusions

1. A change in approach to the problem of hernia from that of the classical methods of repair is desirable.
2. Related clinical factors must be considered.
3. Postoperative reconditioning through exercise is desirable.
4. Repair of the local defects and closure of the inguinal shutter has resulted in a recurrence rate below 2 per cent in 540 hernias operated upon between 1942 and 1948.
5. Our present technique, which involved (1) repair of the local defects, (2) closure of the inguinal shutter and (3) recognition and reinforcement of inadequate tissue layers, has resulted in no recurrence in 111 hernias operated upon between 1948 and 1952.

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1850 David Whitney Bldg.

INFECTIOUS HEPATITIS IN WASHTENAU COUNTY, MICHIGAN

(Continued from Page 1437)

Conclusions

Certain conclusions are derived from an evaluation of the data so far accumulated in this study. The following statements are based on the tabulated data and impressions received by interviewing the patients in their home environment.

1. From January 1 to August 1, 1953, infectious hepatitis reached epidemic proportions in Washtenaw County, Michigan.
2. Preliminary investigation has failed to show any specific channel for the spread of the cases reported.
3. In a significant number of cases transmission of the cases reported was associated with intimate patient-to-patient contact.
4. In a significant number of cases transmission of the cases reported was associated with violation of certain basic sanitary principles in a school.
5. The relationship of school sanitary practice, the spread of infectious hepatitis, and possible remedial measures merits further study.
6. In Washtenaw County, city and village residents infected with infectious hepatitis demonstrated a pattern of free movement through rural areas or contact with infected persons from rural areas during the incubation period of the disease. The same held true for rural residents, city visits, and contacts. Proper rural and fringe sanitation facilities would seem to be of concern to those who reside in cities and villages and vice versa.

Acknowledgment

The writers wish to express their appreciation and gratitude to the doctors, patients and hospitals of Washtenaw County for their interest and co-operation in this study. Special thanks is extended to Dr. F. M. Hemphill, University of Michigan School of Public Health, for helpful suggestions regarding the scope of the investigation, and the presentation of the data and material.

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A Page from Medical History

III. Egypt

By John E. Summers, M.D.
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Thou shalt not abhor an Edomite: for he is thy brother: thou shalt not abhor an Egyptian; because thou wast a stranger in his land.—DEUT. 23:7.

"Moreover also the answer given by the Oracle of Ammon bears witness in support of my opinion that Egypt is of the extent which I declare it to be in my account; and of this answer I heard after I had formed my own opinion about Egypt. For those of the city of Marea and of Cysis, dwelling in the parts of Egypt which border on Libya, being of opinion themselves that they were Libyans and not Egyptians, and also being burdened by the rules of religious service, because they desired not to be debarred from the use of cow's flesh, sent to Ammon saying that they had nought in common with Egyptians, for they dwelt outside the Delta and agreed with them in nothing; and they said they desired that it might be lawful for them to eat everything without distinction. The god, however, did not permit them to do so, *but said that that land was Egypt which the Nile came over and watered, and that those were Egyptians who dwelling below the city of Elephantine drank of that river.*" (Herodotus).*

THE modern races of mankind have been present on the earth's surface for thousands of years. In certain areas of the world conditions were such as to make possible the advancement of man from the *food-gathering* stage of Early Stone Age savagery to the stage of food-production. *Food production* (first meaning the domestication of wild animals) requires a system of irrigation, which depends upon an organized government, which in turn requires *records* (writing) and a *calendar*. *Agriculture* on a large scale and *plentiful metal* are necessary for the development of civilization.

The rich "bottom" land of certain rivers formed the laboratories of our civilization. Along the Tigris and Euphrates rivers the Babylonian civilization and along the Nile river the Egyptian civilization developed. Even at the present time most of the people in China are crowded along the banks of the Yangtze river and the people of India try to secure life from the Ganges.



Fig. 1. Origin of the Rx. *Horus*, the god of health in a fight with *Set*, the demon of evil, lost an eye, which, by magic, was restored. The eye of Horus formed the design for a charm or amulet second only to the sacred dung beetle (scarab). The eye of Horus, after passing through various phases, became conventionalized as something resembling Rx and was placed on objects associated with danger, such as chariots, ships and prescriptions.

The few favored geographical areas where life could be maintained easier have always been in demand. In our consideration of the development of civilization it should be remembered that outside of the circumscribed spotlight of our attention restlessly mill the multitude of less favored members of mankind. In their desire to seek the more fruitful way of life they continually and everlastingly push themselves into the fringes of our spotlight, to be driven back time and time again by the "rightful inhabitants" but eventually to overwhelm the latter. Thus the ancient civilizations have followed a general pattern: (1) a prolonged period of development and expansion, (2) a short period of greatest political domination permitting the culture to attain its maximum, (3) a period of dismemberment, invasion and decline. So it was with Egypt.

The Nile river is the longest river in the world. It is 4000 miles long and consists of three main divisions: (1) the main stream running south to north and fed by the great lakes of East Central Africa, (2) the equatorial tributary rivers draining the country northeast of the Congo Basis, (3) the Abyssinian affluents.[6] Lake Victoria, 3,704 feet above sea level, is the main reservoir feeding the Nile. The Abyssinian affluents are the source

*Herodotus (c. 484 to 425 B.C.) called "the father of history" was born in Halicarnassus in Asia Minor which at that time was ruled by the Persians. His history which was written c. 445 B.C. was so highly approved by the Athenians that he was voted a gift of ten talents (2,400 lbs.). He was unable to secure his citizenship in Athens as the franchise in Athens was difficult to obtain and so sailed to Thurii with other Greek colonists. His work consists of nine books, the first six of which serve as an introduction to the last three which deal with the great Persian wars of invasion.

of the annual Nile flood, which has been recorded each year since 3600 B.C. The Nile traverses the Nubian desert and during the last 1600 miles of its course does not receive a single tributary.

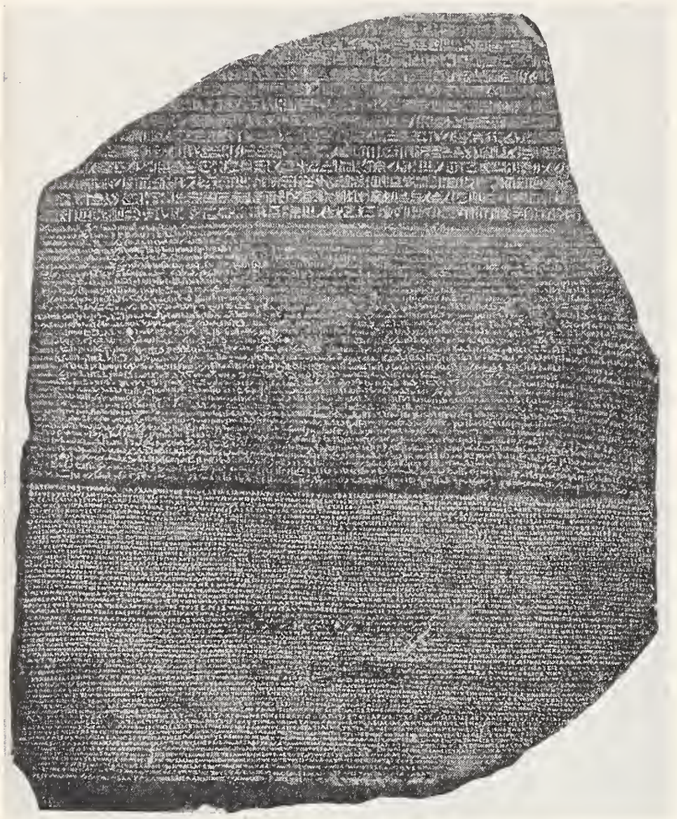


Fig. 2. The Rosetta Stone. When Napoleon set sail in May, 1798, on his expedition to Egypt he carried with his a large group of scientists to explore the country. In 1799 Napoleon's soldiers found, near the Rosetta mouth of the Nile river a stone 3 feet 9 inches long, 2 feet 11 inches wide and 11 inches thick which had writing on its smooth side. This writing was divided into three columns: (1) Hieroglyphics, (2) Demotic (the script writing of the hieroglyphics), (3) Greek. The Greek column was immediately translated but only after twenty years of work was Jean-Francois Champollion able to decipher the hieroglyphics. After this the miles of hieroglyphics in the temples, tombs and coffins up and down the Nile began to speak and tell us about that remarkable civilization. In September, 1801, when the English beat the French at Alexandria they took over Napoleon's pharaonic antiquities; now the Rosetta Stone is in The British Museum. *(Photograph obtained from The British Museum).*

Consequently, as it passes through the hot and rainless Sahara desert it decreases in volume. The annual overflow of the Nile, the cause of which the ancients pondered greatly, as recorded by Herodotus, deposits rich sediment brought from the Abyssinian highlands creating the delta and the fertile strip that is Egypt. So rich and fertile is this strip of land, and especially the delta, that today the average Egyptian farmer grows three crops each year on his one acre. As there is no rain, irrigation is essential now as it always has been.

A line drawn just south of Cairo divides the country into lower Egypt (the delta) and upper Egypt (the Nile valley). In upper Egypt the Nile valley is very narrow and is bounded by mountains of no great height. They form the edge of the desert on either side of the valley, of which the bottom is level rock. The bright green of the fields, the reddish-brown or dull green of the great river contrasting with the bare yellow rocks, seen beneath a brilliant sun and a deep-blue sky, present views of great beauty.[6]

Due to the preservative climate of Egypt the science of archeaology developed there and was subsequently applied to Babylonia, Greece, Rome, and throughout the world. "In the last century and a half, millions of cubic yards of the soil of Egypt have been moved and sifted. Thousands of its native population have worked their lifetimes in its multitude of 'digs,' and hundreds of ships have sailed from its harbors, laden with antiquities for the museums and private collections of the five continents. Yet today, the old mine shows not the slightest sign of being exhausted."[7]

The history of ancient Egypt is divided into three main periods.[4]

1. *The Pyramid Age,* from about the 30th to 25th Century B.C. revealed by the cemeteries (pyramids and other tombs) of Gizeh.

2. *The Feudal Age,* which flourished around 2000 B.C. and is revealed by the cliff-tombs and the papyrus-roll libraries.

3. *The Empire* (called the Golden Age) existed about 1580 to 1150 B.C.; revealed by the temples and cliff-tombs of Thebes (Karnak).

The decipherment of the acres of hieroglyphics which cover the coffins, tombs, pyramids, obelisks, temples, and papyrus rolls followed the discovery and decipherment of the famous Rosetta Stone.

The Pyramid Age

30th to 25th Centuries B.C.

During this period lower and upper Egypt were united under one king (Menes), extensive irrigation was developed, oxen were yoked, the copper mines in the Peninsula of Sinai were exploited and sixty miles of royal pyramids and tombs, ex-

tending from Gizeh (Memphis) into the desert, were built. The inscriptions, pictures, reliefs, and sculptures in these pyramids and tombs tell the story of agriculture, cattle raising, oxen, donkeys, *in 4236 B.C. This is the earliest dated event in human history.*[3,4])

Of the great pyramid of Gizeh which was being built c. 2835 B.C. Herodotus tells us.

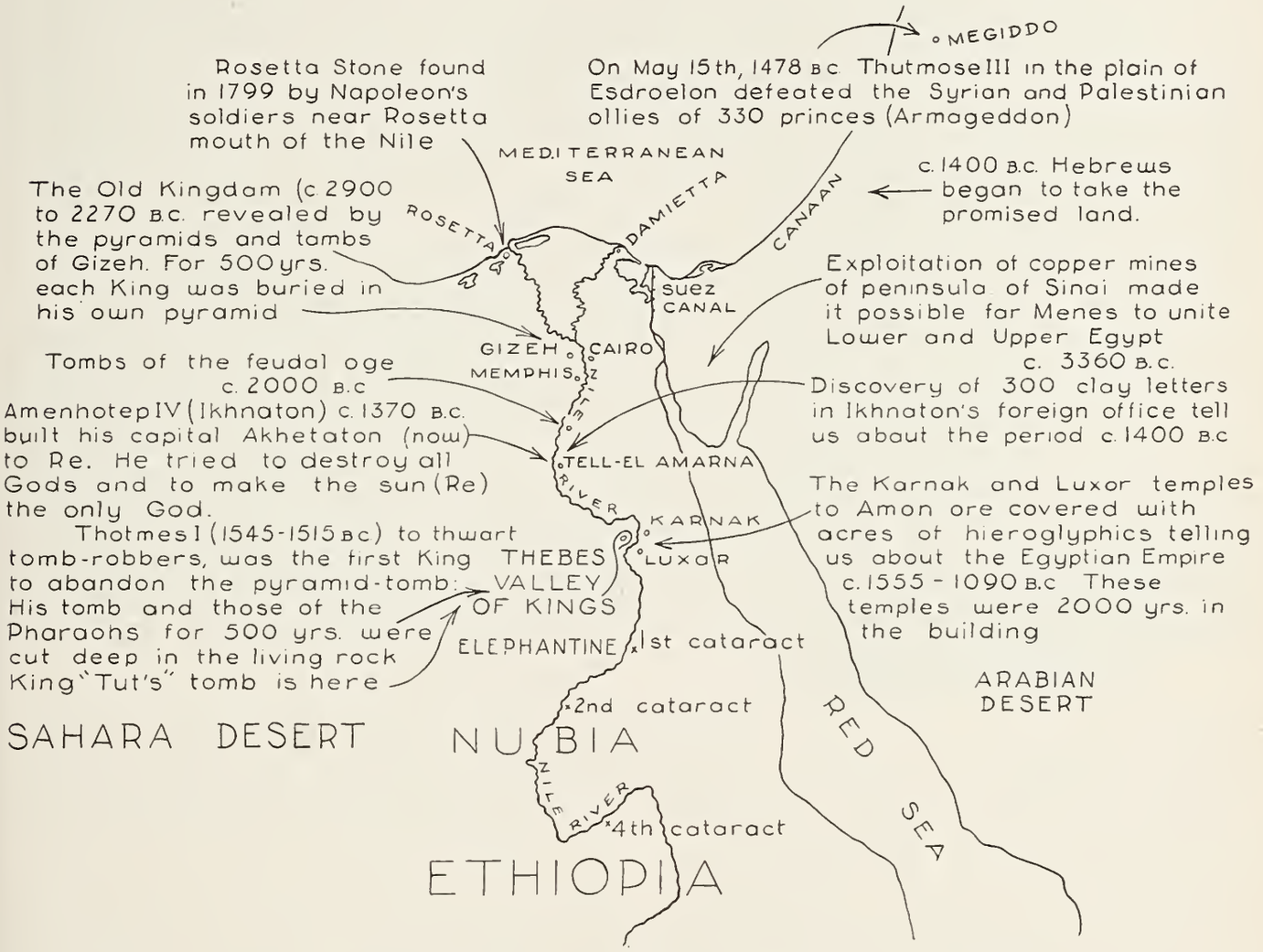


Fig. 3. Diagram of Ancient Egypt.

The Nile river flows north through the hot and rainless desert to empty into the Mediterranean Sea. At the beginning of the delta, the Nile separates into two channels, the Rosetta and the Damietta, which empty into the Mediterranean Sea at its southeast angle. The annual overflow of the Nile produces a fertile strip of land on either side of the river. As there is no rain, irrigtation has always been necessary. A line drawn just south of Cairo divides the country into lower Egypt (the delta) and upper Egypt (the Nile valley). The old kingdom had its capital at Gizeh. During the period of greatest political domination (the empire), the capital was at Thebes.

coppersmiths, lapidary art, goldsmiths, jewelers, potter's wheel and furnance, early glass, weaving, tapestry-makers, paper makers, carpenters and cabinet makers, shipbuilders, river commerce, barter (there was no coined money), kings, nobles, priests, soldiers, freemen, slaves, life on the nobles' estates, captive nations bringing tribute to the Pharaoh and, above all, tribute to the gods.

The calendar (consisting of 12 months of 30 days each plus 5 added feast days, was introduced

". . . but after him (Min, the first king of Egypt) Cheops became king over them and brought them to every kind of evil: for he shut up all the temples, and having first kept them from sacrifices there, he then bade all the Egyptians work for him. Some were appointed to draw stones from the stone-quarries in the Arabian mountains to the Nile, and others he ordered to receive the stones after they had been carried over the river in boats, and they worked by a hundred thousand men at a time—of this oppression there passed ten years while the causeway was made—for the making of the pyramid itself then passed a period of twenty

years. The wickedness of Cheops reached to such a pitch that when he had spent all his treasures and wanted more, he sent his daughter to the stews with orders to procure him a certain sum, how much I cannot say, for I was not told; she procured it, however, and



Fig. 4. Statuette of Imhotep, Physician and Vizier to King Zoser c. 2980 B.C.

Imhotep was vizier, architect, chief ritualist, sage and scribe under King Zoser who built the "step pyramid" of Sakskarah (the oldest surviving stone building in the world). Imhotep's healing was, reportedly, mostly magic. Imhotep was certified as a medical demigod during his life and about 2430 years later was promoted to the position of Full Deity of Medicine. The Greeks called him Imouthes and identified him with their God of Healing, Asklepios. *(Courtesy of the Wellcome Historical Medical Museum, London, England.)*

at the same time, bent on leaving a monument which should perpetuate her own memory, she required each man who sought intercourse to make her a present of a stone towards the works which she contemplated. With these stones she built the pyramid which stands midmost of the three that are in front of the great pyramid—thus the affliction of Egypt endured for the space of 106 years, during the whole of which time the temples were shut up and never opened. The Egyptians so detest the memory of these kings that they do not much like to mention their names."

So much then for the esteem which the Egyptians held for those kings who forced them to build the pyramids.

In almost every museum in this country there is some relic from Egypt. Mummies are very common. The ancient Egyptians did not embalm the dead so that they might have a space in our modern museums but rather that they might live forever. Concerning this art of embalming we have, again, to return to Herodotus.

"Their fashions of mourning and of burial are these. Whenever any household has lost a man who is of any regard amongst them, the whole number of women of the house forthwith plaster over their heads or even their faces with mud. Then leaving the corpse within the house they go themselves to an fro about the city and beat themselves with their garments bound up by a girdle and their breasts exposed, and with them go all the women who are related to the dead man, and on the other side the men beat themselves, they too having their garments bound up by a girdle. When they have done this, they then convey the body to the embalming. In this occupation certain persons employ themselves regularly and inherit this as a craft. These, whenever a corpse is conveyed to them, show to those who brought it wooden models of corpses made like reality by painting, and the best of the ways of embalming they say is that of him whose name I think it impiety to mention when speaking of a matter of such a kind; the second which they show is less good than this and also less expensive. The third is the least expensive of all. Having told them about this, they inquire of them in which way they desire the corpse of their friend to be prepared. Then they depart out of the way and the others being left behind in the buildings embalm according to the best of these ways thus: First with a crooked iron tool they draw out the brain through the nostrils extracting it partly thus and partly by pouring in drugs; and after this with a sharp stone of Ethiopia they make a cut along the side and take out the whole contents of the belly, and when they have cleared out the cavity and cleansed it with palm-wine they cleanse it again with spices pounded up; they then fill the body with pure myrrh pounded up and with cassia and other spices except frankincense, and sew it together again. Having so done they keep it for embalming covered up in natron for seventy days, but for a longer time than this it is not permitted to embalm it; and when the seventy days are past, they wash the corpse and roll its whole body up in fine linen cut into bands, smearing these beneath with gum, which the Egyptians use generally instead of glue. Then the kinsfolk receive it from them and have a wooden figure made in the shape of a man and when they have had this made they enclose the corpse and having shut it up within, they store it in a sepulchral chamber setting it to stand upright against the wall. Thus they deal with the corpse which is prepared in the most costly way."

We do not have very much evidence concerning the practice of medicine in Egypt during the pyramid age. The early Egyptians had many gods which they worshipped. The pyramid is a symbol

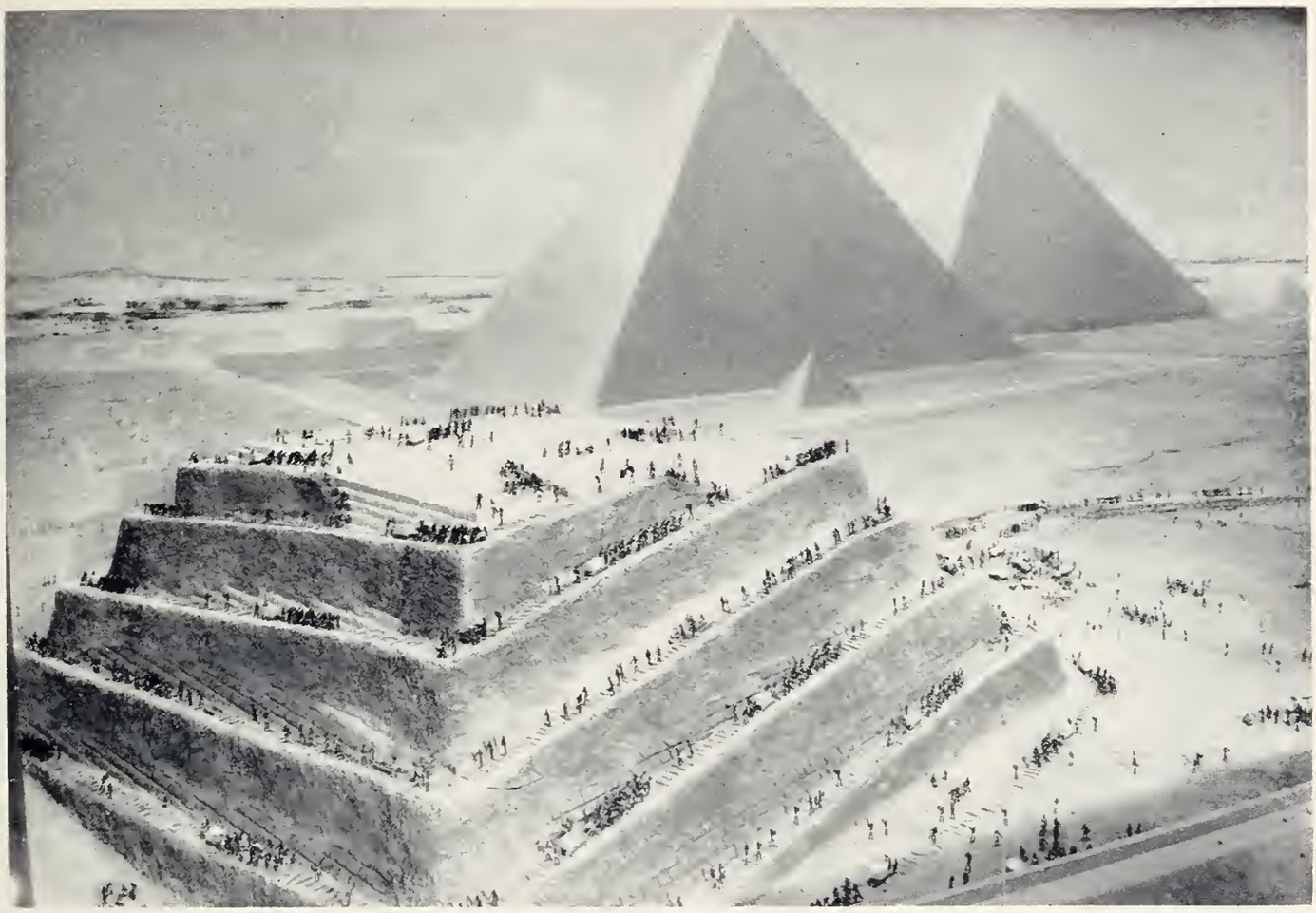


Fig. 5. The Construction of the Third Pyramid at Gizeh.

Photograph of a model at the Boston Museum of Science. Only the pharaohs had pyramids. The nobles had lesser tombs called mastabas. The common people were buried in the desert sand. The pyramids of the pharaohs of the Old Kingdom extend in a line over sixty miles long. One can only conjecture the tremendous amount of human labor expended on these huge rock tombs. Sixty-seven pyramids have been discovered. *(Photograph obtained from the Boston Museum of Science.)*

to the sun god, Re. They expected to continue to live after death so their many possessions were buried with the dead. Only the houses of the dead have survived for our study. The extant medical papyri may have been written during this period; our present ones being copies of the originals.

In regards to Imhotep who was vizier, architect, chief naturalist, sage and scribe under Pharaoh Zoser of the third dynasty (c. 2980 B.C.), there is no contemporary evidence that he was a physician. However, he acquired a wide reputation as a healer through magic and was promoted during life to the rank of demigod. Then under the Ptolemies he was made the Egyptian god of medicine. The Greeks called him *Imouthes* and identify him with their god of healing, *Asklepios.* Large numbers of statues and figurines of Imhotep have been recovered.

(The Feudal Age)

Circa 2000 B.C.

Due to the growth of power of the nobles the Pharaohs had to make many concessions to them. During this period pyramids as royal burial houses went out of fashion and in the cliffs back of their fertile valley estates the nobles excavated their tombs in the living rock. Books (papyrus rolls) written during those times on kindness and justice, drama, poetry, surgery, medicine, science, and mathematics have been found.

The Egyptian papyrus rolls of laws have perished so we do not have a "Hammurabi stone" for Egypt. Ideas of social consciousness were prevalent, however; one monarch had inscribed on the walls of his tomb:

"There was no citizen's daughter whom I misused, there was no widow whom I oppressed, there was no peasant whom I repulsed, there was no herdsman whom

I repelled, there was no overseer of self-laborers whose people I took for (unpaid) imposts, there was none wretched in my community, there was none hungry in my time. When years of famine came, I ploughed all the fields of the Oryx-nome, as far as its southern and northern boundary, preserving its people alive, and furnishing its food, so that there was none hungry therein. I gave to the widow as to her who had a husband: I did not exalt the great above the small in all I gave. Then came great Niles, rich in grain and all things, but I did not collect the arrears of the field."[3]

Yet some of the rulers, in order to thwart the awful judgment of Osiris when their guilty souls stood before him after death, had a sacred beetle (scarabaeus) cut from stone and inscribed with a charm, "Oh my heart, rise not up against me as a witness." And well might they need this charm in view of such complaints as the following:

"The worm hath taken half his corn (wheat), the hippopotamus the rest. Mice abound in the field, and the locust has descended. The cattle devour and the sparrows pilfer. Alas for the husbandman!

"The remainder that lieth upon the threshing-floor, the thieves have made away with it. The ploughshare of copper hath perished, and the yoke of horses hath died at the threshing and ploughing.

"And now *the scribe* landeth upon the embankment to register the harvest. His body guard carry sticks and his negroes palm switches. They cry, give up your corn. And there is none there. He is stretched out and beaten, he is bound thrown into the canal. His wife is bound before his eyes and his children put in fetters. His neighbors run away to look after their own corn."[13]

Scribes were great men in those days and were apparently allied against the people even in Christ's time because Christ said:

"Woe unto you, scribes and Pharisees, hypocrites! for ye devour widow's houses, and for a pretense make long prayer: therefore ye shall receive the greater damnation."—*St. Matthew,* 23:14.

The great majority of the surviving Egyptian literature consists of religious works. These consist of magical spells which help to get the Egyptians to "heaven." They have been classified as "Pyramid Texts" originating in the pyramid age, "Coffin Texts" written on the sides of the coffins during the feudal age, and the "Book of the Dead" written on papyrus rolls during the age of the empire.

The "Book of the Dead," consisting of magical formulas to assist the soul into the new life, allows us to see into the conscience of the noble. Pertinent quotations from the "Book of the Dead" are given:[12]

Homage to Thee, O Great God, Lord of the city of MAATI, I have come unto Thee, O my Lord, and I have brought myself hither that I may gaze upon Thy beauties.

I know Thee, I know Thy Name, I know the names of the forty-two gods who are with Thee in this Hall of MAATI, who live as the warders of sinners and who swallow their blood on that day of reckoning up the characters (or dispositions of men) in the presence of UN-NEFER (i.e., OSIRIS). In truth 'REKHTI-MERTI-NEB-MAATI is Thy Name.

Verily I have come upon Thee, I have brought unto Thee MAATI (i.e., TRUTH, or the LAW), I have crushed for Thee SIN.

1. I have not acted sinfully towards men.
2. I have not oppressed the members of my family.
8. I have not domineered over servants.
10. I have not filched the property of the lowly man.
13. I have not inflicted pain (or caused suffering).
14. I have not permitted any man to suffer hunger.
15. I have not made any man to weep.
16. I have not committed murder.
17. I have not given an order to cause murder.
20. I have not defrauded the gods of (their) cakes (or offerings).
22. I have not committed sodomy.
24. I have not made light the bushel.
26. I have not encroached upon the fields (of others).
27. I have not added to the weights of the scales.
28. I have not diminished the weight of the pointer of the scales.
29. I have not snatched away milk from the mouth(s) of children.
33. I have not made a cutting in a canal of running water.
39. I have not robbed.
40. I have not defrauded.
41. I have not uttered falsehood.
43. I have not blasphemed.
45. I have not uttered slanders.
46. I have not played the eavesdropper.
47. I have not lain with another man's wife.

Most of the knowledge of ancient Egyptian medicine depends upon the following papyri:

1. *Kahun Medical Papyrus* was written c. 1900 B.C. It is small, mostly illegible and deals with diseases of women, wandering of the uterus, methods of ascertaining pregnancy and the sex of unborn children.

2. *Edwin Smith Surgical Papyrus* was written c. 1600 B.C. This papyrus deals in a systematic manner, beginning with the head and progressing downward, with wounds, fractures, and disloca-

tions. The latter part of this papyrus has been destroyed, the last case presented concerns an injury of the spine.

3. *The Papyrus Ebers* was written c. 1550 B.C. It is the largest one and is complete. It does not deal with fractures but otherwise comprises all kinds of diseases.

4. *The Hearst Papyrus* consists of recipes, many of which are identical with those in the Papyrus Ebers.

5. *The Berlin Medical Papyrus* was written c. 1250 B.C. It contains recipes; it also deals with methods of ascertaining pregnancy and the sex of unborn children.

6. *The London Medical Papyrus* was written c. 1350 B.C. It contains some prescriptions but chiefly incantations against different diseases.

Of these papyri, the Edwin Smith Surgical Papyrus and the Papyrus Ebers are the most valuable.

The Edwin Smith Surgical Papyrus is fundamentally different from the other medical papyri. It consists of cases, not recipes. The cases are arranged systematically beginning with injuries of the head and progressing downward. Magic is resorted to in only one case out of the fifty-eight. Each case is classified as, favorable to uncertain, or unfavorable. From fifty-eight examinations, treatment is recommended in forty-two instances; in sixteen cases treatment is not recommended. Case 9 is the one case where magic is used:

CASE NINE:[2]

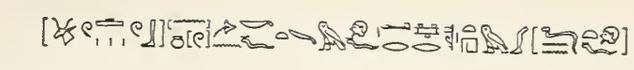
Title.—Instructions concerning a wound in his forehead, smashing the shell of his skull.

Examination.—If thou examinest a man having a wound in his forehead, smashing the shell of his head (conclusion in treatment).

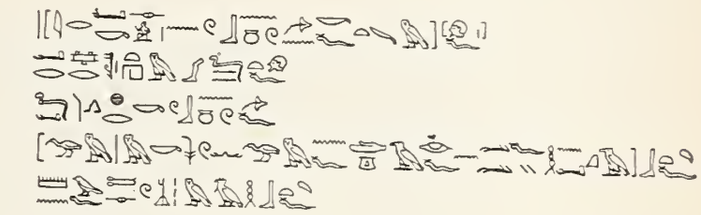
Treatment.—Thou shouldst prepare for him the egg of an ostrich, triturated with grease (and) placed in the mouth of his wound. Now afterward thou shouldst prepare for him the egg of an ostrich, triturated and made into poultices for drying up that wound. Thou shouldst apply to it for him a covering for physician's use; thou shouldst uncover it the third day, (and) find it knitting together the shell, the color being like the egg of an ostrich.

That which is to be said as a charm over this recipe:

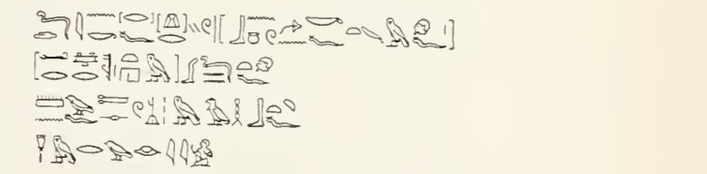
Repelled is the enemy that is in the wound!
Cast out is the evil that is in the blood,
The adversary of Horus, on every side of the mouth of Isis.
This temple does not fall down;
There is no enemy of the vessel therein.
I am under the protection of Isis;
My rescue is the son of Osiris.



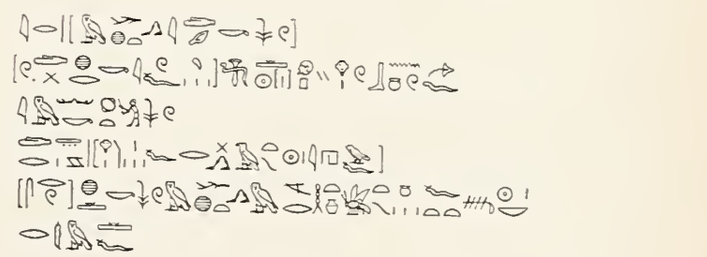
"[Instructions concerning] a gaping wound in his head, penetrating to the bone and perforating his [skull]."



[If thou examinest a man having a gaping wound in] his [head], penetrating to the bone, and perforating his skull; thou shouldst palpate his wound; [shouldst thou find him unable to look at his two shoulders] and his [br]east, and suffering with stiffness in his neck,



Thou shouldst say [regarding] him. "One having [a gaping wound in his head, penetrating to the bone, (and) per]forating his skull while he suffers with stiffness in his neck. An ailment which I will treat."



Now [after thou hast stitched it, thou shouldst lay] fresh [meat] upon his wound the first day. Thou shouldst not bind it. Moor (him) [at his mooring stakes until the period of his injury passes by]. Thou shouldst [tre]at it afterward with grease, honey, and lint every day, until he recovers.

Fig. 6. A case history from The Edwin Smith Surgical Papyrus. This surgical treatise was written on payrus in the manuscript or rapid writing form of hieroglyphics called hieratic. Breasted transliterated it to hieroglyphics as shown here. Each case was divided into four main parts: (1) Title, (2) Examination, (3) Diagnosis, (4) Treatment. Breasted believes that this surgical manuscript originated in the Old Kingdom period of Egypt.

Now afterward thou shouldst cool (it) for him (with) a compress of figs, grease, and honey, cooked, cooled, and applied to it."

CASE TWENTY-EIGHT:[2]

Title.—Instructions concerning a wound in his throat.

Examination.—If thou examinest a man having a gaping wound in his throat, piercing through to his gullet; if he drinks water he chokes and it comes out of the mouth of his wound; it is greatly inflamed so that he develops fever from it; thou shouldst draw together that wound with stitching.

Diagnosis.—Thou shouldst say concerning him: one having a wound in his throat, piercing through to his gullet. An ailment with which I will contend.

First Treatment.—Thou shouldst bind it with fresh meat the first day. Thou shouldst treat it afterward (with) grease, honey, (and) lint every day, until he recovers.

Second Examination.—If, however, thou findest him continuing to have fever from that wound, (conclusion in following second treatment).

Second Treatment.—Thou shouldst apply for him dry lint in the mouth of his wound, (and) moor (him) at his mooring stakes until he recovers.

The Papyrus Ebers consists mostly of recipes heavy on the carthartic side. There are a few examinations recorded; there are references to nineteen separate examinations dealing with: a "liver-case," a weak digestion, chest complaint with fetid expectorations, angina pectoris, catarrh of the nose with conjunctivitis, a fit of shivering, a case of bubonic plague, hemorrhage of the stomach, accumulation of fluid in the stomach, disease of the back, uremic cramps with dropsy, abdominal pain in the right side, enlargement of the spleen, ankylostomiasis, a serious wasting disease.

Chest Complaint with Fetid Expectoration.[5]—"If thou examinest a man with an obstacle, and he produces expectoration (lit. what is lifted by cough), and his disease under his breast sides is like a latrine-cave (then thou shalt say thereof): It is (due to) accumulations in his breast sides, it is narrow for his cardia. Thou shalt prepare for him strong remedies to drink; fresh porridge, boiled with oil and honey . . . and . . . is added to it, they are boiled together and drunk for 4 days. If thou examinest him afterwards and findest him in his disease of the first time (?), it shows that he will get well."

Also from the Papyrus Ebers we have:

Recital on Drinking a Remedy.—"Come remedy! Come thou who expellest (evil) things in this my stomach and in these my limbs! The spell is powerful over the remedy. Repeat it backwards! Dost thou remember that Horus and Seth have been conducted to the big palace at Heliopolis, when there was negotiated of Seth's testicles with Horus, and he shall get well like one who is on earth. He does all that he may wish like these gods who are there. Spoken when drinking a remedy. Really excellent, (proved) many times!"

Ebell believes that the Greeks obtained much of their medical knowledge from the Egyptians.

The feudal age in Egypt was brought to an end by the invasion of the Hyksos. These people introduced, among other things, the horse into Egypt.

The Empire Age

Circa 1580 to 1150 B.C.

Following the expulsion of the Hyksos by Ahmose I, the Pharaohs organized great armies of archers and chariots and became imperalistic. At this time the greater part of the land, with the exception of that owned by the priest order, was the personal property of the Pharaoh. The Hebrews later recorded that this came about during the viziership of Joseph. After Joseph had been sold into slavery into Egypt he prospered and was advanced by the Pharaoh. After the affair between Joseph and the Pharaoh's wife *(Gen.,* 39:7-23) Joseph was cast into prison. After interpreting his cell-mates' dreams he gained a reputation for dream interpretation and later interpreted the Pharaoh's dream to mean seven years of plenty in Egypt to be followed by seven years of famine. The Pharaoh made him vizier of Egypt and during the seven years of plenty Joseph stored, for the Pharaoh, much grain. After the seven years of famine had gotten under way the Egyptians who had not been forewarned soon ran out of grain.

Genesis, 47:

13. And there was no bread in all the land; for the famine was very sore, so that the land of Egypt and all the land of Canaan fainted by reason of the famine.

14. And Joseph gathered up all the money that was found in the land of Egypt, and in the land of Canaan, for the corn which they bought; and Joseph brought the money into Pharaoh's house.

15. And when money failed in the land of Egypt, and in the land of Canaan, all the Egyptians came unto Joseph, and said, Give us bread; for why should we die in thy presence? For the money faileth.

16. And Joseph said, Give your cattle; and I will give you for your cattle, if money fail.

17. And they brought their cattle unto Joseph; and Joseph gave them bread in exchange for horses, and for the flocks, and for the cattle of the herds, and for the asses and he fed them with bread for all their cattle for that year.

18. When that year was ended, they came unto him the second year, and said unto him, we will not hide it from my lord, how that our money is spent; my Lord also hath our herds of cattle; there is not ought left in the sight of my Lord, but our bodies, and our lands.

19. Wherefore shall we die before thine eyes, both

we and our land? buy us and our land for bread, and we and our land will be servants unto Pharaoh; and give us seed that we may live, and not die, that the land be not desolate.

20. And Joseph bought all the land of Egypt for Pharaoh; for the Egyptians sold every man his field, because the famine prevailed over them; so the land became Pharaoh's.

21. And as for the people, he removed them to cities from one end of the borders of Egypt even to the other end thereof.

22. Only the land of the priests bought he not; for the priests had a portion assigned them of Pharaoh, and did eat their portion which Pharaoh gave them, wherefore they sold not their lands.

23. Then Joseph said unto the people, Behold, I have bought you this day and your land for Pharaoh; lo, here is seed for you, and ye shall sow the land.

24. And it shall come to pass in the increase, that ye shall give the fifth part unto Pharaoh, and four parts shall be your own, for seed of the field, and for your food and for them of your households, and for food for your little ones.



Fig. 7. Funerary Papyrus of the Princess Entiu-ny.

This section from "the Book of the Dead" shows Princess Entiu-ny standing before the Osiris, judge of souls and god of the deceased. In the center the dog-headed Anubis weights the princess's heart against the figure of the goddess of truth. To the far left stands Isis, sister of Osiris. *(Photograph obtained from the Metropolitan Museum of Art.)*

There were several remarkable persons during this period. Queen Hatshepsut (the first great woman of history) built, among many other monuments, the magnificent temples of Der el-Bahri for her own mortuary service. Thutmose III, called the Napoleon of Egypt, spent much time and effort erasing and destroying the works of Queen Hatshepsut. On May 15, 1478 B.C. with his army he descended from the heights of Carmel and fell upon the collective armies of the rebellious nations which had joined with the Syrians and defeated them in the plain of Esdraelon before the gates of Megiddo (Battle of Armageddon).[7] This was the most important victory of the time because by it the trade routes of the Near East were captured.

One of the most remarkable of the Pharaohs was Amenhotep IV. The Egyptians had many gods, spirits, demons, sacrificial ceremonies, and "mysteries." Under the empire the Theban god Amon had come to the fore, and this priesthood established in the great temple at Karnak had acquired tremendous wealth. Amenhotep IV decided that there was only one god and that was the old sun god, Re. Thereupon he set about destroying all other gods and especially the god Amon. Amenhotep IV (meaning "Amon rests") changed his name to Ikhnaton ("spirit of Aton"). His queen was Nofretete, whose bust is seen in all respectable museums and art galleries. The king had two hymns to Aton, the only god, chiseled on the walls of tomb chapels, and Breasted has shown that certain parts of these hymns are very similar to passages in the 104th chapter of the Psalms. Following the death of Ikhnaton, the old order was re-established.

One should mention Tutenkhaton ("Living image of Aton") more popularly known as "King Tut" whose tomb, discovered November, 1922, is the only one which contained possessions which had been placed in it originally and which had not been pilfered by grave-robbers.

Under Ramesses II the empire was restored, the rebelling provinces and also Nubia were brought under the Pharaoh's yoke. The booty and slave labor from Nubia (negroes) made possible the most gigantic works of man on earth, i.e., the temple of Ramesses II. (It should be remembered that all the Pharaohs were in reality the sons of the sun god, Re.)

The decline of the empire is said to have begun c. 1000 B.C. Following 145 years of rule by the priests of Amon, Sheshonk (the Biblical Shishak) seized the throne and was responsible for the sack of Jerusalem in 930 B.C. Negro kings from Ethopia ruled Egypt from 712 to 663 B.C. The Assyrian armies drove out the latter, and later Nebuchadnezzar of Babylon took the provinces of Syria and Palestine. In 525 B.C. King Cambyses made Egypt a Persian province, and Alexander the Great drove out the Persians in 332 B.C. After Alexander died (323 B.C.), one of his generals, Ptolemy, was given control and his descendants ruled Egypt for 300 years; the last of this line was Cleopatra VI (the most well-known Egyptian). The Romans ruled Egypt for 500 years and then the Moslems conquered it.

Herodotus visited Egypt sometime in the 4th century B.C. He wrote:

"For three successive days in each month they purge, hunting after health with emetics and clysters, and they think that all diseases which exist are produced in men by the food on which they live; for the Egyptians are from other causes also the most healthy of all men next after the Libyans. . . . The manner of divination however is not established among them according to the same pattern everywhere, but is different in different places. *The art of medicine among them is distributed thus: each physician is a physician of one disease and no more; and the whole country is full of physicians, for some profess themselves to be physicians of the eyes, others of the head, others of the teeth, others of the affections of the stomach, and others of the more obscure ailments.*"

When Amenhotep III fell ill (he died c. 1375 B.C.), King Tushratta of Mitanni sent the "figure of the goddess Ishtar of Nineveh, which had traveled to Egypt on a previous occasion," in order that it might restore the Pharaoh to health.[14]

Finally, a passage from Herodotus for those interested in the fee schedule of those days:

"Not long after this it happened that Darius, (King of Persia, 521-485 B.C.) while hunting, twisted his foot in dismounting from his horse, so violently that the ball of the ankle joint was dislocated from its socket. Darius called in the first physicians of Egypt, whom he had till now kept near his person, who, by their forcible wrenching of the foot, did but make the hurt worse; and for seven days and nights the king could get no sleep for pain. On the eighth day he was in very evil case; then someone, who had heard in Sardes of the skill of Democedes of Croton, told the king of him. Darius bade Democedes be brought to him without delay. Finding the physician somewhere all unregarded and forgotten among Orvetes' slaves, they brought him into view, dragging his chains and clad in rags. . . . Democedes applied Greek remedies and used gentleness instead of the Egyptians violence; . . . Darius, pleased by his wit, sent him to the king's wives. The enuchs brought him to the women, saying, this is he who saved the king's life, whereupon each of them took a vessel and scooping with it from a chest full of gold, so richly rewarded the physician that a slave named Sciton, who followed him, and picked up the staters which fell from the saucers, gathered together a great heap of gold. . . . He dwelt there in a large house, and feasted daily at the King's table, nor did he lack anything that his heart desired, excepting liberty to return to his country. By interceding for them with Darius, he saved the lives of the Egyptian physicians who had had the care of the king before he came when they were about to be impaled, because they had been surpassed by a Greek."

Egyptian Love Song

The love of my sister (sweetheart) is beyond the river;
The arm of the Nile is between us, and a crocodile lurketh on the bank.
Yet will I plunge into the depths of the water: I will walk on the flood:
My courage is high on the stream; the water is earth to my feet.
'Tis her love that maketh me mighty: that is my magic which smitheth the crocodile.
I behold now my sister cometh, and my heart is in gladness.
Mine arms open wide to embrace her: my heart exulteth within me: for my lady hath come to me . . .
She kisseth me, she openeth her lips to me: then am I joyful even without beer . . .
Oh that I were but her Nubian slave girl, her companion:
Then might I behold the fairness of her limbs!
Would that I might be my sister's launderer, if for but a single month:
Then could I wash the sweet oil from her headcloth . . .
A labor of love would it be: that would I do without pay![14]

(Continued on Page 1459)

Obstetrical Management of the Primigravid Woman

By Isadore Dyer, B.S., M.D., F.A.C.S.
New Orleans, Louisiana

BY DEFINITION, the primigravid woman is one who is experiencing pregnancy for the first time. She is the true "mother-to-be" and, because of this fact, belongs in a special category of thought.

Untried, the obstetrician cannot draw experience or counsel from a history of her past obstetrical performances. By mere absence of this experience, her anticipation may produce anxiety and fear. Her emotions are mixed and, if not appreciated, may in themselves become a hindrance.

She must be evaluated even more carefully than the multigravid woman who has proven herself. The obstetrician is charged with the responsibility of striving for that ideal result which will be a happy, satisfactory one, ever keeping in mind that this first obstetrical experience can well interfere with her future well-being, to say nothing of her outlook for future pregnancies. Her infant risks injury and, if severe enough, may impose a cross to bear early in what could have been a happy, carefree marital career.

With these thoughts in mind, the physician who accepts a primigravida for care should constantly be aware of his responsibility and conscious of the challenge she offers.

Prenatal care is well established in the regimen of today. There are a few extra facets of prenatal care *especially* designed for the primigravid woman. A good obstetric history should be obtained, with emphasis on those previous diseases or injuries which may alter the course of this first pregnancy and delivery. An example would be such simple notations of known previous cardiovascular, renal or skeletal diseases, and their evaluation. Has she received a transfusion in the past? What surgical procedures have been performed? Is there a history of anemia, any chronic diseases or mental disease?

The family history should not be overlooked. So often the history of multiple pregnancies, large or small babies, and abnormal infants born in a family recur in subsequent generations. Likewise, diabetes, polycystic renal disease and a host of other hereditary diseases may also appear in subsequent generations.

As in history taking, one must keep in mind that it is the rule that the present pregnancy has occasioned her visit to a physician for the first time since this woman left the domain of pediatric care. She probably has never had a pelvic examination. One then cannot be too careful in bringing her physical status up to date, as it were.

The physical examination should be thorough, from head to foot, and not limited solely to the uterus and birth canal. Particular emphasis should be placed on the pelvic survey, excluding measurements or evaluation for pelvic capacity. The latter can more satisfactorily be performed later in pregnancy, preferably at the seventh to eighth month, when considerable relaxation of pelvic structures is present. Early in pregnancy, it is more important to learn of intragenital or extragenital tumors, or variations from normal in the uterus, cervix and vagina. Ovarian tumors (notoriously dermoid cysts) are frequently discovered during pregnancy, the *first* pregnancy, only because it occasioned also the first pelvic examination. The same is often true for the occasional finding of a double uterus, cervix or vagina.

When any pelvic tumor is discovered, immediate investigation should be conducted to determine its nature. Of absolute necessity is the routine performance of kidney, ureter and bladder visualization studies. In our experiences in New Orleans, anomalies of the urogenital system are considered one of the most common. An occasional pelvic kidney may be discovered encroaching on the sacrum and shortening the anterior-posterior diameter of the pelvic inlet. A dilated double kidney pelvis has been known to have been palpated in the pelvis and initially diagnosed as an ovarian cyst.

Ovarian cysts may grow during pregnancy, may twist and degenerate or commonly fall into the posterior cul-de-sac and obstruct the vaginal canal. If these growths are discovered early, we have had repeated success in removing them at eighteen weeks of gestation—with no interference with the

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pregnancy. Dermoid cysts are often bilateral, therefore both ovaries should be examined and even in those few experiences when *both* ovaries have had to be removed, the pregnancies continued to term! Recently, a 14-centimeter, simple ovarian cyst was removed from the cul-de-sac of a woman in her thirty-eighth week of pregnancy. The abdomen was closed, and she delivered successfully seventy-two hours later without incident. It must be emphasized that genitourinary studies are of extreme importance in the clinical investigation of any pelvic mass, found for the first time.

Vaginal septae should be removed prior to delivery, since serious vaginal tears have been observed to occur during descent of the fetal head. A double uterus increases the incidence of an abortion, a premature delivery or even uterine rupture. Other uterine anatomical variations may produce breech and compound presentations and even prolonged labor. Many of these observations are suspected in the early period of pregnancy and on the first pelvic examination hence the obstetrician, if observant, becomes the discoverer.

The usual laboratory investigations should be performed, including a blood and chest survey. The Rh factor must be determined since Rh-negative primigravidae *have* given birth to erythroblastotic infants even though their original sensitization was unknown to them.

No, the primigravid woman knows nothing of what the future holds for her. Most girls, as they grow up, have a certain curiosity regarding childbirth, but it remains for the presence of the actual pregnancy for the true searching curiosity to develop. Her sources of information in this respect are too often poor and inaccurate, enveloped with the fog of superstition. The average woman (including her own mother) takes great pains to exaggerate details of childbirth. It is almost as though women refuse to admit that childbearing is anything but an achievement over the most trying of all human endeavors. The primigravida becomes an object of confusion, and many will establish apprehension beyond the realm of truth.

It is clearly recognized that emotions do affect the progress of labor. It is too late if conditioning is left to the last minute. Women who are apprehensive and fearful protract their labor mechanism.

We are all aware of the relative recent fad of "natural childbirth," "childbirth without fear," et cetera. Its true value, no doubt, lies in the prepuerperal instruction and knowledge of the progress of labor in its entirety. I rather doubt that the various squatting techniques do more than emphasize knowledge of the labor process. Relaxation is a form of self-discipline, and self-discipline over one's emotions is the foundation for good human behavior in conditions of stress and strain. But let us not omit the importance of the physician-patient relationship which may reach its zenith in childbirth.

None of this approach is new. It has only been revamped for the twentieth century woman by opportunists and none too often overemphasized by various decadent groups searching for new life to put stress on their importance. For proof of the ageless observation, here is presented a quotation from "Aristotle's Compleat and Experienc'd Midwife," published in London in the year of 1700 (Page 73):

> "Others protract the birth by reason of their timidity and extreme fear of some farther pain than what she at present feels; such must be advised that it is the will of the Author of our beings that it should be so; and that others have gone through greater pains than she is like to have: Such comfortable words being oft-times a great support to the labouring woman. If she be melancholy, (for sometimes difficult labour arises from thence) endeavor by all means to make her cheerful; and encourage her to believe, that all will soon be over, and that she shall have such a child as she desires; that her sorrows will be soon turn'd into joy, and that she is in no danger—."

Five years ago, my associates and I established a program for patient instruction. This was considered a need when it suddenly became obvious to us that the Charity Hospital expectant mothers, for the most part, were better informed than our women of the higher social class. The former had the opportunity of chatting at length with medical students. Only the most inquisitive of our group received detailed information which presented a time-consuming office duty.

Three simple sessions were established, and attendance of both prospective father and mother was urged. The material we present them is outlined in Tables I, II, and III. The first two classes are given by obstetricians and the last conducted by one of the supervisors of the newborn nursery. The slide material used was procured from the Cleveland Health Museum, consisting of Kodachrome slides of the Dickinson models. McLaurin's report[1] of this endeavor follows:

TABLE I. CLASS I: THE CHANGES OCCURRING WITH PREGNANCY

1. Diagnosis of Pregnancy
   (a) Reliance on menstrual history
   (b) Symptoms of pregnancy
   (c) Biologic tests
      (1) Value
      (2) Indication for use
   (d) Fetal movements
   (e) Appearance of fetal heart tones
2. Hygiene of Pregnancy
   (a) Proper diet
   (b) Proper attitude
   (c) Importance of weight control
   (d) Superstitions
3. Laboratory Work
   (a) Nature of tests
      (1) Blood studies
      (2) Urinalyses
      (3) X-rays
   (b) Indications for tests
4. Fetal Growth during Pregnancy
5. Slides

TABLE II. CLASS II: LABOR AND DELIVERY

1. Labor
   (a) Onset
   (b) Duration or length of labor
   (c) Possibility of early rupture of membranes
   (d) How to recognize labor
   (e) Symptoms indicating need to consult physician
   (f) When to go to the hospital
2. What happens in the hospital
   (a) Mechanics of entering
   (b) Preparation by nurses
   (c) When the patient will be separated from her family
3. Delivery
   (a) Analgesia and anesthesia
   (b) Normal delivery
   (c) Use of forceps and episiotomy
   (d) Variations from normal
      (1) Breech
      (2) Cesarean section
4. Appearance of newborn
   (a) Conditions under which it will first be seen by family
5. Slides

TABLE III. CLASS III: THE BABY

1. Hospital Care of Infant
   (a) Routine nursery care—especially immediate care
   (b) Visiting—When baby may be seen by family
   (c) Identification safeguards
2. Infant feeding
   (a) Breast
   (b) Artificial
3. Care of Newborn at Home
   (a) Behavior of normal infant
   (b) The bath
   (c) The cord
   (d) Bottles
   (e) Diapers
4. Movie on preparation of formula*

*Furnished by Carnation Milk Company.

TABLE IV. CONTRACTED PELVES

	Inlet	Midplane	Outlet	Outlet Alone
Contraction	32	197	17	0
In combination	11	28	17	0

"After having had this plan in effect for the past four years, one might ask has it proved worthwhile? Also, how has it affected the course of pregnancy and labor in the patients who have taken advantage of the program?

We feel that these patients, as a group, are better behaved. Certainly, there is more rapport both with them and their families. Although there is no statistical proof available at this time, we are convinced that labors of well-oriented patients are more effective. Although sedation is not denied, the actual need for or demand for sedation is reduced. The average patient in this group receives 75 or possibly 100 mgm. of demerol per labor and many are maintained comfortably on only 50 mgm.

Remarks are frequently made by the birth room personnel concerning how well behaved and easily managed these women are. Prolonged labors are a rarity. They maintain a wholesome attitude in the postpartum period. One is rarely annoyed with a troublesome family, and the majority have expressed their appreciation for the education. They know what to expect and, for example, are not too alarmed at such a simple but frequently disturbing occurrence as molding of the baby's head.

It is suspected that in addition, these women have a more normal acceptance of their babies with less apprehension but it is too early to present statistical proof."

There is no doubt in my mind that this relatively simple approach prepares the primigravida psychologically for childbirth and has proven of value in obstetric management.

We have no statistical proof, but it is an opinion that early abortion occurs more frequently in the first pregnancy. Etiology may rest in some, in reduced thyroid activity attested by too frequent correction or avoidance of abortion when thyroid therapy is instituted prior to conception and continued until the twenty-eighth week of gestation. Persistent uterine retro-displacements share some blame and should be corrected by the third month if still present.

Toxemias of pregnancy, on the other hand, do exist more commonly in the primigravidae. This knowledge should be borne in mind throughout the prenatal period.

Evaluation of the fetal size and capacity of the pelvis for delivery is a real challenge in a first labor. The pelvis should be examined carefully during the eighth month. Clinically, the anterior-posterior diameter of the inlet, the configuration of the sacrum, the pubic arch and prominence of ischial spines can quickly and efficiently be surveyed in the office. Actual measurements of the anterior-posterior, transverse and posterior sagittal diameters of the outlet can be ascertained very simply on any examing table. An ordinary pelvimeter is the only instrument needed. These measurements are as accurate as x-ray determinations, and since the outlet mirrors the midplane architecture, valuable information is thus obtained.

In a study of 1,000 pelvic x-ray measurements,[2] we were unable to find one so-called funnel pelvis. In this study, there were 197 who revealed midplane contraction and seventeen in whom the outlet was contracted (Table IV). However, in *all* outlet contractions found, each was accompanied

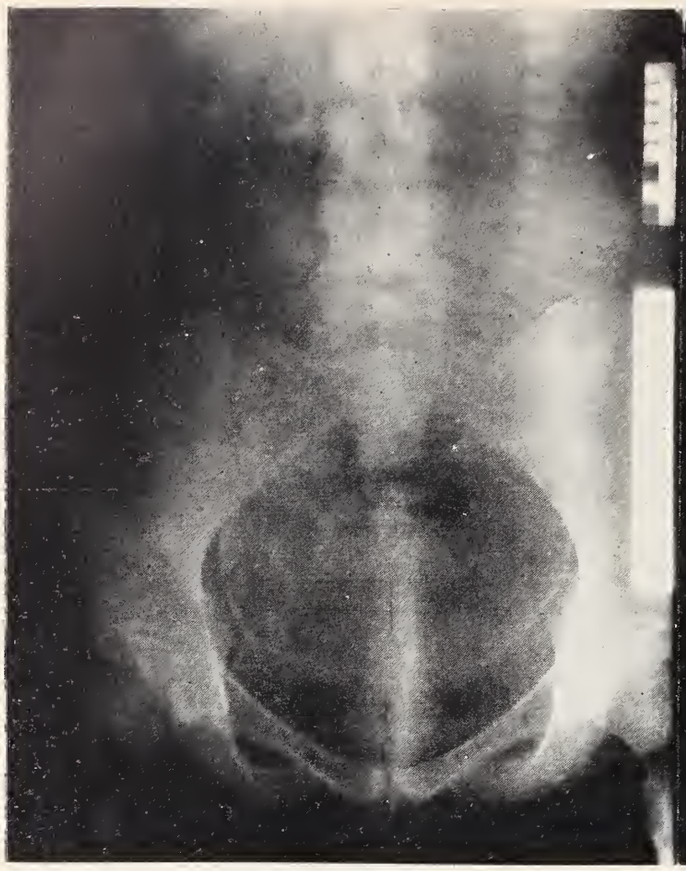


Fig. 1. Mrs. M.

	AP.	Tr.	Post. Sag.
Inlet.	13.5	14.2	6.5
Midplane	14.0	12.0*	5.2
Outlet.	14.0	12.2	10.0

*Volume, 910 cc. Fetal head, 810 cc.

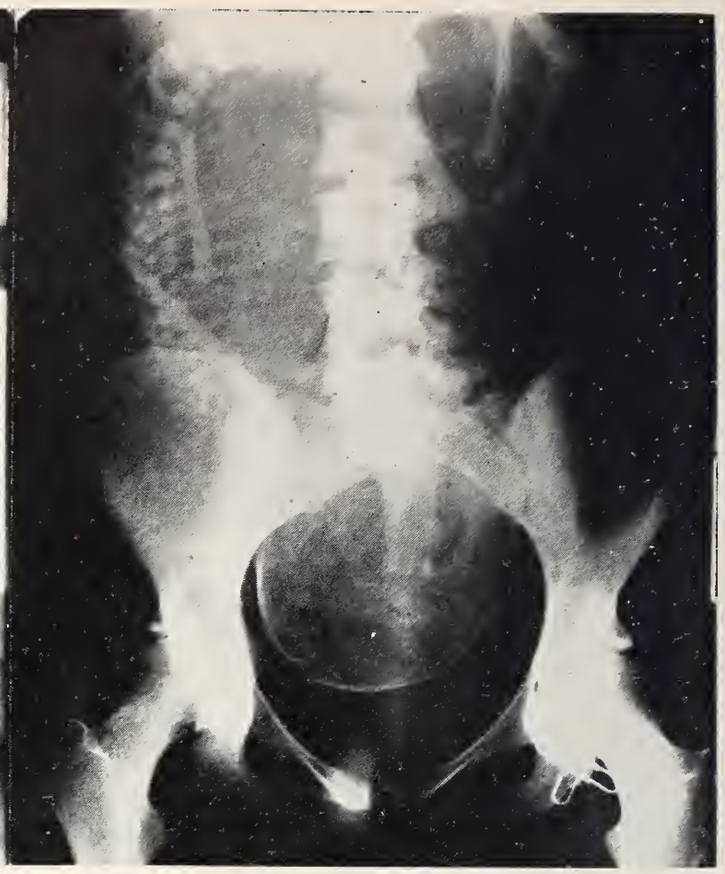


Fig. 2. Mrs. O.

	AP.	Tr.	Post. Sag.
Inlet.	12.2	12.5	5.2
Midplane	11.4	9.7*	4.2
Outlet.	11.4	9.5	7.0

*Volume, 480 cc. Fetal head, 680 cc.

by midplane contraction as well. Borderline or questionable clinical findings should be further evaluated by x-ray pelvimetry.

One should always be alerted when a primigravida approaches term and the fetal head fails to enter the pelvis. In all breech presentations, x-ray investigation is indicated not only for the importance of determining fetal attitude but also to obtain estimation of pelvic capacity.

It would be well, at this point, to sum up the present evaluation of x-ray pelvimetry. All accepted techniques have proved to be accurate in their results, providing meticulous application to the method is utilized. Investigators have shown impressive figures of similar values when the *same* women were evaluated by as many as five different techniques. There are pitfalls however if the application of x-ray pelvimetry to clinical use is haphazard. For example, one cannot predict the clinical behavior of labor in a given patient with a measured pelvis, even if the capacity of the fetal skull is accurately appraised. I would like to present three interesting examples:

1. Figure 1 shows a roentgenogram of one of the largest pelves we have observed. Large in all diameters, the midplane transverse diameter was 12 cm., representing a volume of 910 cubic centimeters. The fetal head was estimated to be 810 cubic centimeters. These reports agreed with the clinical impressions. This patient failed in labor due to a poor mechanism, hindered by obesity, toxemia and thorough emotional instability. A 10-pound, 12-ounce infant was delivered by cesarean section after the membranes had been ruptured for eighteen hours with labor and non-engagement of the fetal head.

2. Figure 2 shows a pelvis asymmetric at the inlet and narrowed transversely at the midplane to 9.7 cm (volume of 480 cc.). The miplane anterior-posterior diameter was 11.4 cms. and the fetal head was estimated at 680 ccs. A trial of labor was planned with the expectancy of some arrest at the midplane if the fetal head presented in any but the anterior-posterior axis. This patient went into labor spontaneously, developed a transverse arrest at the midplane and achieved complete cervical dilatation. When rotated, the fetal head was delivered with minimal traction and without incident. The baby weighed seven pounds 2 ounces.

3. Figure 3 presents another example of midplane narrowing in a nineteen-year-old primigravida. The mid-



Fig. 3. Mrs. R.

	AP.	Tr.	Post. Sag.
Inlet.	11.6	12.3	4.6
Midplane	11.0	9.0*	3.3
Outlet.	11.0	10.0	7.7

*Volume, 385 cc. Fetal head, 580 cc.



Fig. 4. Mrs. L. C. P.

	AP.	Tr.	Post. Sag.
Inlet.	13.0	11.9	4.3
Midplane	11.9	8.4*	4.0
Outlet.	11.9	10.0	8.9

*Volume, 315 cc. Fetal head, 640 cc.

plane transverse diameter was 9.0 cm (volume 385 cc.). The anterior-posterior diameter of the midplane was normal, the posterior sagittal was smaller than normal, 3.3 cm. The fetal skull was estimated at 580 cc. An excellent labor ensued which lasted twelve hours and a 6-pound, 13-ounce baby was delivered via low forceps without incident.

4. Figure IV represents a pelvis with even greater contraction. The transverse of this midplane was estimated at 8.9 cm. (volume 315 cc.). In addition, the fetal skull was larger than that in Figure 3, namely 640 cc. This unfortunate mother, the only one of this group with a previous pregnancy, had been delivered previously after a thirty-six-hour labor which was terminated with a difficult mid-forcep procedure. The child survived and is a hopeless spastic. In addition, the mother suffered major vaginal and cervical trauma. The pregnancy shown was terminated by cesarean section.

These are only a few of the many variations of human behavior coupled with pregnancy and variations in pelvic architecture.

Since pelvimetry is important chiefly to the primigravida, what values can one place on x-ray pelvimetry?

TABLE V. MOLDING OF THE FETAL HEAD IN RELATIVE DEGREES OF CEPHALO PELVIC DISPROPORTION

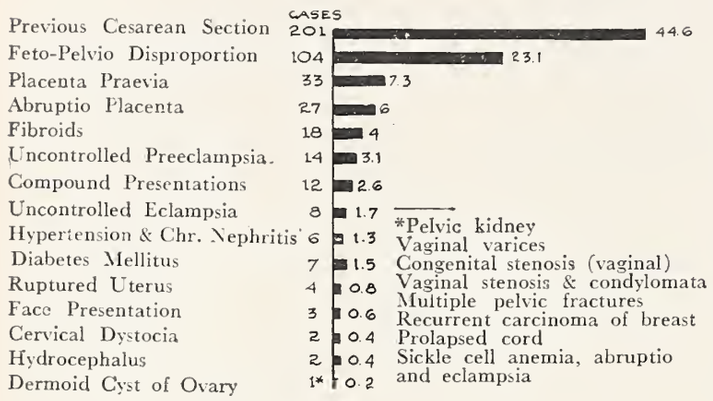
	Volume in cc.	Predicted molding
1. Normal pelvis, large baby		
Fetal head	800	
Tranverse diam, Midplane	600	25%
Disproportion	200	
2. Contracted pelvis, normal size baby		
Fetal head	600	33%
Transverse diam. Midplane	400	
Disproportion	200	

As far as pure mensuration is concerned, practice has proven that it is an accurate technique. However, known pelvic capacities must never replace intelligent observation of clinical behavior. Some diameters frequently compensate for contracted opposing diameters. The poorest prognosis has been observed in those pelves with combined inlet and midplane contraction.

The disproportion between the volume of a pelvic plane and the fetal skull can be expressed. The evaluation of this knowledge will depend not on the cubic centimeter discrepancy alone but only if it pitted against the percentage of molding expected of the fetal head (Table V). For ex-

TABLE VI. TOTAL CESAREAN SECTIONS

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ample, 200 cc. discrepancy, if the baby is large, may represent only 25 per cent of the fetal skull volume, whereas 200 cc. discrepancy in a *normal* size baby through a contracted pelvis might represent 33 per cent of the fetal skull volume. In each instance, the cephalopelvic disproportion is the same; however, in the second example, it would be unwise or perhaps impossible to expect the skull to mold one-third of its total volume without injury to the infant, the mother or both.

Finally, I know of no published so-called pelvic index which is helpful in predicting the outcome of labor in a given patient, and it is unpardonable for any roentgenologist to present a report to a physician stating *his* opinion as to the feasibility of vaginal delivery except in the rare abnormally deformed pelves. The report should be one of measurement only, the interpretation of which, like any other laboratory report, should be delegated to the obstetrician himself, who alone can evaluate all the other factors involved which play such important roles in the ultimate outcome.

The primigravida faces the prospect of cesarean section more than at any other time of her procreative career. The indications for cesarean section should not only be clear-cut, but the operator who incises her uterus for the first time should consider many factors which will influence her life thenceforth.

What thoughts should enter the mind of the operator who plans a cesarean section?

The maternal risk is increased. It is a major surgical procedure made safe today by blood banks and antibiotic drugs but still shadowed by the specter of aspiration, emboli and shock. The fetal salvage is less than in deliveries from below. The primigravida faces the stigma of a uterine scar, ever subject to subsequent rupture. She must repeat the performance with each succeeding pregnancy, in spite of the occasional instance of the patient who is allowed to deliver normally following previous cesarean section. She risks loss of later babies prematurely. Her family will be limited and the risk she takes is not only repeated but also might *increase* with parity. This ofttimes produces acute marital and moral problems, including incompatibility, pregnophobia and psychoses. She ultimately faces hysterectomy and may become a castrate long before the calculated climateric period.

Cesarean section is a serious affair in the young woman, and any conscientious obstetrician will solidify the indication by sound judgment in every case.

Our observations of the present-day indications for cesarean section are seen in Table VI. There have been no significant changes in the past eight years. Indications can be very rapidly summed up in four categories. Approximately 45 per cent are repeat procedures, and 23 per cent are for cephalopelvic disproportion. Placenta previa and premature separation account for 13 per cent. The remaining 20 per cent are for less frequently occurring conditions. Thus 81 per cent of all indications are for repeat performances, disproportion or bleeding. One can assume that a good percentage of the repeat group had as a primary indication, cephalopelvic disproportion also. This commonly used term lacks definite description and fails to qualify the true condition. Since "cephalopelvic disproportion" includes various degrees of fetal and pelvic size, variations of fetal attitude or just mere suspicion, a more complete account should be popularized.

More emphasis should be placed on interpretation of initial patient-evaluation mentioned before; on pelvic evaluation, on fetal attitude and less on sentiment and/or pressure from the family. Whereas, there is a fine line to draw between ultraconservatism and dogged radicalism, emphasis belongs on good, long-term maternal and fetal results regardless of circumstances. No procedure can substitute for an intelligent trial of labor. Utilizing a trial of labor, the primigravida is given a fighting chance to prove her worth. Many will succeed to defy all predicted obstacles. If not, the

obstetrician can certainly feel secure in his responsibility to the mother whose anatomy and physiology alone have joined forces to compel her to procreate with the aid of surgery.

This discourse would be amiss if it deleted the "horrible" caste of the "elderly primigravida." With few exceptions, any woman capable of conception for the first time at the end of the average procreative period is capable of producing a baby. Her anatomical age has merely failed to accompany her chronological age. Often one hears the statement, "It is a very valuable baby." All babies are valuable. The value of a baby of a woman of forty *seems* increased because she is usually the wife of a well-established local citizen, the banker or successful business executive with affluence. All eyes are centered on her and her obstetrician.

Intelligent management rests with the same quality of care one would offer *any* pregnant woman. The type of delivery will depend on the same standards established for *any* primigravida. Her risk should not be increased appreciably over her younger sister. In our experience, the only inconstant observation is that she might suffer a slightly greater degree of loss of pelvic support, all other considerations being equal.

In conclusion, let me emphasize that obstetric management of the primigravid woman is a challenge to the obstetrician. He holds the key to her happiness and to her future. Success in any maternity should not be measured in statistics alone, but in terms of live unharmed babies, whose mothers are physically sound following their experience in childbirth and emotionally secure with their genuine desire to repeat the performance again and again.

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A PAGE FROM MEDICAL HISTORY: EGYPT

(Continued from Page 1452)

Conclusion

The Egyptians had many gods. They built great temples and had many "mysteries" and sacrificial ceremonies. So much time and labor was spent on trying to preserve the dead and trying to live forever. They did, however, make a beginning in the science of medicine, and everyone knows that there is nothing more difficult than making a beginning. From Egypt and Babylonia the hard-won experience of the ages passed across to Greece and to the Hebrews. Through these channels our present society has been made possible.

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An Obstetrical Survey in a Small Hospital

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IF PATIENTS are to continue to receive the highest possible type of medical care, no physician must ever let himself become complacent or self-satisfied with the quality of medical care he is rendering. Without doing this, nonetheless, he must occasionally compare his results with those of others, so that he may better evaluate his own accomplishments. Through proper comparison, he is better enabled to pinpoint his efforts at self-improvement on the areas most in need of strengthening.

In the field of obstetrics, as is true in many fields, any program designed to study results must soon find itself faced with the necessity of making certain statistical surveys and comparisons. If one is working in a large teaching center, it is relatively easy to find suitable standards from comparable institutions to match against one's own results. If, on the other hand, one is connected with a small general hospital, it becomes much more difficult to find suitable material for a comparative study. It is with a hope that others might be interested in making a similar survey and find these statistics of value that the following report is made.

This study covers all the deliveries performed over a ten-year period in Mercy Hospital, a nonsectarian general community hospital, located in a city of approximately 18,000 population. The period covered is from January 1, 1944, through December 31, 1953. There were 11,876 deliveries during this period. For purposes of evaluating progress, the study was divided into two five-year periods.

At the beginning of this time, the hospital had a capacity of eighty-five beds, of which twenty-three were devoted to obstetrics. There was one delivery room. In 1952, an addition was built which increased the hospital to 135 beds. At this time, the obstetrical unit was built entirely new in this addition and consisted of two delivery rooms, labor rooms, preparation and work rooms, and thirty-one beds for maternity patients.

The obstetric care was given by a staff composed of both general practitioners and those limiting their work to obstetrics and gynecology. Any physician on the general medical staff of the hospital was granted the privilege of doing normal obstetrics, if he so desired. During the period covered, a total of fifty-five physicians delivered women at this hospital. Percentagewise, 43 per cent of the deliveries were performed by general practitioners in both periods.

In the first five-year period, cesareans were done by eight different operators, only three of whom limited their practice to obstetrics and gynecology. During the second five-year period, all these procedures were done by four surgeons, all of whom limited their practices to this specialty.

In the interest of good obstetric care, consultation was required in the presence of any of the following conditions: breech in primipara, hemorrhage, toxemia, cesarean section, prolonged labor, surgical induction of labor and operative vaginal deliveries.

Figures are not available as to the exact number of these women who had had prenatal care, but the big majority had had some. In quite a few, however, there had been none, or else the amount had been considerably short of the desirable minimum. Approximatly 90 per cent of these patients were Caucasian.

There had never been any resident staff at this hospital until July, 1951, when an interne-training program was established in conjunction with the general practice program of the University of Michigan Hospital. That program has been in effect since that time.

In Table I, we have summarized the analysis of the obstetrical work at Mercy Hospital for the period mentioned. We realize that various other aspects could have been considered, but we felt that these probably were the most important.

For the first comparison, we have brought together in Table II figures from Mercy Hospital, our own state and a neighboring state. In Michigan, at present, 90 per cent of all deliveries are done in hospitals, and the Illinois figures are for hospital deliveries.[10] From this chart, it becomes apparent that our results compare favorably with the two mentioned groups.

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TABLE I. AN ANALYSIS OF OBSTETRICAL RESULTS IN MERCY HOSPITAL
1944-1953

Year	Deliveries Including Sections	Live Births	Maternal Deaths	Sections	Still Births	Premature Deaths	Infant Deaths	Neonatal Deaths including Premature Deaths
FIRST 5-YEAR PERIOD								
1944	885	874	0	25	11	5	6	11
1945	880	863	0	18	17	10	7	17
1946	1166	1148	0	44	18	17	3	20
1947	1427	1403	2	39	24	20	6	26
1948	1324	1308	2	35	16	14	4	18
5-Year Total	5682	5596	4	161	86	66	26	92
5-Year Rate			0.71	2.87	15.3	11.8	4.64	16.4
SECOND 5-YEAR PERIOD								
1949	1226	1206	1	26	20	13	6	19
1950	1214	1199	1	27	15	10	9	19
1951	1327	1308	0	24	19	19	4	23
1952	1236	1211	1	32	25	12	12	24
1953	1191	1179	1	35	12	18	5	23
5-Year Total	6194	6103	4	144	91	72	36	108
5-Year Rate			0.655	2.35	14.9	11.8	5.90	17.7
10-Year Total	11,876	11,699	8	305	177	138	62	200
10-Year Rate			0.68	2.60	15.1	11.8	5.3	17.0

Note: Maternal death, premature death, infant death, neonatal death, and stillbirth are expressed as per 1000 live births. Sections are expressed as per cent of deliveries.

TABLE II. COMPARISON OF TEN-YEAR ANALYSIS OF LIVE-BIRTH RATE, MATERNAL MORTALITY RATE, STILLBORN, PREMATURE DEATH AND CESAREAN SECTION RATES IN MERCY HOSPITAL, ILLINOIS, AND MICHIGAN

	Live Birth	Maternal Mortality	Stillborn	Premature	Cesarean Section
Mercy Hospital	11,699	0.68	15.1	11.8	2.60%
State of Illinois 196 hospitals	1,560,835	0.97	17.1		3.68%
State of Michigan	1,344,526	0.95	20.6	10.1	

The report of Mott from St. Joseph Hospital, Patterson,[9] New Jersey, presented us with an opportunity to compare the results of Mercy Hospital for a ten-year period with those of this eastern institution.

In Table III, these two sets of figures are summarized. If cesarean percentage is a criterion, it would appear that both hospitals practice a conservative type of obstetrical care. The results in the categories listed show a very close similarity in most instances.

In the interest of making further comparative studies, it was decided to study separately, three phases of the work. These were maternal mortality, cesarean sections and fetal loss.

TABLE III. COMPARISON OF TEN-YEAR RESULTS AT ST. JOSEPH AND MERCY HOSPITALS

	St. Joseph Hospital	Mercy Hospital
Total Live Births	18,814	11,699
Total Maternal Deaths	14	8
Total Maternal Mortality in percentage	.07	.068
Total Mortality Vaginal Deliveries	.05%	.035%
Cesarean Section	1.7%	2.6%
Total Cesarean Sections	338	305
Total Mortality Cesarean Section	1.1%	1.2%

TABLE IV. COMPARISON OF MATERNAL MORTALITY IN FOUR HOSPITALS

Hospital	Total Deliveries	Maternal Mortality	Mortality Per cent
St. Anne's 1943-1947	12,209	11	.09
Huntington Memorial 1943-1947	8,014	6	.075
St. Joseph 1944-1948	9,242	7	.075
Mercy 1944-1948	5,596	4	.071

Maternal Mortality

The first review of maternal mortality was made in New York State in 1930, when it became apparent that little progress had been made in this regard between the years 1915 and 1930. At this time, the rate was six to eight deaths per thousand live births. Since then, much emphasis has been placed on this subject, and today many states make detailed studies of all such deaths.

Comparative ten-year statistics were difficult to find, but in Table IV,[9,1,4] a comparison is made

between five-year periods at four hospitals. A fairly uniform rate is found to exist. These maternal mortality rates are much improved over those of the early thirties and are lower than those which, at one time, were considered irreducible minimums. Figures from Connecticut and Oregon,[6] where in 1951 the maternal mortality rate was reduced to 0.01 per cent, prove that we cannot rest on the oars, but rather must work even harder to reach this same goal or possibly improve on it. Progress after this much improvement becomes increasingly harder and calls for redoubled efforts.

A résumé of the eight maternal deaths in this series follows:

Case 1.—This patient twenty-two years old, gravida II, para I, whose last menstrual period was November, 1946, had a normal prenatal course until the day of admission. Pregnancy was then estimated at about thirty-two weeks.

On admission in the evening of June 25, 1947, she stated that her bag of water ruptured at 1:00 p.m., and at 6:00 p.m. she began having vaginal bleeding, with blood coming in gushes. At 8:00 p.m., she began having labor pains. In spite of this, she did not enter the hospital until 11:30 p.m. After admission, the patient continued to have bleeding. A sterile vaginal examination revealed a portion of placenta in the cervical os. Fetal heart tones were not present and Braxton Hicks version was done, one foot delivered and traction applied. The body was delivered after thirty minutes, and the cervix clamped around the head. Because of poor uterine contractions and continued bleeding around the head, Duhrssen's incisions were made, and delivery of a stillborn infant was completed at 1:40 a.m. The uterus was explored and, no damage being found, was packed and the cervical incisions were closed. Normal saline was given intravenously while waiting for blood to be cross-matched. In spite of the pack plus ergotrate intravenously and intramuscularly, the bleeding continued, and it was felt necessary to explore the uterus, but, again nothing was found and the uterus was repacked. Shock had developed at this time. The patient was transferred to her room, and an attempt was made to start blood by a cut-down, but the shock state deepened, and the patient expired at 4:55 a.m.

Clinical diagnosis was (1) pregnancy at term; (2) stillborn infant; (3) premature separation of placenta; (4) shock due to hemorrhage.

Case 2.—The patient, twenty-five years old, gravida III, para II, was admitted to Mercy Hospital in active labor at term. She had a normal prenatal course until the third trimester, when she began developing a polyhydramnion. During the last two weeks prior to admission, she had not felt fetal movements and at this time the fetal heart could not be detected. In the third trimester, she was treated with sulfa drug for cystitis. Except for a gravid abdomen, physical examination findings were negative. Kahn test was negative. After four hours of labor, she delivered with ease by left occipito anterior to occipito anterior mechanism over a left mediolateral episiotomy, a macerated infant. There was an excessive amount of amniotic fluid. The placenta was delivered by simple expression with 200 cc. blood loss in third stage. Placenta was considered to be complete. Immediately following the third stage, the patient developed profound shock. Intravenous fluids were started, but the patient dislodged the needle two or three times, and finally a cut-down was done. During this time, she continued to bleed from the uterus. Ergotrate intravenously failed to contract the uterus. Oxygen was started. A consultant examined the patient and removed fragments of placenta from the poorly contracted uterus. The uterus was packed and pitocin given intramuscularly and intravenously, followed by calcium gluconate. Pack was removed after several hours. The uterine bleeding never completely stopped and in spite of blood and fluids intravenously plus adrenalin and eschatin, the shock state did not improve, and the patient expired approximately sixteen hours after delivery.

Clinical diagnosis was: (1) pregnancy at term; (2) macerated term fetus; (3) postpartum hemorrhage; (4) polyhydramnion; (5) atony of uterus.

Case 3.—This patient, twenty-five years old, gravida II, para I, whose expected date of confinement was May 9, 1948, was admitted on April 26, 1948. Except for severe vomiting during the first trimester, her pregnancy was uneventful. Because of a large retroperitoneal tumor involving pelvis, thigh, abdominal wall and labia, she had had a previous cesarean section. Physical examination was negative except for gravid abdomen and tumor mass involving the right thigh, labia, abdominal wall and retroperitoneal area in the pelvis.

Because of previous cesarean section, the patient was delivered by repeat section of a viable female infant. The postoperative course was unremarkable until the afternoon of the first postoperative day when, suddenly, while laughing and talking, she began gasping for breath and became cyanotic. She gave the impression of having severe pain, although she was comatose. Oxygen was started and coramine given without effect, and she expired twenty-five minutes later.

Clinical diagnosis was: (1) pregnancy at term; (2) postcesarean section; (3) viable female infant; (4) pulmonary embolism; (5) retroperitoneal tumor (type undertermined).

Case 4.—This patient, twenty-six years old, white, married, gravida I, para O, was admitted in active labor at term following an unremarkable prenatal course. Physical examination was not remarkable.

After a twenty-hour period of labor, a normal male infant was delivered spontaneously by left occipito anterior to occipito anterior mechanism over a left mediolateral episiotomy. During labor, blood pressure was 130/82. After saddle anesthesia and just prior to delivery, the patient complained of headache and blood pressure was 200/130. Blood pressure dropped to 170/100 immediately after delivery, and the patient was

talking and acting normally. Shortly afterwards, she began tossing in bed and talking irrationally. Two hours later, she was apparently asleep and breathing regularly and quietly. At 7:00 a.m., six hours postpartum, respirations became irregular, pulse very rapid, right pupil enlarged, neck stiff, with spastic right extremities. A spinal tap revealed pressure of 250 mm. xanthochromic fluid with 295 white blood count (70 per cent polymorphonuclears), 4 plus Pandy test with elevations of protein and sugar. Urinalysis showed 3 plus albumin and granular casts. At this time, temperature was 105° and penicillin was started. The following day, June 16, 1950, ventriculograms were done. There was normal pressure and clear fluid on the right side and increased pressure and xanthochromic fluid on the left side. X-rays suggested a mass in the third ventricle. Several hours after ventriculograms, the temperature went to 108°, the patient became cyanotic and pulse and respirations became irregular. Later the same day, she began to have convulsive movements and blood pressure became difficult to obtain. A catheter was put into the left ventricle, and there was normal ventricle pressure. The patient expired quietly at 10:25 a.m. on June 17, 1950. Autopsy was done.

Clinical diagnosis was: (1) pregnancy at term; (2) viable male infant; (3) subarachnoid hemorrhage; (4) possible colloid cyst of third ventricle.

Pathological diagnosis was: (1) hemorrhage from choroid plexus into left lateral, third ventricle and aqueduct of Sylvius; (2) edema and congestion central nervous system; (3) pulmonary congestion, edema, early bronchopneumonia; (4) acute hyperplastic splenitis; (5) parenchymatous degeneration of liver, kidney and heart; (6) pepto-esophagitis.

Case 5.—This patient, twenty-nine years old, white, primigravida, whose expected date of confinement was February 17, 1952, was admitted to Mercy Hospital on January 5, 1952 because of a large amount of painless vaginal bleeding. She had had two previous admissions in December, 1951, because of painless vaginal bleeding.

Physical examination was negative except for gravid abdomen. Hemoglobin was 9.3 gm. (58 per cent). Urinalysis showed 1 plus albumen.

On the second hospital day, this patient was transfused with 500 cc. of whole blood. She continued to have a small amount of vaginal spotting. The third hospital day, her hemoglobin was 10.9 gm. (68.1 per cent) and because of age, primiparity, x-ray evidence of pelvic asymmetry and marginal placenta previa, a cesarean section was carried out with delivery of a viable female infant.

The patient was returned to her room in good condition following the section. Five hundred cc. of whole blood was added to intravenous fluid that was started in the operating room. Three hours postoperatively a small amount of blood was noted on the abdominal dressing and there was vaginal bleeding in excess of what would be expected, but not in a large amount. Blood pressure was 105/75. Without additional signs or symptoms, in about one hour, blood pressure and pulse suddenly became unobtainable and attempt at starting transfusion was unsuccessful. Ergotrate gr. 1/320 and eschatin 2 cc. were given intramuscularly without effect, and the patient went steadily into more profound shock and expired. Autopsy was done.

Clinical diagnosis was: (1) primipara at eight months' gestation; (2) placenta previa; (3) postcesarean section with viable infant; (4) profound sudden shock.

Postmortem diagnosis was: (1) lower nephron nephrosis recent, due to incompatible blood transfusion; (2) hemorrhage into left broad ligament and retroperitoneal space and peritoneal cavity, secondary to cesarean section; (3) status following recent section; (4) Bronchopneumonia left lower lobe; (5) patchy adrenal hemorrhage recent; (6) chronic pyelitis and cystitis.

Case 6.—This patient, twenty-three years old, gravida II, para I, whose expected date of confinement was September 21, 1953, was admitted in active labor on September 21. Prenatal course was normal. Past obstetrical history was unremarkable, an 8 pound male infant having been delivered by low forceps after eight hours' labor in 1952.

Physical examination showed a normal woman with large firm gravid uterus. After thirteen hours of hard labor, x-ray pelvimetry showed a large single fetus in left occipito posterior position with floating head and an adequate pelvis. The first stage of labor was twenty-two hours, and when the cervix was fully dilated, the presenting part was at station minus one.

Two hours after the cervix was fully dilated and effaced and the presenting part at plus 1 to plus 2, it was decided to undertake delivery. The head was rotated with considerable difficulty from left occipito posterior to left occipito anterior. At this time, a large amount of bloody fluid, estimated at 1500 cc., began to gush from the uterus. Mid-forceps were applied and with difficulty a 12 pound 6 ounce female stillborn infant was delivered over a left mediolateral episiotomy.

Intravenous glucose was started immediately, and ten minutes postpartum the patient was cyanotic, blood pressure 70/30 and pulse 96 and weak. There was very little uterine bleeding after the baby was delivered, although the uterus did not contract well. Twenty minutes after intravenous injection and oxygen were started, the pulse was slow and faint and the patient was warm and dry. She did not respond, and thirty-eight minutes postpartum, she expired. Autopsy was refused.

Clinical diagnosis was: (1) amniotic fluid infusion with defibrinization; (2) term pregnancy; (3) stillborn; (4) afibrinogenemia (confirmed by blood studies).

Case 7.—This patient, twenty-six years old, white, gravida I, para O, whose expected date of confinement was February 9, 1948, was admitted February 19, 1948, after a normal prenatal course.

On admission, she was having abdominal pains, but these gradually ceased and she was discharged on March 2, 1948. She returned on March 3, having irregular pains, and was given small doses of pitocin with im-

provement in the frequency and character of contractions. The following day, contractions became irregular, and the cervix was only 2 cm. dilated, which was the same as on previous days.

Because the patient had been a sterility problem, had mild chronic hypertension and showed no progress in labor, a cesarean section was carried out with delivery of a viable female infant. During the operation, the patient suddenly became depressed, with slow shallow respirations, and the blood pressure became unobtainable. There was no evidence of bleeding, body was warm and dry, pulse was slow but weak.

Blood 350 cc., plasma 500 cc. and stimulants gave slight temporary improvement in her general condition. Two hours postoperatively she expired. Autopsy was refused.

Clinical diagnosis was: (1) pregnancy at term; (2) viable female infant; (3) postcesarean section; (4) cerebral anoxia.

Case 8.—This patient, twenty-seven years old, primigravidum, whose expected date of confinement was December 17, 1946, was admitted on December 23. Her prenatal course was unremarkable. Physical examination findings were negative except for gravid uterus with transverse presentation.

A cesarean section was carried out, with delivery of a normal male infant. The postpartum course was benign until the fifth postoperative day, when the patient developed abdominal distention, marked, with emeses of fecal-like material. Wangensteen suction was instituted. She showed some improvement until the ninth postoperative day when she developed a sudden peripheral vascular collapse. She was given 600 cc. of whole blood and coramine with much improvement in her general condition. A medical consultant felt that the patient had thrombophlebitis of the right leg, with pulmonary emboli and adrenal cortical hemorrhage. The tenth postoperative day, she seemed improved slightly, but on the following day she suddenly expired.

Clinical diagnosis was: (1) term pregnancy; (2) transverse presentation; (3) post cesarean section; (4) viable male infant; (5) thrombophlebitis with pulmonary emboli; (6) adrenal cortical hemorrhage.

Postmortem diagnosis was: (1) asphyxia; (2) bilateral pulmonary atelectasis and emphysema; (3) recent cesarean section; (4) localized abscess of anterior abdominal wall; (5) ileus; (6) ulcerative ileitis of embolic origin; (7) toxic nephritis.

The eight fatal cases have been reviewed more or less in detail. Several factors in connection with these cases are noteworthy. The cases were divided as to cause of death as follows: hemorrhage, two; embolism, one; choroid plexus hemorrhage, one; transfusion reaction due to incompatible blood, one, amniotic fluid infusion, one. The remaining two cases present no clear-cut cause of death; one on the operating table without adequate explanation, and another following cesarean section and with the cause of death still obscure even after postmortem examination.

TABLE V. COMPARISON OF CESAREAN SECTION FOR TEN YEARS IN THREE SMALLER HOSPITALS

Hospital	Number of Sections	Percentage of Sections	Maternal Mortality	Mortality Percentage
St. Joseph 1942-1951	338	1.7	4	1.1
Ind. General 1944-1953	307	2.1	6	1.9
Mercy 1944-1953	305	2.6	4	1.3

It is disconcerting that although the cesarean incidence in the total series of cases was only 2.6 per cent, four (50 per cent) of the deaths occurred in patients who had cesareans. The small series of cases may account for this extraordinary figure, and certainly it is much higher than the figure reported by Taylor[12] from the Pennsylvania study in which 146 of 959 maternal deaths were encountered in cesarean section. This latter figure represents 15.2 per cent. Contemplation of these figures should be a deterrent for the poorly considered cesarean section.

The two deaths from hemorrhage are dramatic and pitiful evidence of the failure to take early and aggressive action in the presence of hemorrhage. One of them, likewise, is illustrative of the comment of Dr. Miller, "Faulty judgment which leads to use of untimely operative procedures in the absence of justifiable indications . . ."[8]

The second case of death due to hemorrhage might reasonably be considered to fall in the category of defibrination due to the presence of a macerated fetus in the uterus. This can only be conjecture at this time, of course. However, in both instances frantic efforts were made to give blood after a shock state had developed, instead of making preparations for this procedure at a time when such efforts might have been more easily carried out and to much more avail.

It is disturbing to realize that even with a resident staff and with blood available in the bank, the patient in Case 6 progressed to fatal termination so rapidly that adequate therapy could not be instituted. Fibrinogen was not available at that time, even if its need had been immediately recognized.

Specific comment cannot add much to the previous presentation of the other maternal deaths. A serious language difficulty may have been a factor in the death from incompatible blood, in that,

TABLE VI. INCIDATIONS FOR 305 CESAREAN SECTIONS DONE AT MERCY HOSPITAL 1944-1953

Year	Cephalo-Pelvic Disproportion	Hemorrhage	Mal-Presentation	Toxemia	Inertia Primary and Secondary	Previous Section	Miscellaneous*
1944	7	2	0	1	3	8	4
1945	6	1	1		4	4	2
1946	13	4	5	1	4	12	5
1947	15	4	3	0	1	12	4
1948	10	3	2	0	2	18	0
1940	7	4	0	0	4	10	1
1959	7	3	2	1	1	11	2
1951	6	3	0	1	1	12	1
1952	8	9	2	0	4	9	0
1953	8	8	6	0	1	11	2
Total	87	41	21	4	25	107	21

*Pregnancy at term (1)—1944
Postmaturity and POP (1)—1944
Previous Duehrssen's incision (2)—1944
Obstructing tumor (3)—1944, 1950, 1953
Previous difficult deliveries (1)—1945
Cervical amputation and previous pelvic surgery (1)—1945
Perineorrhaphy, suspension, and previous pelvic surgery (1)—1946
Diabetes Mellitus (3)—1946, 1947, 1950
Erythroblastosis (2)—1946, 1947
Fetal distress (1)—1946
Carcinoma of cervix (1)—1946
Cardiac decompensation (1)—1947
Removal of stillborn 8½ months baby (1)—1947
Bowel obstruction (1)—1949
Prolapse cord (2)—1951, 1953

if the patient had been able to make the nature of her complaints more clearly understood, definitive action might have been taken earlier.

It is reasonable to assume that there have been an average number of convulsive toxemias during this ten-year period, although accurate figures are not available. Certainly, there is a definite incidence of non-convulsive toxemia. Dr. Miller[8] states that 20 per cent of maternal deaths are due to toxemia, a figure which is verified by Longyear, Ott and Sutton,[7] who give the figure of 19.1 per cent in Michigan in 1950. This figure is compared in their article with 28.3 per cent in Minnesota in the same year, and 25.9 per cent in Illinois in the years 1948-1951. In the light of these figures, two maternal deaths might have been expected from toxemia and the absence of any deaths from this cause is not explained. Certainly, no unusual therapy was employed in the management of patients with toxemia.

There have been no hard and fast rules established for the management of obstetric hemorrhage, except the rules requiring consultation which were formulated following the First American Congress on Obstetrics in 1939, but which were not effective for several years thereafter. These rules require consultation with a recognized consultant, for all patients who have hemorrhage. Beyond that, treatment has been individualized, and a relatively high number of patients have been delivered vaginally in the presence of abruptio placenta and partial placenta previa, with satisfactory results. Cesarean section has by no means been the immediate refuge of the consultant in cases of hemorrhage.

Cesarean Sections

Shortly before the period covered by this report, our hospital had a cesarean section rate which was above the national rate and accepted averages and resulted in criticism by the accreditation committee. With the inauguration of compulsory consultation in all such cases the rate dropped, and for this ten-year period our average falls in the group of hospitals with a relatively low incidence.

Hoffman[5] states that reported cesarean rates vary from 0.5 per cent to 14 per cent, a variation which hardly seems justifiable. Table V[5,10] summarizes the ten-year record for cesareans in three hospitals with relatively low incidence of sections.

Breaking down the figures from Mercy Hospital into two five-year periods a few trends appear. In the first period, there were three deaths in 161 sections for a mortality rate of 1.8 per cent. The three deaths were from embolism, electrolytic imbalance and one from an unknown cause. In the second period, there was one death in 144 sections for a mortality rate of 0.7 per cent. This one death was from an incompatible blood transfusion. In the first period, the operations were performed by a total of eight surgeons, five of whom were general surgeons. In the second period, the operations were done by four surgeons, none of whom was a general surgeon.

In Table VI are listed the indications for the sections. It will be seen that in the first five-year period, fifteen were done for so-called miscellaneous indications. In the second period, only six were done for these reasons.

It is noteworthy that with the gradual disappearance of the general surgeon from the cesarean

section stage, there has been a decrease in the number of cesarean sections for miscellaneous indications. While there is only slight decrease in the total incidence of cesarean sections, it is our feeling that more clear-cut diagnoses are made, that cephalopelvic disproportion has been more clearly evaluated before labor has proceeded to an inevitably tragic outcome, that the fear of section after failed forceps has been lessened, and that cesarean section may be the selected treatment in the presence of hemorrhage. These and other factors have maintained the percentage of cesarean sections at the level given, but on a more seemingly justifiable basis. The figure of 2.87 per cent in the first five years, and 2.35 per cent in the second five years, is of interest in the light of the 4.8 per cent cesarean incidence at the Chicago Lying-In Hospital as given in the Annual Report, 1953-54.[2]

Our experience and the experience of Mott[9] again reiterate the increased risk in cesarean section over that of vaginal delivery. Mott reported for ten years a mortality rate of 1.1 per cent for cesarean deliveries and 0.05 for vaginal. Our respective figures are 1.3 and 0.03.

Fetal Loss

The results of the study of fetal loss show that progress here is lagging. We were quite disappointed and surprised to find that results in the two periods were very similar. Corresponding findings have been reported by others. Hawkins[4] reported some statistics for all hospitals in the State of Illinois having 1,000 or more births per year. In these, the stillbirth rate in 1943 was 20.5 per thousand live births, and in 1947 it was 16.3. In neonatal deaths, it was 19.7 in 1943 and 22.1 in 1947. In his own hospital, the same figures were: stillbirths, 15.9 in 1943 and 18.3 in 1947; neonatal deaths, 17.6 in 1943 and 18.0 in 1947.

In Table VII the results for five-year periods in four hospitals are given.[1,4] The results are very similar. Figures from the other hospitals for later years were not available.

Our experience welds another link in the growing chain of evidence pointing to the need of the expenditure of great energy to solve the problem of prematurity. Only sixty-two full-term, live-born babies died out of 11,699 live births. This gives a percentage of one-half of one. There was a total of 667 premature deliveries with a loss of 138 for a percentage of 20.5.

TABLE VII. COMPARISON OF FETAL LOSS IN FOUR HOSPITALS

Hospital	Live Births	Stillbirths		Neonatal Deaths	
Swedish (Seattle) 1938-1947	19,736	359	1.8%	299	1.5%
Huntington Memorial 1943-1947	7,912	102	1.28%	124	1.5%
St. Anne's (Chicago) 1943-1947	12,209	215	1.7%	210	1.7%
Mercy 1944-1948	5,596	86	1.53%	92	1.6%

Dr. Edith Potter, in discussing Hawkins' paper, said that in Chicago Lying-In Hospital much progress had been made in reducing this loss. In 1931, the combined loss from stillbirth and neonatal deaths was forty-one per thousand live births. By 1948, this had been reduced to twenty-one. Although smaller hospitals will have a much harder job to get the results possible in an institution like Lying-In, nonetheless, these results are a challenge to us, and this part of our program obviously needs much careful study.

Contemplation of over-all statistics tends to cause complacency. It is only necessary to subject specific areas to critical analysis to bring about the realization of a need for improvement. Small hospitals, such as ours, are not likely to make such studies unless impetus is provided from some outside source. A distressing factor in making such a survey is the lack of complete records. This condition may very well exist in many small institutions that have adequate material for studies which might make contributions to our total knowledge. Focusing attention on our weaknesses should strengthen our determination to prevent recurrence of our mistakes.

Conclusions

From a survey of the ten-year results of an obstetric service in a general hospital in a small community, the following conclusions may be drawn:

1. Although the maternal mortality percentage compares favorably with figures from other institutions, an analysis of the individual deaths shows preventable deaths still occur and the goal of

irreducible level of maternal mortality is not yet reached.

2. The increased risk of cesarean delivery over vaginal is again demonstrated.

3. Improvement in reducing fetal loss is lagging behind that in lowering maternal loss. Coordinated co-operation between obstetrician, pediatrician and anesthetist is indicated in an attack on this problem.

4. More intensive efforts to solve the problem of prematurity are indicated.

Summary

1. Statistical studies of the obstetrical service in a small general hospital have been presented.

2. Total maternal deaths are comparable to national averages during the period studied.

3. Fifty per cent of the maternal deaths occurred in patients who had cesarean sections, representing 2.6 per cent of the total number of deliveries.

4. Fetal loss has not showed any satisfactory improvement in the ten-year period studies.

Addendum:

Since this survey was made, 1,185 additional deliveries have been cared for on this service, with no maternal deaths.

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Identifying X-Ray Films

By E. C. Swanson, M.D.

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A REVIEW and evaluation of the progress in the field of x-ray concerning the absolute identification of films after exposure failed to disclose any simple certain method of solving the problem. The following method, which has been utilized in the author's office for the past several years, has proved satisfactory.



The method of reproducing signatures and other pertinent data has been through the use of translucent paper which is used in industry for the copying of communications. On this paper, the following information is inscribed:

E. C. Swanson, M.D.
220 N. Main Street
Vassar, Michigan

Patient .....

Date .....Part x-rayed.....

Signature .....

This slip of paper, on which the data have been inscribed, is placed in the cassettee under the film before exposure, and the information is transferred to the film at the time of exposure.

The usefulness of this manner of imprinting the

(Continued on Page 1540)

Agranulocytosis Following Chlorpromazine Therapy

By Vladimir Prokopowycz, M.D.

Northville, Michigan

THE REPORTS about toxic, depressant action of Chlorpromazine on the bone marrow are, to date, very limited. "Animals given thorazine for ninety days by oral or parenteral routes showed no significant variations in the blood picture and no pathological changes in any tissue, organ or system."* "Extensive studies of hematopoietic activity in several large series of patients receiving thorazine revealed no deleterious effects from the drug, even after prolonged use."**

The chemical name of Chlorpromazine is 10-3-dimethylaminopropyl-2-chlorphenothiazine hydrochloride. This compound consists of two benzene rings connected with one sulfur and one nitrogen atom, with attached dimethylaminopropyl group. Shortly, it is a phenothiazine derivative.

The writer reports having a case of acute agranulocytosis with a fatal outcome which was caused, in all probability, by the use of chlorpromazine. The fulminating onset, typical clinical picture and short duration of the illness were closely observed and recorded. The clinical picture was similar to agranulocytosis, sometimes observed following administration of aminopyrine.

Case Report

A sixty-two-year-old woman was admitted to the hospital with a diagnosis of presenile brain disease, in February, 1953. The physical examination did not reveal any pathological abnormalities at the time of her admission. Laboratory findings were as follows: Urine: albumin negative; sugar negative; sediment in normal ranges. Complete blood study: red cells 5,100,000; white cells 8,400; hemoglobin 88 per cent; Kahn test negative. The chest x-ray did not reveal any abnormalities of the heart or lungs.

After admission, patient was treated symptomatically for ankle edema, constipation, seborrhea and disturbed behavior. She was given digitoxin, 0.1 milligrams daily for two months; mercuhydrine, 1 cc. intramuscularly each week for one month; phenobarbital, grain ½, three times daily for one month; chloral hydrate, 8 cc., as needed for sleep, for three months, and mineral oil, as needed. During the treatment, repeated blood and urine studies were done. These did not reveal any pathological abnormalities. Her behavior continued to be much disturbed. Chlorpromazine,† 50 milligrams three times daily, was instituted on October 14, 1954, with the simultaneous discontinuance of all other medication.

Improvement of her mental condition was striking. She sat in a chair very quietly most of the day. She was neatly dressed and tidy. She ate well and was more co-operative. The continuous grimacing and disturbed behavior disappeared. She attended movies and watched the pictures intently and quietly. Twelve days later, on October 26, 1954, Chlorpromazine was reduced to 50 milligrams twice daily because the patient seemed to be somewhat somnolent. An allergic rash appeared on the face, neck and upper back, and the patient was given Benadryl, 50 milligrams three times daily, orally, for three days, in addition to Chlorpromazine. The allergic rash disappeared. The blood study done one month after chlorpromazine therapy was begun, November 16, 1954, was as follows: red cells 4,180,000; white cells 8,050; hemoglobin 88.8 per cent. Schilling differential: myelocytes 1; segmented 68; lymphocytes 20; monocytes 11. The dose of Chlorpromazine was increased again to 50 milligrams three times daily and was continued until December 5, 1954, and there were no unusual changes in her physical or mental status.

Suddenly, approximately seven weeks after treatment with Chlorpromazine was begun, on December 5, 1954, the patient developed a high temperature (102.2° F.), great weakness, complete anorexia and profuse perspiration. Physical examination revealed a diffuse, ulcerated tonsillitis and pharyngitis. Lung and heart were clear to percussion and auscultation. Abdomen soft, nontender. Extremities were normal. Morphological blood study was done on December 6, 1954, with the following results: red cells 3,900,000; white cells 1,500; hemoglobin 75 per cent. Schilling differential: myelocytes 4; eosinophils 2; lymphocytes 70; monocytes 20. Sedimentation rate, index 32. Urinalysis: specific gravity 1.021; albumin 3+; sugar 1+; many granular casts in sediment. Nonprotein nitrogen 55.8 per cent. Later that day, the temperature went to 105° F. Blood pressure dropped to 70/35, pulse 180 per minute, breathing became rapid and superficial. Patient went into deep shock. Penicillin, 400,000 units, intramuscularly stat, streptomycin, 1 gram intramuscularly, intravenous 5 per cent glucose in water and nasal oxygen were administered. Despite all of those measures, patient died on December 7, 1954, in the morning hours. Autopsy and bone marrow studies were refused by the patient's relatives.

This report describes the clinical course in a patient receiving Chlorpromazine for disturbed behavior, who died of agranulocytosis seven weeks after the drug was begun.

Complete serial blood studies should be carried out on patients receiving this drug. Further control studies on the effects of Chlorpromazine on the hematopoietic system are desirable, particularly since the drug has been felt to be relatively nontoxic to date.

*Citation from "Questions and Answers on Thorazine," page 2, chapter 9, Smith, Kline and French Laboratories, Philadelphia.

**Citation from "Thorazine," Smith, Kline & French Laboratories, Philadelphia.

Michigan Clinical Institute

Sheraton-Cadillac Hotel, Detroit

Wednesday-Thursday-Friday, March 7-8-9, 1956

L. W. Hull, M.D., Detroit, General Chairman

Information

- **HEADQUARTERS**—Sheraton-Cadillac Hotel: Assemblies, Exhibits and Press Room on Fourth Floor.

- **REGISTER**—Top of stairs—Fifth Floor—as soon as you arrive.

Hours: Tuesday, March 6—1:00 p.m. to 5:00 p.m.

Wednesday, March 7—7:30 a.m. to 5:15 p.m.

Thursday, March 8—8:45 a.m. to 5:15 p.m.

Friday, March 9—8:45 a.m. to 3:30 p.m.

- **NO REGISTRATION FEE** for Members of MSMS and other State Medical Associations, AMA, and Canadian Medical Association.

- **ADMISSION BY BADGE ONLY** to all Assemblies, Discussion Conferences and the Exhibition. Please present your MSMS or other State Medical Association, AMA, or CMA Membership Card to expedite registration.

- **GUESTS**—Members of any state medical association, AMA, or CMA members from any province of Canada and physicians of the Army, Navy, and U. S. Public Health Service are invited to attend as guests. No registration fee. Please present credentials at the Registration Desk.

  Bona fide doctors of medicine who are associate or probationary members of Michigan county medical socities or who are serving as residents or interns, if vouched for by the president or secretary of the county medical society in whose jurisdiction they practice, will be registered as guests, with no registration fee. Please present credentials at the Registration Desk.

- **MICHIGAN DOCTORS OF MEDICINE**, in practice but who are not members of MSMS, if listed in the American Medical Association Directory, may register as guests upon payment of $25.00. This amount will be credited to them toward dues in the Michigan State Medical Society FOR 1956 ONLY, provided they subsequently are voted into membership by the county medical society in whose jurisdiction they practice.

- **DOCTOR**, register Tuesday, to save your time! Registration of physicians will be held Tuesday afternoon from 1:00 to 5:00 p.m.—as well as on Wednesday-Thursday-Friday, during the 1956 Michigan Clinical Institute. The Tuesday afternoon registration hours are arranged so that physicians may avoid waiting in line Wednesday morning before the opening Assembly.

  We recommend to Detroit physicians—and those who arrive in Detroit on Tuesday—that they register Tuesday, March 6, from 1:00 to 5:00 p.m., Fifth Floor, Sheraton-Cadillac Hotel.

- **TELEPHONE SERVICE**—Local and long distance telephone service will be available in the Sheraton-Cadillac Hotel, fourth floor. In case of emergency, physicians will be paged from the meetings by an announcement on the screen. Call the Sheraton-Cadillac Hotel, Detroit, Woodward 1-8000, and ask for the Michigan Clinical Institute extensions on the fourth floor.

- **CHECKROOM** is available in the Sheraton-Cadillac Hotel, fourth floor, next to Grand Ballroom.

- **GUEST ESSAYISTS** are very respectfully requested not to change time of their lecture with another speaker without the approval of the Committee on Arrangements. This request is made in order to avoid confusion and disappointment on the part of members of the audience.

- **PAPERS WILL BEGIN AND END ON TIME**—Nothing makes a scientific meeting more attractive than by-the-clock promptness and regularity; therefore, all meetings and panels will open on time, all speakers will be required to begin their talks exactly on time and to close exactly on time, in accordance with the schedule in the Program. All who attend the Institute, are respectfully requested to assist in attaining this end by noting the schedule carefully and by being in attendance accordingly, in order not to miss that portion of the program of greatest interest.

- **TECHNICAL EXHIBITS**—Eighty-one interesting and instructive displays—will open daily at 8:45 a.m. and close at 5:15 p.m., except on Friday when the exhibit breaks up at 3:30 p.m. Frequent intermissions to view the exhibits have been arranged daily before, during and after the assemblies.

- **THE SCIENTIFIC EXHIBIT** will be located in the Reception Room, adjoining the Grand Ballroom, fourth floor, Sheraton-Cadillac Hotel.

- **THERE IS SOMETHING** of interest or education in the large exhibit of technical displays. **SAVE AN ORDER FOR THE EXHIBITOR AT THE MICHIGAN CLINICAL INSTITUTE.**

THREE DISCUSSION CONFERENCES

These quiz periods will be held Wednesday-Thursday-Friday, March 7-8-9, Grand Ballroom, Sheraton-Cadillac Hotel, 12:00 noon to 1:00 p.m. with all the guest speakers of the day invited to appear on the platform.

An opportunity to ask questions concerning the presentations of the guest essayists, or to discuss one of your interesting cases with them, is thus provided.

• **POSTGADUATE CREDITS** are given to every MSMS member who attends the Michigan Clinical Institute. Notify J. M. Sheldon, M.D., Chairman, MSMS Committee on Postgraduate Medical Education, 1313 E. Ann St., Ann Arbor, Michigan.

• **PARKING**—Do not park on Detroit's streets. Inside parking at a convenient distance from the Sheraton-Cadillac Hotel is available at the Book Tower Garage, 333 State, the DAC Garage, 1754 Randolph, and the Grand Circus Garage, 1776 Randolph.

• **INFORMATION OF PRACTICAL VALUE IN DAILY PRACTICE** will be found at the Michigan Clinical Institute. All subjects on the Institute Program are applicable to clinical medicine. They stress diagnosis and treatment, usable in everyday practice.

• **"UBIQUITOUS HOSTS"**—The following doctors of medicine have placed themselves at the disposal of the out-of-Michigan guest essayists who grace the program of the tenth annual Michigan Clinical Institute in Detroit; they will demonstrate the meaning of Michigan hospitality to the eminent speakers from other parts of the United States: J. G. Bielawski, M.D., Detroit; E. I. Carr, M.D., Lansing; Leon DeVel, M.D., Grand Rapids; L. Fernald Foster, M.D., Bay City; W. M. LeFevre, M.D., Muskegon; G. T. McKean, M.D., Detroit; B. T. Montgomery, M.D., Sault Ste. Marie; D. W. Myers, M.D., Detroit; C. A. Payne, M.D., Grand Rapids; J. L. Posch, M.D., Detroit; W. D. Robinson, M.D., Ann Arbor; E. A. Sharp, M.D., Detroit; and L. W. Walker, M.D., Lansing.

• **PRESS RELATIONS COMMITTEE** for the 1956 Michigan Clinical Institute: C. L. Weston, M.D., Chairman, Owosso; H. F. Dibble, M.D., Detroit; A. B. Guinn, M.D., Hastings; Ralph W. Shook, M.D., Kalamazoo; and Arch Walls, M.D., Detroit.

• **L. W. HULL, M.D.**, Detroit, is General Chairman of Arrangements for the 1956 Michigan Clinical Institute.

• **MEETINGS OF SPECIAL SOCIETIES, ALUMNI AND AUXILIARY GROUPS**

Tuesday, March 6, 1956

1. **Michigan Chapter, American College of Surgeons**—8:00 a.m. meeting; 6:30 p.m. reception; 7:30 p.m. dinner.
2. **Michigan Branch, Academy of Pediatrics**—2:00 to 5:00 p.m. clinical conference to be followed by dinner and evening program.

Wednesday March 7, 1956

3. **Michigan Regional Committee on Trauma, American College of Surgeons**—luncheon-meeting.
4. **Conference for Residents, Interns and Senior Medical Students**—2:30 p.m. meeting; 5:30 p.m. reception.
5. **Woman's Auxiliary to Michigan State Medical Society, Board Meeting**—beginning with registration at 9:30 a.m.
6. **Michigan Academy of General Practice, Board of Directors and Delegates**—6:00 p.m. dinner.
7. **Cancer Luncheon** honoring Alton Ochsner, M.D., New Orleans, La., and Owen H. Wangensteen, M.D., Minneapolis, Minn.

Thursday, March 8, 1956

8. **Operating Room Nurses Conference**—meeting all day Thursday, March 8 and on Friday, March 9.
9. **Michigan Heart Association, Board of Trustees**—dinner-meeting at 6:30 p.m.
10. **Testimonial Luncheon** honoring Presidents of National Organizations: W. H. Beierwaltes, M.D., Ann Arbor; A. C. Curtis, M.D., Ann Arbor; R. N. DeJong, M.D., Ann Arbor; A. C. Furstenberg, M.D., Ann Arbor; C. S. Livingood, M.D., Detroit; R. C. L. Markoe, M.D., Detroit; R. H. Meade, M.D., Grand Rapids; Frederic Schreiber, M.D., Detroit; F. F. Yonkman, M.D., Summit, N. J.; and W. W. Zuelzer, M.D., Detroit.
11. **Michigan Proctologic Society**—reception-dinner-meeting.

Friday, March 9, 1956

12. **Operating Room Nurses Conference**—continued from Thursday, March 8.

• **ACKNOWLEDGMENTS**—The Michigan Clinical Institute gratefully acknowledges the co-operation of

1. The Michigan Regional Committee on Trauma, American College of Surgeons, sponsor of the trauma program (six speakers) on Wednesday afternoon, March 7.
2. The Michigan Heart Association, sponsor of the heart and rheumatic fever program (six speakers) on Thursday morning, March 8.
3. The Michigan Foundation for Medical and Health Education, Inc., sponsor of Alton Ochsner, M.D., New Orleans, La., the Foundation Lecturer.
4. The Michigan Cancer Co-ordinating Committee, sponsor of Owen H. Wangensteen, M.D., Minneapolis, Minn., the MCCC Lecturer.
5. Michigan Medical Service and the Michigan State Medical Society—co-sponsors of the Conference for Residents, Interns and Senior Medical Students.
6. Davis & Geck, Inc., Danbury, Conn., for sponsorship of the color motion pictures shown during the MCI in the Normandie Room, Sheraton-Cadillac Hotel.
7. Michigan Medical Service, which contributes notepads for use of MCI registrants.

MUCH THAT IS NEW AND INTERESTING WILL BE FOUND IN THE MCI EXHIBIT

THE "BLOCK SYSTEM"
at the
1956 MICHIGAN CLINICAL INSTITUTE

Surgery—Wednesday morning, March 7
Trauma—Wednesday afternoon, March 7
Heart and Rheumatic Fever—Thursday morning, March 8
Internal Medicine—Thursday afternoon, March 8
Obstetrics and Pediatrics—Friday morning, March 9
General Practice—Friday afternoon, March 9

Michigan Clinical Institute
1956



L. W. Hull, M.D.

L. W. Hull, M.D., Detroit, is General Chairman of Arrangements for the 1956 Michigan Clinical Institute. Doctor Hull is a Past President of the Michigan State Medical Society.

Program

WEDNESDAY, MARCH 7, 1956

A.M.

7:30 **REGISTRATION—Top of Stairs, Fifth Floor, Sheraton-Cadillac Hotel**

8:45 **EXHIBITS OPEN—Fourth Floor, Sheraton-Cadillac Hotel**

FIRST ASSEMBLY

Grand Ballroom, Sheraton-Cadillac Hotel

Chairman: L. W. Hull, M.D., Detroit

Secretary: J. M. Hammer, M.D., Parchment

8:50 **WELCOME**

Wm. S. Jones, M.D., Menominee
President, Michigan State Medical Society

Milton A. Darling, M.D., Detroit
President, Wayne County Medical Society



Donald Munro, M.D.

SURGERY

9:00 **"The Prevention of Death Following Cranio-cerebral Injuries Caused by Automobile Accidents."**

Donald Munro, M.D., Boston, Massachusetts

Associate Professor of Neurosurgery, Boston University Medical School; National Medical Advisor on "Paraplegia"—Liberty Mutual Insurance Company; Chief of Department of Neurosurgery and Rehabilitation—Massachusetts Memorial Hospitals; Formerly Surgeon in Chief for Neurosurgery and Head of the Department of Neurosurgery—Boston City Hospital.



E. A. Osius, M.D.

9:30 **"Peripheral Arterial Disease"**

Eugene A. Osius, M.D., Detroit

Chief, Department of Surgery and Vice Chief of Staff, Harper Hospital; Clinical Associate Professor of Surgery, Wayne University Medical School

10:00 **INTERMISSION TO VIEW EXHIBITS**

11:00 **THE MICHIGAN CANCER CO-ORDINATING COMMITTEE LECTURE**

"Trends and Accomplishments in Alimentary Tract Cancer"

Owen H. Wangensteen, M.D., Minneapolis, Minnesota

Chief, Department of Surgery, University Hospital and Professor of Surgery



O. H. Wangensteen, M.D.



ALTON OCHSNER, M.D.



W. C. BAUM, M.D.



G. J. CURRY, M.D.



M. M. FROLICH, M.D.



N. S. GIMBEL, M.D.



E. S. GURDJIAN, M.D.



M. L. MASON, M.D.

11:30 THE MICHIGAN FOUNDATION FOR MEDICAL AND HEALTH EDUCATION, INC., LECTURE

"What's New in Lung Cancer"

ALTON OCHSNER, M.D., New Orleans, Louisiana
The Wm. Henderson Professor of Surgery and Chairman of the Department of Surgery, Tulane University School of Medicine; Director of Surgery, Ochsner Clinic

12:00 End of First Assembly

12:00 DISCUSSION CONFERENCE

Grand Ballroom, Sheraton-Cadillac Hotel

Leader: R. L. MUSTARD, M.D., Battle Creek

Participants: WILLIAM C. BAUM, M.D., Ann Arbor; GEORGE J. CURRY, M.D., Flint; MICHAEL M. FROHLICH, M.D., Ann Arbor; NICHOLAS S. GIMBEL, M.D., Detroit; E. STEPHEN GURDJIAN, M.D., Detroit; MICHAEL L. MASON, M.D., Chicago; DONALD I. MUNRO, M.D., Boston; ALTON OCHSNER, M.D., New Orleans, La.; EUGENE A. OSIUS, M.D., Detroit; and OWEN H. WANGENSTEEN, M.D., Minneapolis, Minn.

P.M.

1:00 Lunch Hour

SECOND ASSEMBLY

Grand Ballroom, Sheraton-Cadillac Hotel

Chairman: D. A. CAMPBELL, M.D., Ann Arbor
Secretary: S. E. CHAPIN, M.D., Dearborn

TRAUMA

2:00 "Management of Bladder and Urethral Injury Following Pelvic Fracture"

WILLIAM C. BAUM, M.D., Ann Arbor
Associate Professor of Urology-Surgery, University of Michigan

2:15 "Accident Proneness"

MICHAEL M. FROHLICH, M.D., Ann Arbor
Professor of Psychiatry, University of Michigan; Director, Veterans' Readjustment Center

2:30 "Responsibility to the Injured"

GEORGE J. CURRY, M.D., Flint
Chairman National Committee on Transportation of the Injured, American College of Surgeons; Chairman Sub-Committee—Regional Committees on Trauma, U. S. and Canada; Member Board of Governors, American College of Surgeons

3:00 INTERMISSION TO VIEW EXHIBITS

4:00 "New and Old Methods of Managing Burn Wounds"

NICHOLAS S. GIMBEL, M.D., Detroit
Associate Professor of Surgery, Wayne University

4:15 "Shoulder Hand Syndrome"

E. STEPHEN GURDJIAN, M.D., Detroit
Professor of Neurological Surgery, Wayne University College of Medicine

4:30 "Injuries of the Hand"

MICHAEL L. MASON, M.D., Chicago, Illinois
Professor of Surgery, Northwestern University Medical School; Secretary, American College of Surgeons; Attending Surgeon, Passavant Memorial Hospital

5:00 End of Second Assembly
(No evening MCI meeting)

THURSDAY, MARCH 8, 1956

A.M.

8:45 REGISTRATION—Top of Stairs, Fifth Floor, Sheraton-Cadillac Hotel

EXHIBITS OPEN—Fourth Floor, Sheraton-Cadillac Hotel

THIRD ASSEMBLY

Grand Ballroom, Sheraton-Cadillac Hotel

SEVENTH ANNUAL MICHIGAN HEART DAY

Chairman: H. L. Smith, M.D., Detroit
Secretary: J. B. Rowe, M.D., Flint

Sponsored by Michigan Heart Association

9:00 Michigan Heart Association Members' Meeting

HEART AND RHEUMATIC FEVER

9:15 "Prevention and Prophylaxis of Rheumatic Fever"
Benedict F. Massell, M.D., Boston, Mass.
Research Director, House of the Good Samaritan; Assistant Clinical Professor of Pediatrics, Harvard Medical School

9:45 "Interatrial Septal Defect—Its Clinical Course and Surgical Correction"
Anthony C. Nolke, M.D., Detroit
Associate Pediatrician in Chief and Associate Professor of Pediatrics, Wayne University College of Medicine
and
James B. Blodgett, M.D., Detroit
Associate Surgeon, Grace Hospital; Assistant Surgeon, Children's Hospital

10:00 INTERMISSION TO VIEW EXHIBITS

11:00 "Diuretics in the Treatment of Congestive Heart Failure"
Yoshikazu Morita, M.D., Detroit
Assistant Professor of Medicine, Wayne University College of Medicine

11:20 "Clinical Evaluation of Senthrom (G-23350)—A New Oral Anti-Coagulant"
Josiah A. Polhemus, M.D., Ann Arbor
Junior Clinical Instructor, Department of Internal Medicine, University Hospital, Ann Arbor

11:40 "Epidemiological Aspects of Heart Disease"
Ancel Keys, M.D., Minneapolis, Minnesota
Professor in the School of Public Health and Director of the Laboratory of Physiological Hygiene, University of Minnesota

12:00 End of Third Assembly

12:00 DISCUSSION CONFERENCE
Grand Ballroom, Sheraton-Cadillac Hotel
Leader: W. B. Cooksey, M.D., Detroit
Participants: James B. Blodgett, M.D., Detroit; Ancel Keys, M.D., Minneapolis, Minnesota; Leo Loewe, M.D., Brooklyn, N. Y.; Benedict F. Massell, M.D., Boston; Yoshikazu Morita, M.D., Detroit; Anthony C. Nolke, M.D., Detroit; Josiah A. Polhemus, M.D., Ann Arbor; Henry J. Ricketts, M.D., Chicago; Tom D. Spies, M.D., Birmingham, Alabama; and Robert W. Wilkins, M.D., Boston, Mass.

P.M.

1:00 Lunch Hour



B. F. Massell, M.D.



A. C. Nolke, M.D.



J. B. Blodgett, M.D.



Y. Morita, M.D.



J. A. Polhemus, M.D.



Ancel Keys, M.D.



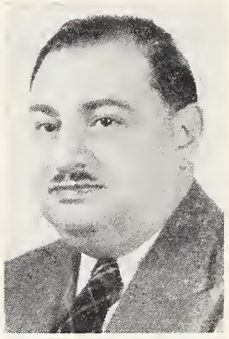
TOM D. SPIES, M.D.



R. W. WILKINS, M.D.



LEO LOEWE, M.D.



M. A. PERLSTEIN, M.D.



M. V. VELDEE, M.D.



C. S. STEVENSON, M.D.

FOURTH ASSEMBLY

Grand Ballroom, Sheraton-Cadillac Hotel

Chairman: H. M. POLLARD, M.D., Ann Arbor
Secretary: J. W. STRAYER, M.D., Niles

INTERNAL MEDICINE

2:00 "What's New in Vitamin and Hormone Treatment of Arthritis"

TOM D. SPIES, M.D., Birmingham, Alabama
Professor of Nutrition and Metabolism and Chairman of the Department, Northwestern University Medical School, Chicago; Director Nutrition Clinic, Hillman Hospital, Birmingham, Alabama

2:30 "Rauwolfia in Hypertension"

ROBERT W. WILKINS, M.D., Boston, Massachusetts
Professor of Medicine, Boston University School of Medicine; Associate Director, Evans Memorial, and Associate Physician-in-Chief, Massachusetts Memorial Hospitals; Chief of Hypertension Clinic, Massachusetts Memorial Hospitals

3:00 INTERMISSION TO VIEW EXHIBITS

4:00 "What's New in Diabetes"

HENRY T. RICKETTS, M.D., Chicago, Illinois
Professor of Medicine, Section on Metabolic Diseases, University of Chicago

4:30 "What's New in Antibiotics for the General Practioner"

LEO LOEWE, M.D., Brooklyn, N. Y.
Assistant Clinical Professor of Medicine, State University College of Medicine, N. Y.; Attending Physician, Jewish Hospital of Brooklyn

5:00 End of Fourth Assembly
(No evening MCI program)

FRIDAY, MARCH 9, 1956

A.M.
8:45 REGISTRATION—Top of Stairs, Fifth Floor, Sheraton-Cadillac Hotel

EXHIBITS OPEN—Fourth Floor, Sheraton-Cadillac Hotel

FIFTH ASSEMBLY

Grand Ballroom, Sheraton-Cadillac Hotel

Chairman: W. S. JONES, M.D., Menominee
Secretary: W. R. MULLEN, M.D., Pentwater

OBSTETRICS AND PEDIATRICS

A.M.
9:00 "What's New in Cerebral Palsy"

MEYER A. PERLSTEIN, M.D., Chicago, Illinois
Professor of Pediatrics, Cook County Hospital Post Graduate School; Associate Professor of Pediatrics, Northwestern University; Chief Neurology, Cook County Hospital

9:30 "Poliomyelitis Vaccine: Problems in Processing and Antigenic Value"

MILTON V. VELDEE, M.D., Palo Alto, California
Chairman, Department of Biology, Stanford Research Institute; Formerly Chief, Biologics Control Laboratory, National Institutes of Health

10:00 INTERMISSION TO VIEW EXHIBITS

11:00 "The Handling of Breech Presentation"

CHARLES S. STEVENSON, M.D., Detroit
Professor and Chairman, Department of Obstetrics and Gynecology, Wayne University College of Medicine; Chief Obstetrician, Herman Kiefer Hospital; Head Attending Gynecologist, Detroit Receiving Hospital; Associate Attending Staff, Grace Hospital; and Consulting Obstetrician, Detroit Memorial Hospital and Dearborn Veterans Hospital

11:20 **"Cystocele and Rectocele—Present-Day Indications for Correction, and Technical Advances"**
GEORGE S. SAYRE, M.D., Ypsilanti
Alternate Chief of Obstetrical Department, Beyer Memorial, Ypsilanti; Associate Staff in Obstetrics and Gynecology, St. Joseph's Mercy, Ann Arbor

11:40 **"Recent Advances in Medical Care of Children"**
ERNEST H. WATSON, M.D., Ann Arbor
Professor of Pediatrics, University of Michigan

12:00 **End of Fifth Assembly**

12:00 **DISCUSSION CONFERENCE**
Grand Ballroom, Sheraton-Cadillac Hotel
Leader: LESTER E. BAUER, M.D., Detroit
Participants: ARTHUR C. CURTIS, M.D., Ann Arbor; JOHN T. FERGUSON, M.D., Traverse City; MEYER A. PERLSTEIN, M.D., Chicago, Illinois; DAVID J. SANDWEISS, M.D., Detroit; GEORGE S. SAYRE, M.D., YPSILANTI; HERBERT E. SLOAN, M.D., Ann Arbor; CHARLES S. STEVENSON, M.D., Detroit; MILTON V. VELDEE, M.D., Palo Alto, California; ERNEST H. WATSON, M.D., Ann Arbor; and FREDERICK F. YONKMAN, M.D., Summit, New Jersey

P.M.

1:00 **Lunch Hour**


G. S. SAYRE, M.D.


E. H. WATSON, M.D.


F. F. YONKMAN, M.D.

SIXTH ASSEMBLY

Grand Ballroom, Sheraton-Cadillac Hotel

Chairman: K. H. JOHNSON, M.D., Lansing

Secretary: COLEMAN MOPPER, M.D., Detroit

GENERAL MEDICINE

P.M.

2:00 **"What's New in Drugs, 1956"**
FREDERICK F. YONKMAN, M.D., Summit, New Jersey
Vice President in Charge of Research, Ciba Pharmaceutical Products, Inc., Summit, N. J.; Member Research and Development Section of American Drug Manufacturers Association

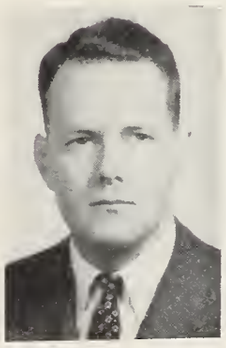

A. C. CURTIS, M.D.

2:30 **"Tips on the Treatment of Skin Diseases"**
ARTHUR C. CURTIS, M.D., Ann Arbor
Professor and Chairman of Department of Dermatology, University Hospital


D. J. SANDWEISS, M.D.

3:00 **FINAL INTERMISSION TO VIEW EXHIBITS**

3:30 **"What is New in Ulcerative Colitis"**
DAVID J. SANDWEISS, M.D., Detroit
Chief of Section on Gastroenterology and Attending Physician, Sinai Hospital, Detroit; Associate Attending Physician in Internal Medicine, Harper Hospital; Associate Physician in Internal Medicine, Detroit Receiving Hospital


H. E. SLOAN, M.D.

3:50 **"Cardiac Arrest"**
HERBERT E. SLOAN, JR., M.D., Ann Arbor
Associate Professor of Surgery, University of Michigan Medical School

4:10 **"A New Approach to the Clinical Management and Treatment of Behavior Problems"**
JOHN T. FERGUSON, M.D., Traverse City
Staff Physician, State Hospital


J. T. FERGUSON, M.D.

4:30 **End of Sixth Assembly and the 1956 Michigan Clinical Institute**

COMMITTEE ON ARRANGEMENTS

1956 MICHIGAN CLINICAL INSTITUTE

L. W. Hull, M.D., Detroit, *Chairman*

W. S. Jones, M.D., Menominee, *President, Michigan State Medical Society*

R. H. Baker, M.D., *Immediate Past President, Michigan State Medical Society*

L. Fernald Foster, M.D., Bay City, *Secretary*

Representing Michigan State Medical Society

* * *

H. H. Cummings, M.D., Ann Arbor

A. C. Curtis, M.D., Ann Arbor

H. M. Pollard, M.D., Ann Arbor

H. K. Ransom, M.D., Ann Arbor

J. M. Sheldon, M.D., Ann Arbor

Representing University of Michigan School of Medicine, University of Michigan, Department of Postgraduate Medicine

* * *

Muir Clapper, M.D., Detroit

E. H. Fenton, M.D., Detroit

W. S. Reveno, M.D., Detroit

Nelson Taylor, M.D., Detroit

Representing Wayne University College of Medicine and Wayne County Medical Society

* * *

F. J. Kemp, M.D., Pontiac

F. D. Johnson, M.D., Flint

W. S. Jones, Jr., M.D., Menominee

P. W. Kniskern, M.D., Grand Rapids

D. G. Pike, M.D., Traverse City

A. J. Swingle, M.D., Benton Harbor

R. W. Teed, M.D., Ann Arbor

Ralph Ten Have, M.D., Grand Haven

J. M. Wellman, M.D., Lansing

Representing Out-State Practitioners, members of MSMS

* * *

A. E. Heustis, M.D., Lansing

J. D. Monroe, M.D., Pontiac

Representing Michigan Department of Health and Michigan Health Officers Association

* * *

E. I. Carr, M.D., Lansing

Representing Michigan Foundation for Medical and Health Education, Inc.

* * *

W. B. Cooksey, M.D., Detroit

Representing Michigan Heart Association

* * *

V. C. Abbott, M.D., Pontiac

Representing American College of Surgeons Regional Committee on Trauma

HOTEL RESERVATIONS

MICHIGAN CLINICAL INSTITUTE

Detroit, March 7-8-9, 1956

The reservation blank below is for your convenience in making your hotel reservation in Detroit. Please send your application to Miss Dorothy J. Gibb, Assistant Sales Manager, Sheraton-Cadillac Hotel, Detroit 31, Michigan. Mailing your application now will be of material assistance in securing hotel accommodations.

As very few singles are available, registrants are requested to co-operate with the Committee on Hotels by sharing a room with another registrant, when convenient.

Committee on Hotels

Michigan Clinical Institute

c/o Sheraton-Cadillac Hotel

Detroit 31, Michigan

Attention: Miss Dorothy J. Gibb, Assistant Sales Manager

Please make hotel reservation(s) as indicated below:

.....Single Room(s)

.....Double Room(s) for.....persons

.....Twin-Bedded Room(s) for.....persons

Arriving March .....hour.....A.M.....P.M.....

Leaving March .....hour.....A.M.....P.M.....

Hotel of First Choice: .....

Second Choice: .....

Names and addresses of all applicants including person making reservation:

Name	Address	City	State
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.....	.....	.....	.....

Date ..... Signature .....

Address ..... City .....

John F. Wurz

A Practical Idealist in the Editor's Chair

John F. Wurz is a newspaper man and an idealist, with all the shrewdness that decades of newspaper editing develop, the moral earnestness that goes with idealism in any walk of life, and the sense of humor without which an idealist in a newspaper office is doomed.

The combination of humor, idealism and a discernment that recognizes evolving news as well as the full-blown article, has made John Wurz not only an effective newspaper executive but one who is happy in his job. He was born in 1885, but he's still in his office daily and can't be lured away with talk of mid-winter vacations or any more relaxation than his modest three weeks a summer up north on his beloved Crystal Lake.



John Wurz's whole career has been associated with Michigan save for one brief tour of duty in Chicago. He was born in St. Joseph, and after graduating from St. Joseph High School, he went to the University of Michigan, where he was business manager of the *Michigan Daily.* The University had no separate Department of Journalism at that time but took its newspaper, as it does now, very seriously. A great deal of practical experience was to be accumulated in the newspaper office.

Wurz graduated in 1909 with the degree of Bachelor of Arts. Returning to St. Joseph, he became a reporter on the *St. Joseph Herald.* Not much later he became the youthful managing editor of the *Benton Harbor News-Palladium,* then worked on the *St. Joseph Herald Press.* From there, he went to Chicago and worked for a short time on the copy desk of the *Chicago Herald-Examiner,* next going to the *Kalamazoo Telegraph Press* as managing editor.

He joined the editorial staff of *The Grand Rapids Herald* on June 18, 1916. He became City Editor a short time later and has been heard to tell of days in World War I when newspaper manpower was so short that the City Editor found himself covering City Hall and County Building beats in addition to his regular duties.

From City Editor, Wurz was promoted before long to the position of Managing Editor. Staff members who worked under him in those days know that for many years the Managing Editor never left *The Herald* until the paper had been "put to bed." Theoretically, he took Sundays off, but as certainly as Sunday afternoon came, he turned up at the office.

Since January 1, 1948, John Wurz has been Editor of *The Grand Rapids Herald.*

During his earlier years on *The Herald,* he was closely associated with a man who went from the editorship of *The Herald* to a position of world influence, the late Senator Arthur H. Vandenberg, whose conception of bipartisan foreign policy still molds much American thinking.

From the beginning of his newspaper career, Wurz has taken a broad view of the responsibilities of the newspaper, not only as the organ of local information but as the medium of presenting general knowledge about world developments. Along with a keen appreciation of a story for its news value, he has stood for the ideal of the newspaper as a servant of the community, affording people the objective information that will enable them to make up their minds intelligently about issues and public personages.

Toward public officials who attempt to keep public affairs private, Wurz usually quiet and amiable, became a crusader. Closed meetings of public officialdom are anathema to him.

It is Wurz's general view of the newspaper as an instrument of all-important information that has led him to develop in *The Herald* the policy toward medical news that earned him the award for "distinguished health service," which he is to receive from The Council of the Michigan State Medical Society.

The Herald has always given careful, objective attention to medical news. When mass immunization with Salk polio vaccine was being organized, *The Herald* reported the developments from day to day, honestly, vigorously and independently. Through the complications that followed, *The Herald* followed the changing situation carefully, not taking sides, simply reporting the daily developments. When an important medical speaker is in town, a reporter is assigned to get the story, and then the story is checked for medical accuracy, either with the speaker himself or an authoritative spokesman.

Aside from his profession of newspaperman, John Wurz's interests center largely in his family. He was married to Lilah Hooper August 14, 1912, at St. Joseph. They have two children, John Frederick Wurz, M.D., who is a practicing physician in Grand Rapids, and Robert Hooper Wurz of Grand Rapids.

Mrs. Wurz, whose family had produced several physicians, has always had an active interest in health matters and for years devoted herself to getting the campaign against cancer firmly established in the Grand Rapids area. She was one of the founders of the Kent County Chapter of the American Cancer Society and served as its Commander.

Wurz is a member of the American Society of Newspaper Editors and of Rotary Club International. He attends the Church of St. Thomas the Apostle in Grand Rapids.

—Marguerite S. Kerns

MAKES YOU WONDER!

A recent study made by the Hartford County (Conn.) Medical Society of 144 obituaries of local physicians and probate court cases involving their estates reveals some illuminating—and startling—facts which should make any physician do a bit of checking on his own financial status and on just how fair he is being to his own health.

The study revealed the following, according to an article in the *Hartford Times* and abstracted by the New England Mutual Life Insurance Company's official bulletin, *The Pilot's Log:*

One out of eight of the physicians who died between 1940 and 1953 was in debt at the time of death.

Of the 144 doctor estates studied, one out of three . . . left net assets of less than $10,000.

The Hartford survey disclosed only one extremely wealthy doctor out of the 144 and that $575,915 of his estate was consumed by estate taxes and other settlement expenses.

Only one doctor in eight survived his wife!

The doctors aged forty to fifty died in a ratio of 2:1 as compared with the general population, and in the sixty to seventy bracket, the doctors' death rate was 50 per cent higher than that shown in the insurance table.

Heart diseases and cerebral hemorrhage were the chief causes of death.

Expenses of settlement of the estates studied ranged from a minimum of 13 per cent to as much as one third.

The age at death of the physicians when compared with life insurance mortality tables showed that there were two vulnerable age periods for medical men—forty to fifty and sixty to seventy.

One out of three physicians left no will.—*Muskegon County Medical Society Bulletin,* November, 1955.

Do We Want Compulsory Social Security?

At its 1955 Annual Session in Grand Rapids, the MSMS House of Delegates considered a resolution concerning Old Age and Survivor's Insurance, better known as "Social Security." While the resolution as presented was disapproved, the House of Delegates very wisely requested each component County Society to conduct a poll among Society members to ascertain their position on the question.

Right now is the time to conduct this poll, while we still have the opportunity to express ourselves. This is a question upon which the opinion of every doctor of medicine in Michigan should be recorded—and soon, before Congress acts upon Social Security measures in its new session. The findings of this poll will help guide MSMS policy in its contact with Congress.

To me, it appears there are three primary questions to be answered when the doctor of medicine considers his attitude toward Federal Old Age and Survivor's Insurance:

1. Are you for or against Social Security for physicians in its traditional form, as a *compulsory* obligation?
2. Do you favor *voluntary* Social Security?
3. Do you favor a reappraisal study of the Old Age and Survivors Insurance Program as a whole?

There is little question that some type of Old Age and Survivor's Insurance is here to stay, but there are great doubts in the minds of many whether the program in its present form is "insurance" or whether it is a pension plan which will demand huge payments for the current income of future generations rather than from funds laid aside in reserve during the early years of the program. As Social Security now exists, today's young people—and their children and grandchildren—apparently are being saddled with an enormous debt which rapidly grows larger year by year.

There is also one final question which often comes to my mind: I wonder how many doctors in the State of Michigan would agree to retire at the age of sixty-five in order to draw the small benefits paid under the Social Security plan as it now stands?

In next month's Page, I shall continue the discussion of this controversial question.

W. D. Jones.

President, Michigan State Medical Society

President's Message



Solid reasons for prescribing

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For nearly two years, ACHROMYCIN has been in daily use. Thousands of practicing physicians in every field have substantiated its advantages, and the confirmations mount every day.

In any of its many dosage forms, ACHROMYCIN has proved to be well tolerated by patients of every age. It provides true broad-spectrum activity, rapid diffusion, and prompt control of a wide variety of infections caused by Gram-negative and Gram-positive bacteria, rickettsia, and certain viruses and protozoa.

ACHROMYCIN—an antibiotic of choice, produced under rigid controls in Lederle's own laboratories.

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wide-spectrum activity

prompt control of infection

rapid diffusion

negligible side effects

Editorial

THE NEW YEAR

The officers of the Michigan State Medical Society and the Publication Committee of THE JOURNAL wish all our members and readers a most happy and busy but satisfying New Year.

THE PRESIDENT'S HEALTH

ON the morning of July 2, 1881, as President James A. Garfield was entering a railway station at Washington, D. C., he was shot. He battled for life, lingering until September 19, when the Vice President succeeded. For two and one-half months the Presidency was much disturbed and hampered.

In the summer of 1919 President Woodrow Wilson had proposed a treaty with the Central powers, establishing the formula for the League of Nations. In an attempt to bring public opinion to bear upon Congress to accept the treaty, the President made a trip throughout the country and en route suffered a stroke which necessitated his return to Washington and his complete withdrawal from official contacts with the government. For many months, Mrs. Wilson was the only contact. She produced his signature when necessary but there were no cabinet meetings or other functions.

President Franklin D. Roosevelt's fourth term and the manifest impropriety of that nomination prompted us to publish in July, 1945, page 716, an editorial sharply outlining medical responsibility and honesty when making misleading reports under such circumstances.

The recent heart attack suffered by President Eisenhower has recalled this evident lack of precaution. We are unable to understand how a medical man charged with the health of not just a man, but the most important man in the world, would allow him (at his not too advanced age but an age when health matters need special care) to do the things reported on that day before the heart attack occurred. Our practice is restricted, but many of our patients ask advice about behavior in advancing age and we always caution against very strenuous living. If the President had been much less active, the coronary might still be in the future.

This brings up other editorial suggestions which we are repeating. Reread the editorial, "Health Surveys," pages 74-75, January, 1953. We quote three paragraphs:

"There is no provision in our government for carrying on the functions of the Presidency in case the President is incapacitated temporarily. Many people believe there should be a periodic appraisal of the President's health. This should not be made by a politically appointed or selected medical man. The regular care of the President's health is his own personal privilege, and he is entitled to his own private physician, be he an officer of the Army, Navy or civilian. There is an element of personal or political bias in that selection. That is the President's right as a free citizen."

"But the President is not a free citizen, insofar as he is President of the United States. He owes his best service to the people of this country. Some plan should be set up by Congress providing for an independent non-political appointment-free commission which shall periodically and at sufficiently frequent intervals make a thorough study of the President's health, mental and physical, to determine whether he is able and capable to carry on his arduous work. If found sound, the Commission shall so report; if found temporarily incapacitated, his duties could temporarily be assumed by the Vice President. If found permanently disabled, some provision should be made for an independent confirmation of that finding, in which case the Vice President should take over. . .

"The President is a living symbol of our government, and essential to the proper function of the government. We must protect his health, and also protect ourselves from the dangers which might develop if the burdens should prove too great."

We believe the misfortune which has hampered President Eisenhower is so evidently a threat that it is the duty of Congress to enact precautionary procedures.

OLD AGE AND SURVIVOR'S INSURANCE

IN 1954, the Congress amended and extended the Old Age and Survivor's Insurance Act, providing that beginning January 1, 1955, 58,800,000 persons are eligible to participate. It is compulsory except for a very few groups, and deductions are made from wages, 2 per cent (matched by the employer) for earnings up to $4,200 a year. Benefits are paid upon application and establishment of proof. If self-employed, the person must pay this tax with his income tax.

The maximum a retired worker may collect at present is $108.50 per month. If married and both husband and wife are over sixty-five, the maximum is $162.80 per month. If the worker continues to work and earn $1,200 a year he cannot draw any benefits at all except in months when his earnings are less than $80.

If the worker in the $4,200 income level dies, his wife (if over sixty-five) may draw $81.40 per month, or at any age if she has one child under eighteen, she may get $162.80 a month. If two children, the amount is $200.00. If she is in the lower income level, there are stated allowances for more than two children, but the maximum is $200.00. When the children reach eighteen, the widow, if under sixty-five, will receive no benefits until she reaches sixty-five, at which time her maximum will be $81.40 per month. At the present time the minimum a worker will receive upon retirement is $30.00 per month, man and wife $45.00, and the widow, or a surviving minor child, if sole heir, $30.00.

Economists, including Frank L. Dickinson, Ph. D., Director of A.M.A. Bureau of Economics, have outlined programs whereby one may provide equal or better protection through recognized insurance methods.

If a worker is disabled permanently, the new law provides that his earned benefits will not decrease under the averaging rule, but the period of his disability will be exempted from the figuring. He will however, have to wait until he is sixty-five before he may draw his benefits. A new bill (H.R. 7225) is now under consideration to which the AMA has taken exception. This new bill recognizes payment for permanent disabilities, advances the time of payment to age fifty and provides a controlled method of federally paid medical examinations to determine disability. It was passed in the House of Representatives without public hearing, with only thirty minutes of debate, and amendments prohibited. The bill is now in the Senate. We all believe any legislation of great moment should follow time-honored procedures and be voted upon only after suitable consideration. That objection to this legislation is basic and logical for anyone.

The medical profession has consistently objected to legislation which sets up controls of professional work as does the section in this amendment providing for determining amount and permanence of disability. We believe that is the privilege and duty of the claimant to be obtained from his private physician, just as so many other reports are made.

HOSPITAL COSTS

FREQUENTLY we hear complaints about the costs of hospital care. Just recently we quoted a letter to one of the newspapers from a prominent insurance man, remonstrating bitterly about the fact that a short hospital experience could use up the savings of years of frugality.

A study of records in seven representative hospitals in Michigan is very illuminating. We are quoting the costs per patient day:

Year	Personnel Costs	Other Costs	Total
1949	$13.59	$6.37	$19.96
1950	14.00	6.64	20.64
1951	15.41	7.14	22.55
1952	17.15	7.32	24.47
1953	18.14	7.32	25.46
1954	20.38	7.50	27.88

We are also giving the average gross monthly starting salaries for the following groups, comparing with U. S. averages.

		1949	1950	1951	1952	1953	1954
General duty nurses	U.S.	$212	$214	$224	$233	$242	$247
	Mich.	219	222	241	251	261	265
Practical nurses	U.S.	123	123	128	132	136	137
	Mich.	129	128	143	147	152	153
Clerks	U.S.	140	141	148	154	160	162
	Mich.	155	155	165	177	182	189
Untrained men	U.S.	146	147	155	160	166	170
	Mich.	146	150	164	168	175	181
Untrained women	U.S.	148	149	156	164	160	172
	Mich.	159	162	178	184	186	195

In every single item the Michigan salaries are higher than the United States average.

ON THE PROPER USE OF CYTOLOGY

RECENTLY the mails have been flooded with literature on the "Cancer Protection Plan" as proposed by the Cancer Cytology Foundation of America. Pamphlets describing a plan to establish regional cytology centers throughout the country were sent to 183,000 physicians and 60,000 civic and business leaders. The statement was made that this plan had been "now endorsed enthusiastically by the medical profession" and the article in *Spotlight* stated that cancer cytology is the "discovery of the century." It may be that this type of publicity will be of value in obtaining a greater acceptance of cytology by the physicians of the United States. However, one questions whether

this is the best method to employ. There has been steady progress in the years that have elapsed since Papanicolaou's publications and the increased use of this technique through the years has borne testimony to its usefulness. However, there are many physicians who know nothing about the potentialities of cytology and some pathologists who still maintain a stubborn resistance toward the acceptance of the value of cytology.

It is generally recognized that some malignancies can be diagnosed by cytologic means before there is any clinical evidence of the disease by physical examination. This technique has made possible diagnosis of certain malignancies, especially epidermoid carcinoma of the cervix, while still in an early and curable stage. Approximately 1 in 100 adult women who are presumably well will have abnormal cells in the vaginal and cervical smears which indicates the presence of squamous cell carcinoma.

There is then no room for argument as to whether the cytological techniques are of practical value and acceptance of these techniques is now so firmly established that candidates for certification by the American Board of Pathology must be able to show proficiency in cytodiagnosis. But there are serious objections to the ideas as set forth by the Cancer Cytology Foundation of America, Inc. A layman reading their material would gain the impression that a negative smear is proof that no cancer exists. This is definitely not true. Approximately 10 per cent of women with invasive carcinoma of the cervix will have negative smears.

A further objection lies in the fact that there are not nearly sufficient numbers of trained persons who can either screen or diagnose such a vast number of smears as would be involved in a mass program of the sort advocated. Patients are advised to get the smears made in their physicians' office and this is the right and proper procedure. The profession, as a whole, and important specialty organizations, such as the College of American Pathologists, the American Society of Clinical Pathologists and the Inter-Society Cytology Council, are definitely opposed to such a plan as described in *Spotlight*. It is generally conceded that:

1. Cytology (smear diagnosis) is a recognized laboratory procedure now widely offered by pathologists.

2. The test is rapidly becoming available to those desiring it.

3. It is in the best interest of the patient to maintain the closest possible professional relationship with the clinician caring for him and the pathologist endeavoring to interpret this material. In only this way can close correlation be obtained between clinical findings, cytologic examinations, and results of biopsy and therapy.

The best interests of the patient will be served if cytology is practiced in pathological laboratories where close co-operation between the attending physician and his pathologist can be maintained. Mail order laboratory service such as proposed by the Cancer Cytology Foundation of America, Inc., has never proved satisfactory.

HARRY M. NELSON, M.D.

ROLE OF THE PHYSIATRIST IN MODERN MEDICAL PRACTICE

COMMONLY, patients seek the advice of the medical profession primarily for relief of two complaints, pain and anxiety. It matters little to the patient whether we individually consider ourselves specialists in general practice or specialists in one of its multitudinous offspring. Our treatment falls into six categories. These are dietary, drugs, surgical, radiation, physical and psychotherapy. We, as physiatrists, frequently find it advisable to consult with a suitable specialist for confirmation of diagnosis, or concerning management or for specific treatment.

Payment for services is becoming daily one of the patient's great problems. He may finally wish he had had sufficient stoicism to endure the pain rather than the anxiety engendered by the cost to him of medical care. Within the last decade he has asked help of the actuarian for protection from the cost of medical care. He has found able allies in the medical profession and in the hospital administrators. The Blue Cross plan has been an exemplary buffer between the dictates of economical medical care and private medical care. By private medical care we mean the inviolable patient-physician relationship upon which medicine has prided itself for at least two thousand years.

There are those who believe that the high cost of medical care can only be met by the disruption

of this relationship between physician and patient. Their belief is given support by two widely diverse groups. On the one hand there are those outside the medical profession who recognize a good political tool and are actively promulgating methods to destroy the private practice of medicine in America.

However, these are the less dangerous of the two groups. The real danger lies within our own ranks. Our individual inertia increases the strength of the vociferous minority.

Ironically, the medical care of the past five decades has helped to create the problems which are increasing in frequency and severity. Our population has grown older because of the high quality of preventive and definitive medicine. Those of us specializing in rehabilitation are aiming to maintain the gains.

In rehabilitation medicine, emphasis shifts sharply to so-called drugless and knifeless therapy: but physical medicine, like pharmacology and surgery, has also the fine thread of psychiatry running through it. Unfortunately, the quackery which formerly surrounded those physicians who used physical modalities still tends to cloud the issue, and causes the physiatrist to be held suspect. It is not only a question of the physiatrist proving his ability to render service for which he is trained, but also that his colleagues come to know which problems he can assist them in.

The physician trained in physical medicine and rehabilitation is to see to it that efficient use of highly skilled adjunct personnel is made. There should be no disruption of the physician-patient relationship. By reason of his special training the physiatrist is in a position to prescribe treatment of referred patients to be rendered by such personnel as the physical, speech and occupational therapist, the clinical psychologist, the medical social worker, and the vocational counsellor.

It has been found that the training which the physiatrist has had frightens many of his colleagues. The majority still feels that the "physiotherapy" physician should stick to his bake and massage as directed by the physician referring a patient. As a result, the major part of the physiatrist's ability remains untapped. His skill in the diagnosis and management of many physical medicine problems, medical orthopedics, various neuromuscular disabilities, the arthritides and peripheral vascular diseases, when confined by attitudes as mentioned above, remains dormant.

How, then, can we make the transition from preventive and definitive medicine to rehabilitation medicine a smooth one? The physiatrist, with much to contribute to the former and the catalyst for the latter, has a definite responsibility. It cannot be done by giving lip service to the philosophy of rehabilitation, or even true belief in its advantages. It is important that methods be developed and those that are developed be used. Presently the two important techniques are the consultation technique and the joint clinic technique. The House of Delegates of the American Medical Association consistently has recommended that physical medicine, like radiology, pathology and anesthesiology, be practiced at a consultant level. This has been recommended to protect our profession from the practice of medicine by paramedical personnel and to protect vulnerable members of our profession from prostitution by hospital administrators. Should the American Medical Association ever allow any one of the above groups to become less a physician than other practitioners, the physician-patient relationship is in peril for all members of the American Medical Association. Every thoughtful practitioner will pause for reflection. There can be no room for professional jealousies. There is a great need for understanding and co-operation in effecting this and other policies recommended by the American Medical Association's House of Delegates.

The joint clinic technique is not new. The patient who needs rehabilitation has so many facets to his problem that concensus is necessary. The problems resulting from polio, severe rheumatoid arthritis, cerebral palsy, multiple sclerosis, hemiplegia and paraplegia do not resolve themselves around one medical specialty. Good medical care of the severely disabled requires group judgment. The specialist in physical medicine and rehabilitation is best trained to direct such a team. He knows how to get the best from the paramedical personnel. He also, by reason of his general training in medicine, is able to recognize when help from other specialties is indicated.

As insurance coverage increases percentagewise, there is more activity among the administrators of these plans that rehabilitation procedures be efficient and be economical. The cost of medical training is very high and the medical school curriculum filled to bursting. It is not reasonable to anticipate that each individual specialist will learn

all of the rehabilitation techniques and the use of all of the ancillary personnel without prolonging his residency training period for at least an additional year. This is perhaps unwise, for a majority of the rehabilitation techniques used for one patient are used for most of the others. The physiatrist spends his three years in specialty training mastering them all. A cord bladder, whether seen by the syphilologist or the neurosurgeon, as a result of multiple sclerosis or of neoplasm, is a disability which should be referred to the physiatrist who is experienced in training a cord bladder. A patient with cerebral palsy, whether diagnosed by the general practitioner, by the pediatrician, the neurologist, by the orthopedic surgeon, would benefit most by being referred to the physiatrist for training purposes and management.

Although the philosophy of rehabilitation is important, more emphasis should be placed on the methods and techniques of rehabilitation. The physiatrist is trained as any other physician with additional training in diagnostic techniques and medical care of a highly specific nature. The following is quoted in part from the *Journal* of the AMA for September 27, 1952, regarding specialty board examination for the physiatrist:

The clinical aspects of physical medicine and rehabilitation will include:

(a) Those diseases and conditions that come within the field of physical medicine and rehabilitation. These include arthritis and the various rheumatic diseases, neuromuscular diseases such as poliomyelitis, cerebral palsy, and paraplegia, and musculoskeletal diseases, including the large group of traumatic and orthopedic conditions.

(b) The clinical usage of such physical agents as heat, water, electricity, ultraviolet radiation, massage and exercise, et cetera.

(c) An understanding of the basic principles of physical medicine and rehabilitation and the ability to co-ordinate the services of such personnel as clinical psychologists, social service worker, vocational guidance worker, et cetera; the ability to prescribe specifically the therapy for patients for execution by the technical and ancillary personnel in a department of physical medicine and rehabilitation.

(d) A knowledge of the use of associated personnel within the field of physical medicine and rehabilitation such as the physical therapist, occupational therapist, clinical psychologist, and social service worker. This knowledge must include the ability specifically to prescribe patient care for execution by these therapeutic and technical groups.

Physical medicine and rehabilitation as a medical specialty is a product of our times. The two chief factors which have contributed to its growth are (1) the increasing age of our population and (2) the expansion of rapid communication. The result of these has been a marked rise in long-term illness. Psychiatric, cardiovascular and arthritic disabilities, coupled with the disabling aspects of highway, industrial, and especially home accidents, has inordinately increased the cost of medical care. No small portion of this increased cost has been the demand for expensive ancillary personnel. In some sections of the country, the salaries of ancillary professional personnel are in large measure paid by community and governmental agencies. This can and does disrupt the patient-physician rapport and is not too healthy a situation. Medical care rendered by these auxiliaries should be supervised by the practicing physician or a physician designated by his colleagues or through his medical society so that the patient-physician relationship is not exposed to dissolution.

The patient's physician should be a real leader and a source of guidance for medical care of this nature. He must have sufficient background and training to command the respect of referring agencies and paramedical personnel. Such a physician would be a physiatrist whose training does include all of these essentials. In this way, the physiatrist is taking his right and proper place in a society where health must be guarded through the integration of the various individuals and agencies.

To maintain the physician-patient relationship in such a setting is the basic contribution the physiatrist is destined to make to modern medical practice.

KATHRYN MCMORROW, M.D., M.P.H.

CANCER CONTROL

(Continued from Page 1412)

often be completely resected. Their early experience suggests that this may be possible in at least some types of residual cancers. In all the patients in whom the second-look operation proved effective, residual cancer was limited to one or a few lymph nodes and to one area of the abdomen. For patients with this type of residual cancer, the second-look procedure may prove to be a crucial addition to therapy.

MSMS Ninetieth Annual Session—1955

		Introduction of Business	Reference Committee Report	
I.	Record of Attendance (Roll Call)	1490		
II.	President's Address	1491	1506	approved
III.	President-Elect's Address	1492	1506	approved
IV.	Reports of The Council (including Annual Reports of Committees of The Council)	1492	1509	approved as amended re assessment
V.	Report of Delegates to American Medical Association	1496	1506	approved
VI.	Report of President, Woman's Auxiliary to the Michigan State Medical Society	1498	1506	approved
VII.	Report of President, Michigan State Medical Assistants Society	1498	1506	approved
VIII.	Selection of Michigan's Foremost Family Physician	1499		
IX.	Resolutions and Motions:			
	1. Resolution re Periodic Health Examinations by Hospital Staffs	1499	1507	approved
	2. Resolution re Appreciation of Public Service Rendered by R. L. Novy, M.D., Detroit (Wayne and Genesee)	1499	1512	approved
	3. Resolution re Beaumont Memorial preservation	1499	1508	approved
	4 Resolution re Joint Commission on Accreditation of Hospitals	1500	1510-11	referred to introducer for clarification
	5. Resolution re Screening of Foreign Interns	1500	1508	approved
	6. Resolution of Appreciation of Public Service Rendered by R. L. Novy, M.D., Detroit (Berrien)	1500	1512	approved
	7. Resolution re Jenkins-Keogh Bill	1500	1507	approved
	8. Resolution re Medic—commendation to Los Angeles County Medical Society	1501	1508	approved
	9. Resolution re Medical Representation on Voice of America	1501	1512	approved
	10. Resolution re Propaganda on Salk Vaccine	1501	1514	substitute approved
	11. Resolution re County Society Membership	1501	1507	disapproved
	12. Resolution re Hospital Privileges	1501	1512	approved as amended
	13. Resolution re Fluoridation of Water	1502	1514	disapproved
	14. Resolution re Hospital Facilities for the Mentally Ill	1602	1509	approved as amended
	15. Resolution re Increasing Hospital Personnel for the Mentally Ill	1502	1508	referred to Mental Health Committee
	16. Resolution re Old Age and Survivor's Insurance Program	1502	1512	disapproved with recommendation of county society poll of members
	17. Resolution re Fee for Examination of Mentally Ill	1503	1508	approved
	18. Resolution re Pollution of Inland Waterways	1503	1515	substitute approved
	19. Resolution re Optometric Legislation	1503	1513	approved
	20. Resolution re Election of Executive Committee of The Council	1503	1507	disapproved
	21. Resolution re Study of Surgical Fees (MMS)	1503	1516	approved as amended
	22. Resolution re Blue Shield Reporting in Mediation Cases	1504	1516	substitute approved
	23. Resolution re Contributions to Beaumont Memorial	1504	1513	approved as amended
	24. Resolution re Creation of Occupational Health Section	1504	1508	approved
	25. Resolution re Driver Training	1504	1508	approved
	26. Resolution re AMA Study Committee on Highway Accidents	1504	1513	approved
	27. Resolution re Expansion of AMA Administrative Facilities	1504	1513	substitute approved
	28. Resolution re Non-Scientific Sessions at AMA Conventions	1505	1514	substitute approved
	29. Resolution re Appreciation of Service Rendered by L. A. Drolett, M.D., Lansing	1505	1508	approved
	30. Resolution re Speedy Recovery for President Eisenhower	1506	1515	approved
	31. Resolution re Committee on Division of Fees (MMS)	1506	1516	approved
	32. Resolution re California Cancer Commission	1508	1514	approved
X.	Reports of Standing Committees:			
	1. Postgraduate Medical Education	1505	1511	
	2. Preventive Medicine and Its Subcommittees	1505	1511	
	3. Public Relations	1505	1512	
	4. Ethics	1505	1512	
	5. Legislative	1505	1512	
XI.	Reports of Special Committees:			
	1. Beaumont Memorial	1506	1506	
	2. Scientific Radio	1506	1507	
	3. Advisory to Woman's Auxiliary	1506	1507	
	4. Advisory to Michigan State Medical Assistants Society	1506	1507	
	5. Mediation	1506	1507	

		Introduction of Business	Reference Committee Report
XII.	Reports of Reference Committees:		
	1. *On Officers Reports:* (a) President's Address—1506; (b) President-Elect's Address—1501; (c) Delegates to AMA—1506; (d) President, Woman's Auxiliary to MSMS—1506; (e) President, MSMAS—1506.		
	2. *On Reports of The Council:* (a) Council's two Annual Reports—1509; (b) Resolution on Joint Commission on Accreditation of Hospitals—1510-11.		
	3. *On Reports of Standing Committees:* (a) Postgraduate Medical Education—1511; Preventive Medicine and its Subcommittees—1511; (c) Public Relations—1512; (d) Ethics—1512; (e) Legislative —1512.		
	4. *On Reports of Special Committees:* (a) Beaumont Memorial—1506; (b) Scientific Radio—1507; (c) Advisory to Woman's Auxiliary—1507; (d) Advisory to MSMAS—1507; (e) Mediation—1507.		
	5. *On Constitution and By-Laws:* (a) Resolution re County Society membership—1507; (b) Resolution re Election of Executive Committee of The Council—1507.		
	6. *On Resolutions:* (a) Resolution re Appreciation of Public Service Rendered by R. L. Novy, M.D. (Wayne and Genesee) —1512; (b) Resolution re Appreciation of Public Service Rendered by R. L. Novy, M.D. (Berrien) —1512; (c) Resolution re Medical Representation on Voice of America—1512; (d) Resolution re Hospital Privileges—1512; (e) Resolution re Old Age and Security Insurance Program—1512; (f) Resolution re Possible Optometric Legislation—1513; (g) Resolution re Contributions to Beaumont Memorial—1513; (h) Resolution re AMA Study Committee on Highway Accidents—1513; (i) Resolution re Expansion of AMA Administrative Facilities—1513; (j) Resolution re non-scientific Sessions at AMA Conventions—1514; (k) Resolution re California Cancer Commission—1514.		
	7. *On Special Memberships*.....		1515
	8. *On Legislation and Public Relations:* (a) Resolution re Periodic Health Examinations by Hospital Staffs—1507; (b) Resolution re Jenkins-Keogh Bill—1507; (c) Resolution on Screening of Foreign Interns—1508; (d) Resolution re Beaumont Memorial Preservation—1508; (e) Resolution re Fee for Examination of Mentally Ill—1508; (f) Resolution re Driver Training—1508; (g) Resolution re Hospital Facilities for the Mentally Ill—1508, 1509; (h) Resolution re Increasing Hospital Personnel for Mentally Ill—1508.		
	9. *On Hygiene and Public Health:* (a) Resolution re Propaganda on Salk Vaccine—1514; (b) Resolution re Fluoridation of Water—1514; (c) Resolution re Pollution of Inland Waterways—1515.		
	10. *On Miscellaneous Business:* (a) Resolution re Appreciation of Service rendered by L. A. Drolett, M.D.—1508; (b) Resolution re Medic —Commendation to Los Angeles County Medical Society—1508; (c) Resolution re Creation of Occupational Health Section—1508; (d) Resolution re Speedy Recovery of President Eisenhower—1515.		
	11. *On Medical Service and Prepayment Insurance:* (a) Resolution re Study of Surgical Fees (MMS)—1516; (b) Resolution re Committee on Division of Fees (MSMS)—1516; (c) Resolutions re Blue Shield Reporting in Mediation Cases—1516.		
XIII.	*Miscellaneous:*		
	1. In Memoriam to Past Members, House of Delegates		1491
	2. In Memoriam to Stewart A. Campbell.....		1495
	3. ATAE Grand Award Won by MSMS		1498
XIV.	*Elections:* ..... (1) Councilor, 2nd District—1517; (2) Councilor, 3rd District—1517; (3) Councilor, 15th District—1517; (4) Councilor, 16th District—1517; (5) Delegates to AMA —1517; (6) Alternate Delegates to AMA—1518; (7) President-Elect—1518; (8) Councilor, 1st District—1518; (9) Speaker—1518; (10) Vice Speaker—1540.		1517

MSMS House of Delegates—1955

Summary of Proceedings

The 90th Annual Session of the Michigan State Medical Society's House of Delegates was held in Grand Rapids, September 26-27, 1955.

The House of Delegates:

1. Adopted with thanks the President's Address, the President-Elect's Address, the report of Delegates to the American Medical Association, the Annual Report of the President, Woman's Auxiliary to the Michigan State Medical Society, and the Annual Report of the President, Michigan State Medical Assistants Society.
2. The Annual Reports of The Council (including the Annual Reports of Committees of The Council) were adopted as amended (re assessment for 1956).
3. Adopted Annual Reports of all Standing Committees and of all Special Committees of the Society.
4. Elected Walter H. Winchester, M.D., Flint, as Michigan's Foremost Family Physician for 1955.
5. Adopted resolutions concerning: (a) appreciation of public service rendered by R. L. Novy, M.D., Detroit; (b) Beaumont Memorial preservation; (c) screening of foreign interns; (d) Jenkins-Keogh Bill; (e) "Medic"—commendation to the Los Angeles County Medical Society; (f) medical representation on Voice of America; (g) fee for examination of mentally ill; (h) possible optometric legislation; (i) creation of Occupational Health Section; (j) driver training; (k) AMA Study Committee on Highway Accidents; (l) appreciation of service rendered by L. A. Drolett, M.D., Lansing; (m) speedy recovery for President Eisenhower; (n) Committee on Division of Fees (MMS); (o) California Cancer Commission; (p) periodic health examinations by hospital staffs; (q) hospital privileges (approved as amended); (r) hospital facilities for the mentally ill (approved as amended); (s) study of surgical fees—Blue Shield (approved as amended); (t) contributions to Beaumont Memorial (approved as amended).
   Adopted substitute resolutions concerning: (a) propaganda on Salk vaccine; (b) pollution of inland waterways; (c) Blue Shield reporting in mediation cases; (d) expansion of AMA administrative facilities; (e) non-scientific sessions at AMA Conventions.
   Referred: (a) to introducer, for clarification, a resolution re Joint Commission on Accreditation of Hospitals; (b) to MSMS Mental Health Committee for study a resolution re increasing hospital personnel for the mentally ill.
6. Disapproved resolutions concerning: (a) county society membership; (b) fluoridation of water; (c) old age and survivors insurance program—but recommended that county medical societies conduct polls of their memberships on this question; (d) election of Executive Committee of The Council
7. Elected to Special Memberships:
   (a) Thirty-five members to Life Membership: (Bay) Aloysius J. Zaremba, M.D., Bay City; (Branch) Kendall B. Rees, M.D., Coldwater; (Dickinson-Iron) George H. Boyce, M.D., Iron Mountain; (Genesee) Clifford P. Clark, M.D., Coral Gables, Florida; Lafon Jones, M.D., Flint, and Edwin E. Miller, M.D., Flint; (Ionia-Montcalm) Robert H. Haskell, M.D., Northville; Lee E. Kelsey, M.D., Lakeview, and Isaac S. Lilly, M.D., Stanton; (Jackson) Edward W. Douglas, M.D., Jackson; Walter L. Finton, M.D., Jackson, and Frank F. Pray, M.D., Jackson; (Kalamazoo) Dirk J. Scholten, M.D., Kalamazoo; (Menominee) Henry T. Sethney, M.D., Menominee; (Midland) Joseph H. Sherk, M.D., Midland; (St. Joseph) Charles G. Miller, M.D., Sturgis; (Washtenaw) Howard H. Cummings, M.D., Ann Arbor; Warren E. Forsythe, M.D., Ann Arbor; Christopher G. Parnall, M.D., Ann Arbor, and Inez R. Wisdom, M.D., Ann Arbor; (Wayne) Alexander W. Blain, M.D., Frederick H. Cole, M.D., William A. Defnet, M.D., Martin S. Dubpernell, M.D., Samuel Glassman, M.D., Fred L. Honhart, M.D., Charles J. Jentgen, M.D., E. V. Joinville, M.D., George M. Laning, M.D., Elbert A. Martin, M.D., William O. Merrill, M.D., Plinn F. Morse, M.D., Fred W. Organ, M.D., John B. Rieger, M.D., and Susanne M. Sanderson, M.D., all of Detroit.
   (b) Seven members to Retired Membership: (Bay) Edward S. Huckins, M.D., Bay City; (Calhoun) Theodore Kolvoord, M.D., Battle Creek; (Delta-Schoolcraft) John J. Walch, M.D., Escanaba; (Wayne) John R. Boland, M.D., Jerome W. Ankley, M.D., Ray D. Schirack, M.D., Bertrand C. Switzer, M.D., all of Detroit.
   (c) Seventeen members to Associate Membership: (Delta-Schoolcraft) Gilbert W. Benson, M.D., Escanaba; (Eaton) Richard K. Meinke, M.D., Rochester, Minnesota; (Muskegon) Robert G. Heneveld, M.D.; (Wayne) Henry A. Archambault, M.D., Detroit; Dorothy Fisher Caton, M.D., Detroit; Charles M. Ebner, M.D., Detroit; Martin Z. Feldstein, M.D., Detroit; Dunbar P. Gibson, M.D., Detroit; Gene L. Hackleman, M.D., Dearborn; Ralph G. Hubbard, M.D., Detroit; Werner K. Kersten, M.D., Detroit; Francine Larson, M.D., Wyandotte; Nur M. Malik, M.D., India; Charles W. Park, M.D., Detroit; Eugene V. Perrin, M.D., Washington, D. C.; Jack C. Smith, Detroit, and Vincent J. Turcotte, M.D., Detroit.
8. Elected the following officers:
   (a) A. E. Schiller, M.D., Detroit, as Councilor of the 1st District (1960).
   (b) O. B. McGillicuddy, M.D., Lansing, as Councilor of the 2nd District (1960).
   (c) G. W. Slagle, M.D., Battle Creek, as Councilor of the 3rd District (1960).
   (d) D. Bruce Wiley, M.D., Utica, as Councilor of the 15th District (1960).
   (e) G. Thomas McKean, M.D., Detroit, as Councilor of the 16th District (1960).
   (f) J. S. DeTar, M.D., Milan (1957); W. A. Hyland, M.D., Grand Rapids (1957); and C. I. Owen, M.D., Detroit (1957), as Delegates to the American Medical Association.
   (g) W. W. Babcock, M.D., Detroit (1957); E. F. Sladek, M.D., Traverse City (1957); O. J. Johnson, M.D., Bay City (1957); and Wm. Bromme, M.D., Detroit (1956), as Alternate Delegates to the American Medical Association.
   (h) Arch Walls, M.D., Detroit, as President-Elect.
   (i) J. E. Livesay, M.D., Flint, as Speaker, House of Delegates
   (j) K. H. Johnson, M.D., Lansing, as Vice Speaker, House of Delegates.

Michigan State Medical Society

Ninetieth Annual Session

DIGEST OF PROCEEDINGS OF THE HOUSE OF DELEGATES

MONDAY MORNING SESSION
September 26, 1955

The 90th annual session of the House of Delegates of the Michigan State Medical Society, held at the Pantlind Hotel, Grand Rapids, Michigan, on September 26-27, 1955, convened at 10:10 a.m., J. E. Livesay, M.D., Speaker of the House of Delegates, presiding.

I. RECORD OF ATTENDANCE

Office	*Officer*	*Meetings*				
		1st	*2nd*	*3rd*	*4th*	*5th*
Speaker	J. E. Livesay, M.D.	x	x	x	x	x
Vice Speaker	K. H. Johnson, M.D.	x	x	x	x	x
Secretary	L. Fernald Foster, M.D.	x	x	x	x	x
Immediate Past President	L. W. Hull, M.D.	–	–	–	–	–
County	*Delegate*					
1. Allegan	L. F. Brown, M.D.	x	x	x	x	x
2. Alpena-Alcona-Presque Isle	E. S. Parmenter, M.D.	x	x	x	x	x
3. Barry	A. B. Gwinn, M.D.	x	x	x	x	x
4. Bay-Arenac-Iosco	O. J. Johnson, M.D.	x	x	x	x	x
	D. A. Bowman, M.D.	x	x	x	x	x
5. Berrien	D. W. Thorup, M.D.	x	x	x	x	x
	N. J. Hershey, M.D.	x	x	x	x	x
6. Branch	H. J. Meier, M.D.	x	x	–	–	x
7. Calhoun	H. C. Hansen, M.D.	x	x	x	x	x
	L. R. Keagle, M.D.	x	x	x	x	x
8. Cass	S. L. Loupee, M.D.	x	x	x	x	x
9. Chippewa-Mackinac	W. F. Mertaugh, M.D.	x	x	x	x	x
10. Clinton	F. W. Smith, M.D.	x	x	x	x	x
11. Delta-Schoolcraft	H. Q. Groos, M.D.	x	x	x	x	x
12. Dickinson-Iron	L. E. Irvine, M.D.	x	x	x	x	x
13. Eaton	P. H. Engle, M.D.	x	x	–	–	x
14. Genesee	F. D. Johnson, M.D.	x	x	x	x	x
	C. W. Colwell, M.D.	x	x	x	x	x
	R. M. Bradley, M.D.	x	x	x	x	x
	C. K. Stroup, M.D.	x	x	x	x	x
	F. W. Baske, M.D.	x	x	x	x	x
15. Gogebic	D. C. Eisele, M.D.	x	x	x	x	x
16. Grand Traverse-Leelanau-Benzie	D. G. Pike, M.D.	x	x	x	x	–
17. Gratiot-Isabella-Clare	M. G. Becker, M.D.	x	x	x	x	x
18. Hillsdale	A. W. Strom, M.D.	x	x	x	x	x
19. Houghton-Baraga-Keweenaw	P. S. Sloan, M.D.	x	x	x	x	x
20. Huron	C. W. Oakes, M.D.	x	x	x	x	x
21. Ingham	J. M. Wellman, M.D.	x	x	x	x	x
	F. L. Troost, M.D.	x	x	x	x	x
	O. B. McGillicuddy, M.D.	x	x	x	x	x
22. Ionia-Montcalm	H. W. Harris, M.D.	x	x	x	x	x
23. Jackson	Glenn W. House, M.D.	x	x	x	x	x
24. Kalamazoo	W. A. Wickham, M.D.	x	x	x	x	x
	C. R. Lenz, M.D.	x	x	x	x	x
	F. C. Ryan, M.D.	x	x	x	x	x
	W. A. Scott, M.D.	x	x	x	x	x
	S. E. Andrews, M.D.	x	x	x	x	–
25. Kent	Paul Cooper, M.D.	–	–	–	–	x
	L. C. Carpenter, Jr., M.D.	x	x	x	x	x
	W. C. Beets, M.D.	x	x	x	x	x
	G. W. DeBoer, M.D.	x	x	x	x	x
	K. E. Fellows, M.D.	x	x	x	x	x
	W. J. Fuller, M.D.	x	x	x	x	x
	R. A. Rasmussen, M.D.	x	x	x	x	x
	A. V. Wenger, M.D.	x	x	x	x	x
	D. J. O'Brien, M.D.	x	x	x	x	x
26. Lapeer	G. C. Wilson, M.D.	x	x	x	x	x
27. Lenawee	H. C. Hill, M.D.	x	x	x	x	x
28. Livingston	T. W. Thompson, M.D.	Not Represented				
29. Luce	Sydney Scher, M.D.	–	–	x	x	x
30. Macomb	E. A. Oakes, M.D.	x	x	x	x	x
31. Manistee	A. S. Narotzky, M.D.	x	x	x	x	x
32. Marquette-Alger	H. G. Bacon, M.D.	x	x	x	x	x
33. Mason	Paul Ivkovich, M.D.	x	x	x	x	–
34. Mecosta-Osceola-Lake	J. R. Heidenreich, M.D.	x	x	x	x	x
35. Menominee	H. L. Gordon, M.D.	x	x	–	x	x
36. Midland	T. A. McDonald, M.D.	x	x	x	x	x
37. Monroe	R. D. Risk, M.D.	x	x	x	x	x
38. Muskegon	N. W. Scholle, M.D.	x	x	x	x	x
39. Newaygo	J. P. Klein, M.D.	x	x	x	x	x
40. North Central	E. H. Rodda, M.D.	x	x	x	x	x
41. Northern Michigan	J. R. Rodger, M.D.	x	x	x	x	x
42. Oakland	H. A. Furlong, M.D.	x	x	x	x	x
	E. B. Cudney, M.D.	x	x	x	x	x
	Otto O. Beck, M.D.	x	x	x	x	–
	J. M. Markley, M.D.	x	x	x	–	–
	N. F. Gehringer, M.D.	x	x	x	x	x
	E. W. Bauer, M.D.	x	x	x	x	–
	W. G. Robinson, M.D.	x	x	x	x	x
43. Oceana	W. F. Strong, M.D.	Not represented				
44. Ontonagon	Otto Van Der Velde, M.D.	x	x	x	x	x
45. Ottawa	J. P. Markey, M.D.	x	x	x	x	x
46. Saginaw	M. F. Bruton, M.D.	x	x	x	x	x
	A. C. Stander, M.D.	x	x	x	x	x
	K. T. McGunegle, M.D.	x	x	x	x	x
47. Sanilac	C. L. Weston, M.D.	x	x	x	x	x
48. Shiawassee	J. F. Beer, M.D.	x	x	x	x	x
49. St. Clair	S. A. Fiegel, M.D.	x	x	x	x	x
50. St. Joseph	L. L. Savage, M.D.	x	x	x	x	x
51. Tuscola	R. W. Spalding, M.D.	x	x	x	x	x
52. Van Buren	O. K. Engelke, M.D.	x	x	x	x	x
53. Washtenaw	R. W. Teed, M.D.	x	x	x	x	x
	P. S. Barker, M.D.	x	x	x	x	x
	G. H. Bauer, M.D.	x	x	x	x	x
	H. F. Falls, M.D.	x	x	x	x	–
	M. A. Darling, M.D.	x	x	x	x	x
54. Wayne	L. R. Leader, M.D.	x	x	x	x	x
	M. R. Weed, M.D.	x	x	x	x	x
	J. J. Lightbody, M.D.	x	x	x	–	x
	E. A. Osius, M.D.	x	x	x	x	x
	E. H. Fenton, M.D.	x	x	x	x	x
	G. C. Penberthy, M.D.	x	x	x	x	x
	C. I. Owen, M.D.	x	x	x	x	x
	W. W. Babcock, M.D.	x	x	x	x	–
	D. I. Sugar, M.D.	x	x	x	x	x
	G. S. Bates, M.D.	x	x	x	x	x
	L. J. Bailey, M.D.	x	x	x	x	x
	J. B. Blodgett, M.D.	x	x	x	x	–
	E. G. M. Krieg, M.D.	x	x	x	x	–
	J. E. Loftstrom, M.D.	x	x	x	x	–
	W. L. Brosius, M.D.	x	x	x	x	x
	A. D. Ruedemann, M.D.	x	x	x	x	x
	R. F. Fenton, M.D.	x	x	x	x	x
	C. K. Hasley, M.D.	x	x	x	x	x
	C. W. Sellers, M.D.	x	x	x	x	x
	A. E. Schiller, M.D.	x	x	x	x	x
	R. V. Walker, M.D.	x	x	x	x	x
	C. L. Candler, M.D.	x	x	–	x	x
	Louis Jaffe, M.D.	x	x	x	x	–
	R. H. Pino, M.D.	x	x	x	x	x
	C. E. Umphrey, M.D.	x	x	x	x	x
	J. E. Croushore, M.D.	x	x	x	x	x
	H. B. Fenech, M.D.	x	x	x	x	x
	E. H. Lauppe, M.D.	x	x	x	x	x
	F. P. Rhoades, M.D.	x	x	x	x	x
	M. L. Lichter, M.D.	–	–	x	x	x
	E. C. Texter, M.D.	x	x	x	x	x
	L. S. Fallis, M.D.	x	x	x	x	x
	P. C. Gittins, M.D.	x	x	x	x	x
	S. E. Gould, M.D.	x	x	x	x	–
	Joseph Hickey, M.D.	x	x	x	x	x
	E. A. Bicknell, M.D.	x	x	x	x	x
	L. A. Pratt, M.D.	x	x	x	x	x
	J. A. Kasper, M.D.	x	x	x	x	x
	Sidney Adler, M.D.	x	–	x	x	x
	W. L. Sherman, M.D.	x	x	x	x	–
	W. L. Foster, M.D.	x	x	x	x	x
	J. D. Fryfogle, M.D.	x	x	x	–	–
	E. C. Long, M.D.	x	x	x	x	x
	Clarke McColl, M.D.	x	x	x	x	x
	E. C. Baumgarten, M.D.	x	x	x	x	–
	I. C. Berlien, M.D.	x	x	x	x	x
55. Wexford-Missaukee	R. V. Daugharty, M.D.	x	x	x	x	x

IN MEMORIAM

Each year at this time we announce the names of former members of this House who have passed away. I will also announce the passing of sixty-two members of the Michigan State Medical Society since we last met.

Former delegates and alternates were:

Jackson County—J. J. O'Mera, M.D.

Kent County—P. W. Willits, M.D.

Livingston County—H. G. Huntington, M.D.

North Central Counties—Claude R. Keyport, M.D.

Oceana County—J. H. Nicholson, M.D.

Washtenaw County—Dean W. Myers, M.D.; John A. Wessinger, M.D.

Wexford County—C. E. Merritt, M.D.

Wayne County—Ralph H. Bookmyer, M.D.; Linus J. Foster, M.D.; Frank L. Ryerson, M.D.

May we rise, please, and have a moment of silence.

II. PRESIDENT'S ADDRESS

By R. H. Baker, M.D.

As my term of office as your President ends, I thank you for the honor you have bestowed on me and for a most thrilling and enlightening experience. I had no delusions of my own importance as I assumed this office, and I am more convinced now that I have been but a cog in our wheel of society leadership. My deepest appreciation is tendered to all who have carried on the activities of this Society in 1955. All of our officers and administrative staff have extended to me their help and loyalty. I cannot adequately thank them in words for their generous consideration.

The Council, as always, has carried the load which lightens the work and responsibility of any President. To them I am deeply grateful. Just knowing intimately such fine men is ample compensation for a busy year in office.

And to all committees I am grateful for the hours of sacrifice and effort devoted to their various accomplishments.

To my loyal wife, who has tolerated me and encouraged me this past year, I must express my deep gratitude and affection. A President's wife must put up with much disorganization of her life during her husband's term of office.

I shall not attempt to give you a strict accounting of my year as your President. Our activities are a matter of record. I have failed to achieve much of what I had hoped to do. I thank God I have been permitted to complete my year in spite of some annoying physical ailments; but my experiences have left me with some impressions that I will attempt to convey to you.

I began my year with a desire to reach down to the roots of our membership and study their opinions. I hoped to extend unity where it was indicated, and to promote indoctrination in the objectives and responsibilities of all doctors in their county and state societies.

As may be expected, I found that the work is done by a few—the officers and committees. The rank and file are not vocal of their desires. There is not enough continuity in office, especially that of Secretary.

I was pleased to note that there was less evidence than formerly of personal jealousies that used to lead to caustic criticism and even contributed to malpractice suits. I believe that medical organization has served to stem this tide.

There is still evidence that some men fail to understand or value the objectives of organized medicine. There are those who frequently say that our Society "does not speak for them." Of this I will comment later.

The broadened scope of our Society interest still leaves us with the basic one of stimulating and aiding scientific advancement in medical practice. This we are meeting in many ways, namely, by this convention.

Constantly changing demands from many sources must keep us alert and responsive to economic factors. We must keep our fees constantly defensible against the demands of public criticism. We must not ignore fee splitting where it exists, but be not drawn into controversy where faulty definitions of fee splitting cause argument. The efforts of mediation committees must continue within the boundaries of mediation. Malpractice needs better law enforcement.

Every physician should improve his knowledge of medical insurance, whether it be group prepayment for services, or any other form of commercial or compensation insurance. This will aid him in his practice and his advice to patients.

Our best public relations must be extended and applied by every doctor in his practice, and by all societies, large and small.

Our legislative interests and contacts are increasing at a rapid pace. No one can afford to be uninformed nor to ignore their opportunities to aid in supporting good medical legislation. This obligation holds for much national legislation that affects doctors.

In the field of hospital-physician relationship, I wish to quote from an address by Charles L. Farrel, M.D., at the Conference of Presidents in Atlantic City in 1955. He quotes from *Trustee,* a hospital booklet, in 1954, on the hospital's duty to the staff physician:

"Protection from discrimination on the grounds of race, creed or color should be afforded by the hospital trustees. Nor should the physician have to go about in fear of arbitrary or capricious action by the medical staff or the trustees of the hospital that might terminate his appointment or curtail his privileges without cause."

Dr. E. J. McCormick, Past President of the American Medical Association, stated: "Hospitals should not be centers for specialists, and it never was the ideal of the American Medical Association or the American College of Surgeons or any of the boards to establish a system whereby qualified physicians would be denied the facilities necessary to give good medical care to the people."

Dr. George M. Lewis of New York is quoted as follows: "It is true that the onus of proof might well be on a non-certified applicant for a hospital position to demonstrate his competence. However, once that competence has been proved, either through long service or otherwise, discrimination against him as non-certified cannot be justified. The board certificate should never be used as a weapon." Let us make that a reality, not just a statement.

Dr. Farrel then adds: "How often, however, have the very criteria designed to protect doctors, hospital and patient been subverted at the local level by various selfish forces acting under the guise of 'elevating standards.' "

To me, hospital-physician relationships are most important for our intraprofessional attention and activity. The public is crying for more general practitioners. It should be our deep concern to avoid any imbalance between specialists and general practitioners of medicine. We have been educated to believe that the hospital provides, in some cases, a chance for better medical care. Let not the general practitioner be denied this tool to better quality practice of medicine.

Again, I ask you, does your Society speak for you? This question applies to all levels, from the American Medical Association down to the state and county

levels. I put the American Medical Association first because they are the most remote from control by individuals in any county society.

There still seems to be a need for better understanding of how our democratic organization functions. Does the membership that you delegates represent feel that they have no voice in our activities and decisions? Don't let anyone neglect his right and responsibility to be heard as a medical citizen.

I trust the delegates before me realize their freedom to offer ideas, to discuss them freely in the House, and thereby set the policies that are further advanced to our representatives to the American Medical Association. If you know a better way to practice democratic privilege, yours is the responsibility for policy making.

I urge that you have confidence in your elected officers. In the course of a year's activities you must trust your officers and Councilors to carry on many policies already established, and to meet new and often perplexing problems. Their decisions are made with thought and deliberation to safeguard the interest of all our membership. If you question the soundness of their decisions, be sure you have the facts before you start a backfire of discontent and criticism.

My experience in this House and as an officer in the Society convinces me of the integrity of our elected leadership. May it always continue with an open-mindedness to progress.

Thanks, and my best wishes for our continued leadership in medical organization.

* * *

THE SPEAKER: This address will be referred to the Reference Committee on Officers' Reports.

III. PRESIDENT-ELECT'S ADDRESS

By W. S. Jones, M.D.

While socialized medicine still faces the medical profession, it is not our only serious problem that must be solved. One of our problems is to give the people of our State the very best available medical and surgical care at a reasonable cost. The State of Michigan conferred special rights and privileges upon us when it gave us a license to practice the art and science of medicine. These rights and privileges carry very definite responsibilities which we, as doctors of medicine, must assume. One of the many functions of the State Medical Society is to aid our doctors in carrying out these responsibilities.

I accept the Presidency of the Michigan State Medical Society with deep humility, and pray for Divine Guidance to perform my duties faithfully, and to serve this Society to the best of my ability.

It is my good fortune to know all the living Past Presidents of this Society, most of them rather intimately. When I review the things that these men have done for us, without regard for cost in time or work, it gives me a feeling of inadequacy. During the next twelve months I shall take the liberty of calling on these men for advice and guidance.

Since graduating from medical school, two very wonderful honors have been bestowed upon me, and both have to do with the State of Michigan, the greatest State in the Union. First, just forty years ago the dearest woman in the State of Michigan chose me to be her husband. And now the Michigan State Medical Society has made me its President, exactly forty years later. I love you both, and shall always be your willing and faithful servant.

What our Society accomplishes during the next twelve months depends upon having certain ideals and being able to translate those ideals into reality. By accepting committee appointments and working on them is the first step in that direction. I do hope that members of the Society who are willing to work, and who have knowledge of special problems, will offer their services.

We as medical men have dedicated ourselves to the service of mankind by rendering good medical and surgical care to all people in the State of Michigan at a reasonable cost, regardless of race, creed or color, letting the Golden Rule be the model for our conduct. We shall support our two medical schools and aid them in turning out more doctors of medicine. We would even welcome and support the establishment of another medical teaching facility to supply more doctors of medicine. Under no conditions will we condone sacrificing quality of teaching for quality of doctors. We adhere to the principle that a good doctor must be, first of all, a good citizen; and that medical care is such an intimate problem that it cannot be rendered by governmental agencies, corporations or hospitals.

Ladies and gentlemen, I believe in the private practice of medicine because it is the only system in which each individual has the right to choose his or her own doctor. Therefore, I ask you to join me in rededicating our lives to the service of our fellow men, to make available the very best medical care to all of our people, whether in cities or in rural areas.

I thank you for the honor that you have given me, and I shall do my best to deserve it.

* * *

THE SPEAKER: Dr. Jones' address will be referred to the Reference Committee on Officers' Reports.

IV. REPORTS OF THE COUNCIL

By William Bromme, M.D., Chairman

This begins to bring us down to the problems of the organization which attempts to serve you in maintaining the practice of medicine as we know it. This report is not the work of one person. This report is not the work of one committee. Rather, it is the work of about 600 doctors of our membership who have labored organization-wise on behalf of all of us, and tribute must be paid to all of our men who do work for all of us.

The annual report of The Council is published in the Handbook, which you have at hand, beginning on page 47, and with permission of the Speaker I will not read the text of that report.

1. *Membership.*—On September 1, 1955, the membership of the Michigan State Medical Society totaled 5,899. This compares very favorably with a total of 5,670 at the same time last year.

2. *Finances.*—(See accompanying report).

FINANCIAL REPORT FOR PERIOD ENDING AUGUST 31, 1955

ACCOUNT	On Hand 1/1/55	Income to 9/1/55	Expenses to 9/1/55	Balance on Hand 9/1/55
General Fund	$ 73,452.24	$130,449.11	$ 99,800.17	$104,101.18
Annual Session	.....	29,557.50	4,677.26	24,880.24
Michigan Clinical Institute	.....	12,746.00	14,382.50	- 1,636.50
THE JOURNAL	.....	55,553.43	45,327.36	10,226.07
Public Education	76,816.26	32,382.30	22,471.26	86,727.30
Public Service	3,330.00	18,063.51	16,437.13	4,956.38
Professional Relations	6,545.92	27,095.21	19,051.70	14,589.43
Public Education Reserve	30,000.00	.....	.....	30,000.00
Rheumatic Fever Control	13,645.55	21,025.00	10.765.28	23,905.27
Surplus from Dues	29,390.82	7,741.51	.....	37,132.33
Beaumont Memorial Fund	-10,480.29	200.00	.....	-10,280.29
Building Fund	11,770.04	10,322.00	4,164.84	17,927.20
TOTALS	$234,470.54	$345,135.57	$237,077.50	$342,528.61

3. *Michigan Medical Service.*—An up-to-date report on this corporation, including its finances, will be presented to you at the meeting of Michigan Medical Service membership tomorrow, September 27, at 2 p.m. in

the Grand Ballroom of the Pantlind Hotel. All MSMS delegates are members of the Michigan Medical Service Corporation and are expected to attend this important annual meeting.

Michigan Medical Service proposed a new $6,000 family income service contract—study of adequate fee schedules therefor.

The 1955 contracts between labor and the automotive industry provide for prepaid medical-surgical care at a family income level of $6,000. It is estimated that 80 per cent of present subscribers to Michigan Medical Service will be eligible for such a program.

At the request of Michigan Medical Service, a committee composed of members of the Michigan State Medical Society, representative of each Councilor district, under the general chairmanship of L. W. Hull, M.D., Past President, has been approved by The Council, has held one organizational meeting, and has gone seriously to work.

Every member of the Michigan State Medical Society will receive a questionnaire asking him to indicate what he believes is a fair and just professional fee for the services indicated. It is the hope that every member of the Michigan State Medical Society will respond with information which can be utilized in the development of this new fee schedule. This is a real challenge for all of us because the community service provided by Michigan Medical Service has been good for all concerned, and because we know that many closed panel groups in labor, industry, government and otherwise would like to control the providing of this service. It has been the conviction of the Michigan State Medical Society that the medical profession must control this service.

4. *Beaumont Memorial.*—Otto O. Beck, M.D., Birmingham, Chairman of the Beaumont Memorial Committee, presented the following financial status of the Beaumont Memorial to The Council yesterday:

Subscribed to September 1, 1955	$35,593.30
Expended to September 1, 1955	45,873.59
Advanced by MSMS	10,280.29

The Council invites additional donations to the Beaumont Fund so that the expenses of building and furnishing the Memorial may be fully liquidated through voluntary means.

The Beaumont Memorial continues to be one of the finest public relations projects ever achieved by the medical profession of Michigan. It is a perpetual reminder to the people of Michigan and the nation of the many and enduring scientific contributions made by Michigan's doctors of medicine in their behalf.

5. *Michigan's Foremost Family Physician for 1955.*—Selection of one of our Michigan general practitioners as nominee for the AMA Gold Medal Award is the privilege of the House of Delegates. According to the established procedure, the field of nominees has been narrowed to three, from which the House of Delegates has the privilege of electing one.

The three nominees are:

Paul W. Rigterink, M.D., Grand Rapids
Paul Van Riper, M.D., Champion
Walter H. Winchester, M.D., Flint

6. *List of Nonmembers.*—Pursuant to the House of Delegates' instruction of 1948, The Council (through Secretary L. Fernald Foster, M.D.) today submits a list of former members whose 1955 MSMS dues were not paid as of September 1, 1955. To insure accuracy, this list recently was submitted to and certified as correct by our component county and district medical society secretaries.

7. *MSMS Health and Accident Insurance Program.*—The report to September 15, 1955, supplied by the carrier (Provident Life and Accident Insurance Company of Chattanooga, Tennessee), is as follows:

Premiums Collected	$396,420.88
Premiums Earned	336,907.02
Claims Paid	150,441.09
Reserves on Claims Reported and in Process of Payment	39,646.43
Reserves on Claims Incurred but Unreported	15,895.47
Total Claims Paid and Claim Reserves	205,982.99
Loss Ratio on Earned and Incurred Basis	61.14 per cent

8. *Grand Award to Michigan State Medical Society.*—The American Trade Association Executives, at its 1955 convention at Mackinac Island, presented to the Michigan State Medical Society a plaque indicating the Grand Award, covering state associations of all kinds throughout the nation, for the eminently successful program of your State Society in recruiting and training of medical associates. ATAE, in presenting the plaque to the MSMS Council Chairman, indicated that "the impact of this medical associates campaign has highlighted this contemporary career opportunity throughout the nation."

9. *"You Are Organized Medicine's Basic Unit"* is the theme of the 1956 Annual County Secretaries-Public Relations Seminar. This forthcoming program has been expanded from a one-day into a three-day seminar, scheduled for January 27-29, 1956. It will include general assembly, classroom and other modern techniques of communication and audience participation. The program is beamed at enlightening medical leaders, elected to office on the county level, concerning the opportunities of organized medicine in combatting the four basic threats to health welfare. Every member of the House of Delegates is most cordially invited to attend this meeting in Detroit, January 27-29, 1956. This three-day seminar is built around and for *you*, as organized medicine's basic unit.

10. *Contacts With Governmental Agencies.*—(a) Liaison Committee with State's Executive Office. The Council is pleased to announce that Governor G. Mennen Williams has accepted the formation of a liaison committee to the State Executive Office, to be available when questions of a medical nature are referred by the Governor to the Michigan State Medical Society. The personnel of this committee is: Robert H. Baker, M.D., Pontiac; Milton A. Darling, M.D., Detroit; L. Fernald Foster, M.D., Bay City; Kenneth H. Johnson, M.D., Lansing; William S. Jones, M.D., Menominee, and Ralph W. Shook, M.D., Kalamazoo.

(b) E. C. Swanson, M.D., Vassar, was elected by his nine confreres of the Michigan State Board of Registration in Medicine as Secretary of that State agency on September 2, to succeed J. Earl McIntyre, M.D., Lansing, retired.

The Council congratulates Dr. Swanson and offers him the wholehearted co-operation and assistance of the Michigan State Medical Society in his important work.

11. *Standards of Membership.*—Just before the 1954 House of Delegates' annual session, a committee of The Council was appointed (composed of three Past Presidents) to survey the MSMS Bylaws concerning the standards of membership and the disciplining of members. During the past year this committee has given serious study to the problems of mediation, grievance and ethics, and from time to time has submitted its opinions to The Council for confirmation. This study is one of many complexities, further involved by geographic and other variations from the norm. It will take this committee additional time to complete its study and present to the House of Delegates its final recommendaions for correcting present inconsistencies.

Further study having been given to these problems,

the Mediation, Ethics and Grievance Committee, at its September 25 meeting, agreed in principle as to the distinction between the function of mediation committees and ethics committees. It was agreed that mediation committees shall act as friendly intermediaries by consent of the disputing parties, without power to arbitrate or compel agreement or to exact discipline. Ethics committees concern themselves with infractions of proper professional behavior, and treat with the relationship of a society member to his fellow members, to his society and to his profession, and with the power to recommend discipline for infraction of proper professional conduct.

Consideration has been given to those things which will constitute infractions of ethical practice of medicine and further study to develop necessary mechanics of operation, and any necessary revisions of the MSMS Bylaws will be prepared for presentation as soon as possible to the MSMS House of Delegates. It is expected that specific recommendations of revisions to the Bylaws will be ready for presentation to the 1956 House of Delegates.

12. *Invitations to all New Practitioners.*—As instituted last year, all doctors of medicine who entered practice in Michigan since the last MSMS Annual Session recently were sent special invitations to attend the 1955 convention. In this list of over 300, nonmembers as well as members were included. The Annual Session should indicate to nonmembers some of the many values of association with the Michigan State Medical Society, one of the most progressive state medical units in the United States.

13. *MSMS Public Relations Manual, "Winning Friends for Medicine."*—Two additional projects are being developed for inclusion in "Winning Friends for Medicine," the MSMS public relations guide book for county medical societies which is the basis for our co-ordinated medical public relations program in Michigan for the second year. One project will suggest means of county medical society co-operation with the various health programs sponsored locally by fraternal organizations and service clubs. The other will outline public relations aspects of medical society guidance in local school health programs and activities, based on the policies developed by the Michigan State Medical Society Child Welfare Committee and the pioneering experience of the Wayne County Medical Society.

14. *Annual Reports of Committees.*—

(a) Supplemental Report by Liaison Committee with Michigan Medical Service:

At our July 16 meeting one component county society submitted a complaint received from a veterans' organization re medical care of veterans. This committee recommended that the complaint be investigated and handled on the county medical society level.

The revised forms of medical reports to veterans' facilities, drawn up by Michigan Medical Service, were given study and approval by this Committee.

(b) Special Committee (of The Council) on Resolution re Joint Commission on Accreditation. This Committee, at its August 24 meeting, adopted the following policy statement:

We recognize the need for accreditation of hospitals if the highest standards of patient care are to be maintained. We remind ourselves that the collective effort known as the Joint Commission on Accreditation was entered into voluntarily to avoid the possible pitfalls of unaided nonprofessional control of accreditation.

We believe that every effort should be made to maintain our present representation in this Joint Commission and to preserve the ideals they have thus far evolved.

However, we feel that a careful study should now be made to assess and possibly improve the practical application of the principles of accreditation.

To this end, the Michigan State Medical Society has made a study of grass roots level complaints in this State, and offers the following suggestions as requested by the Committee on Review of the AMA:

(1) We recommend that inspectors examining hospitals in the name of the Joint Commission sever all connections with the parent organization making up the Joint Commission, and become exclusive employes of the Joint Commission.

(2) We recommend that the Joint Commission undertake to train its inspectors as to methods and attitudes of applying the principles set forth by the Joint Commission, uniformly.

(3) Many doctors are disturbed over the amount of time required for the review of the conduct of the practice of medicine through the records of accredited hospitals, to the detriment of the teaching program and patient care. Therefore, we ask the Joint Commission to clarify its position as to the mechanics and detail required in case and statistical review toward an objective of simplification.

(4) We request the AMA Committee on Review to investigate the allegation that open staff hospitals are categorically down-graded under the accrediting system now in effect.

(5) Many hospital staffs and county medical societies are disturbed over the undue emphasis being placed by inspectors on the need for outpatient clinic facilities, and we question whether the services of an outpatient clinic are essential to an intern training program. Basically, we believe that the policy underlying the establishment of outpatient departments should be determined by the local county medical society.

(6) We recommend that all directives and interpretations of the Joint Commission which alter the Standards for Hospital Accreditation and are pertinent to the practice of medicine be officially communicated directly to the chiefs of staff of all hospitals, as well as to hospital administrators, promptly.

(c) The Council respectfully invites attention to the critical status of the General Fund of the Society. It reminds the House of Delegates that the dues of the Michigan State Medical Society have not been increased since 1950.

No material increase except for assessments since 1944, in which year there was a $10 assessment; the following year, 1945, this was increased to $15, and in 1946 the assessment was raised to $25 and continued at $25 until the 1950 House of Delegates, for tax purposes, made the assessment a part of the dues and voted an increase of $8 per year per member, to bring the total to $45, which has continued until this date.

Due to a marked increase during the last few years in the General Fund activity and coincident expenditures, including greatly augmented committee work, necessary salary increases to meet rising costs of living, and a retirement program to encourage more permanent tenure of employment, The Council found it necessary to borrow $5 per member in 1955 from the Public Relations allocation to bolster the weakened General Fund. Because of the foregoing—and a continuation of this unhealthy situation into the unforeseeable future—The Council recommended at its meeting yesterday that the dues of the Michigan State Medical Society be increased. A recommendation on this subject follows.

15. *Michigan State Medical Assistants Society.*—This young organization continued to expand during the year, both in membership and in service to the medical profession, to local medical societies, and to the communities in which chapters are situated. MSMAS now has more than 650 active members, of which 200 are new within the past year. Five new chapters (in Jackson, Van Buren, Calhoun, Oakland and Barry Counties) were organized during the year, bringing the total to sixteen. The current President has attempted to visit

each component society during her term in office. The 1954 MSMAS annual meeting in Detroit drew a total registration of 371.

One major goal achieved during the year, through the co-operation and counsel of MSMAS (with assistance from MSMS), was the two-year course for medical assistants, which will be initiated in September at Ferris Institute, Big Rapids. In addition to the variety of adult education programs and other community projects at the local level, MSMAS representatives participated in the Sixth Annual Michigan Cancer Conference, the annual meeting of the Michigan Health Council, planning sessions of the Michigan Rural Health Conference, a panel discussion on Medical Health Education at the annual MSMS County Secretaries-Public Relations Conference, and in an advisory capacity at the annual meeting of the Kansas Medical Assistants Society. Michigan continues to hold its lead in organization of medical assistants.

16. *Matters Referred to the Council by the House of Delegates.*—

(a) Uniform Health Insurance Claim Forms: Referred by the 1952 House of Delegates. A two-year co-operative effort by the insurance business and the American Medical Association to streamline health insurance claim forms used by doctors of medicine is nearing a successful conclusion. The Health Insurance Council's Special Committee on Uniform Claim Forms has submitted for acceptance by insurance companies the final drafts of two all-purpose and two abbreviated physician statement forms. One all-purpose and one abbreviated form are for use with group insurance policies, and the other two are for individual and family policies. Substantial company support for these four forms is indicated by the responses received to date from the companies, according to the Health Insurance Council.

Two other short forms already have received approval from the AMA's Council on Medical Service and have been accepted by companies writing the majority of the commercial health insurance business in America. One of these approved and accepted forms covers physicians' statements in connection with group surgical benefits, and the other form covers individual or family hospital, medical or surgical benefits.

Around the end of 1955 The Council plans to have ready for wide distribution throughout the medical profession a pamphlet which will tell the story of the uniform claim forms project, and will also serve as a working guide on the use of new uniform and streamlined claim forms. (See addendum)

(b) Involved reports of Michigan Social Welfare Department: As reported last September, this action of the 1953 House of Delegates was invited to the attention of the Michigan Social Welfare Commission, which recomemnded that MSMS appoint a committee to work with the Commission's Medical Advisory Committee to find a solution to the problem. The MSMS committee is composed of W. B. Harm, M.D., Detroit, Chairman; O. J. Johnson, M.D., Bay City, and C. A. Paukstis, M.D., Ludington. The minutes of your committee, which met with the Commission's Medical Advisory Committee on January 14, 1955, are attached as an addendum.

(c) Greater Uniformity by Basic Science Boards: A supplemental report recently was submitted by the Committee on Study of Basic Science Act. (See addendum)

(d) Assistants' Fees under Michigan Medical Service: The 1954 House of Delegates recommended to Michigan Medical Service "That it develop procedures to pay surgical fees to the operating surgeon and the assisting physician who has actually and in person assisted at the surgical operation on the patient when and if requested by the operating physician."

The Special Committee of the Board of Directors of Michigan Medical Service has this complex matter under consideration. One report to its Board of Directors was not adopted by the Board, and the matter was referred back to the Committee for further consideration.

(e) Migrant Workers: A final report from E. F. Sladek, M.D., Traverse City, member of the Governor's Commission on Migrant Workers, was submitted to The Council on August 18, and is attached as an addendum to this report. In a word, the problem of procuring health service for migratory workers has *not* been solved. Dr. Sladek's efforts have been diligent, but often frustrating to him. The problem remains with us—an annual irritant that challenges the medical profession of this State to seek a solution before some catastrophe (such as an epidemic) hits some section of this State. (See addendum)

(f) Deans' Panel—Time Change: Your attention is respectfully invited to a time change in the Panel on Undergraduate Medical Education, approved by your Speaker and Vice Speaker. This panel will not be held at luncheon on this date, Monday, September 26, but will be held today in this room at 4 p.m.

17. *Death of Stuart A. Campbell.*—The Council announces with deep regret the passing of Stuart A. Campbell, Field Secretary of the Michigan State Medical Society for the past six years. Mr. Campbell died on July 16 after an illness of over a month. The Michigan State Medical Society has lost an ardent and enthusiastic worker in "Scotty" Campbell, a man admired and loved by many of our members throughout the State.

Mr. Speaker, may we have your permission to pause for one moment in our report, as you may wish at this time to request the House to stand in memory of Stuart A. Campbell.

(Silent, standing tribute to Mr. Campbell.)

Recommendations

The four recommendations coming from the annual report of The Council, published on page 47 in the Handbook, are as follows:

(1) That The Council be authorized to send MSMS representatives to Washington, D. C. in 1956, on the occasion of the Annual Michigan Day.

(2) That contributions to the Beaumont Memorial Restoration Fund—by every individual MSMS member—be urgently recommended by the 1955 House of Delegates. Every member of the Michigan State Medical Society should take pride in contributing to the Beaumont Memorial, which will represent for generations the best type of public relations for the medical profession of this State.

(3) That each individual member of the MSMS House of Delegates pledge himself to further in his community or area the MSMS periodic health appraisal program, to the end that private medical practice will bring—in full measure to all people of this State—the life-lengthening health protections afforded by modern medical science. The doctor of medicine must keep in mind that this program is one desired by the people; and people usually secure what they demand—if not by voluntary means, then through compulsory legislation.

(4) That, in these times of change, The Council

trusts that it will continue to merit your continued support, co-operation and faith.

The Council, at its September 25 meeting, added two recommendations, as follows:

(5) That the policy statement of the Special Committee on Resolution re Joint Committee on Accreditation be adopted by the House of Delegates, and that a copy of this report be transmitted immediately to the American Medical Association Special Committee on Review of the Joint Committee on Accreditation.

(6) That the dues of the Michigan State Medical Society be increased $10 per member per annum, for allocation to the General Fund of the Society.

This report is respectfully submitted by The Council of the Michigan State Medical Society.

* * *

THE SPEAKER: This report will be referred to the Reference Committee on Reports of The Council, and will include reference of the annual report of The Council as printed beginning on page 47 of your Handbook.

I thought you might be interested in seeing the plaque that Dr. Bromme mentioned. This is the plaque presented to us from the Michigan Legislature on Concurrent Resolution 34 regarding the Beaumont Memorial.

V. REPORT OF DELEGATES TO AMA

By W. A. Hyland, M.D.

The annual meeting of the American Medical Association for 1955 was held on June 6 to June 10 in Atlantic City, with a total over-all registration of over 30,000, being one of the largest.

The House of Delegates' sessions were held on the 6th to 9th inclusive. Eighty resolutions were presented and studied.

Dr. Elmer Hess, the President-elect, assumed the Chair, with Dr. Dwight Murray, Chairman of the Council for several years, being unanimously named as his successor, and Dr. Millard Hill of North Carolina being elected Vice President. Dr. James Reuling, Speaker of the House, was named as Dr. Murray's successor on the Board of Trustees, with Dr. Vincent Askey of California being chosen as Speaker to succeed Dr. Reuling, and Dr. Louis Orr of Florida being named Vice Speaker.

The House of Delegates voted the 1955 Distinguished Service Award to Dr. Donald Balfour of Rochester, Minnesota. Dr. Balfour has been with the Mayo Clinic for nearly fifty years. At present he is Director of the Mayo Foundation for Medical Education and Research. Due to Dr. Balfour's illness, his son, Dr. William Balfour, accepted the Award for his father.

The clinical session for this year will be held in Boston the first week in December, and the 1956 annual meeting will be in Chicago next June.

The scientific sessions were held daily Monday through Friday, with emphasis being on cancer, mental health, poliomyelitis, geriatrics, cardiovascular disease, and the newer drugs.

The specialty groups evidenced more interest than usual on the economic problems facing them in addition to their scientific discussions. This was especially so of the Ophthalmologic Section, in which the majority felt that the former ruling of the Judicial Council prevented them from maintaining as close a relationship with their patients as they deemed necessary. Therefore, they voted to widen the scope of the Judicial ruling supported by the House of Delegates. From now on this will permit them to follow to completion, in their own offices if they so choose, the examination, prescribing and fitting of glasses. Dr. Haughey was very helpful in discussing this question.

In other phases the Board of Trustees was authorized to appoint a committee for continuing study of economics in its relation to medicine. This follows out the Pino resolution to have the American Medical Association keep abreast of the changing economic picture. They have increased the personnel of the executive offices at this time.

The suggestion of the ad hoc Committee on Intern Study, to not deny recognition to teaching hospitals unless they failed to obtain 25 per cent of their quota for two successive years, was passed. The former rule dropped hospitals if they failed to obtain 66⅔ per cent for two successive years.

The subject of accreditation of hospitals came up for considerable discussion. Many felt that the hospital groups in certain areas were usurping the medical profession's prerogative of being the predominant group to handle this question. Therefore, a resolution was passed, authorizing a special committee of the House of Delegates appointed to study and survey the work of the Committee on Accreditation and to return suggestions at the next session. The committee members were not to be those who are on the Joint Committee on Hospitals or Hospital Accreditation Committee at present.

A special committee to study medical practices, appointed some time ago, reported their findings in a 70-page report recently to the Board of Trustees. This group later on gave out certain portions of the report, but withheld the report as a whole, due to the fact that there was contained therein some critical material with direct quotes. The Board felt that there might be some partial use of the material by those who wish to criticize and put a different light on portions of the report.

Several members of the Committee felt that the report in its entirety should be made available to all the members of the House; therefore, Dr. DeTar moved that action on the report should be held over until the next meeting, and that in the meantime all members of the House were to receive this report for study. Dr. Murray, Chairman of the Board, stated it was not the intention of the Board to withhold knowledge from the members of the House, but rather that they felt it judicious not to publicize quoted material that might be construed adversely. Further, all members were welcome to read the report. As it would take some time to digest it, Dr. DeTar felt that further study and a subsequent report was the choice; therefore his motion was passed.

Director Draper of the United Mine Workers had designated his consulting group to pass on those who were to be admitted to this organization's hospitals. This method was disapproved by the House, with a recommendation of free choice of physicians in these cases. This action was unanimously passed.

The question of voluntary social security had been discussed by county and state groups, especially the younger men in many cases. The Michigan delegation with its executive officers felt that while the American Medical Association was against compulsory social security and successfully opposed it, they at no time disapproved the principle of allowing doctors of medicine to participate in federal social security on a voluntary and self-employed basis. Therefore, a bill was put in by us with the hope that the American Medical Association would at least discuss this situation more freely in the journals for the benefit of those who were interested.

The House disapproved of the American Medical Association asking for a recommendation to the Congress of the United States to change the present status of doctors of medicine in relation to social security, for fear that, once opening up the subject, it might weaken the American Medical Association's position on it, and also interfere with other legislation which they are now working on. But the House did recommend that the American Medical Association thoroughly discuss this subject in *The Journal* in the near future. The fact that something of an enlightening nature will be forthcoming satisfied us to a certain extent.

The subject that provided the most discussion was the osteopathic question. Dr. John Cline reported that after nearly a three-year study, his investigating committee, which visited five of the six osteopathic schools, found they were inferior to our medical schools, and needed help both didactically and financially.

It resolved into one of two things: Either suppress them legally, or elevate their standards by allowing doctors of medicine to teach in their schools. The resolution did not advocate recognizing osteopaths or osteopathy per se. After considerable discussion in committee, a majority and minority report reached the floor of the House. The minority report, which was adopted by the House of Delegates, said:

"One member of the Reference Committee was completely satisfied that an appreciable portion of current education in colleges of osteopathy definitely does constitute the teaching of 'cultist' healing, and is an index that the 'osteopathic concept' still persists in current osteopathic practice. Since he cannot with good conscience approve the recommendation that doctors of medicine teach in osteopathic colleges where 'cultism' is part of the curriculum, he respectfully makes the following recommendations to the House of Delegates:

"1. That the report of the Committee for the Study of Relations Between Osteopathy and Medicine be received and filed, and that the Committee be thanked for its diligent work and be discontinued.

"2. That if and when the House of Delegates of the American Osteopathic Association, their official policy-making body, may voluntarily abandon the commonly so-called 'osteopathic concept,' with proper deletion of said 'osteopathic concept' from catalogs of their colleges, and may approach the Trustees of the American Medical Association with a request for further discussion of the relations of osteopathy and medicine, then the said Trustees shall appoint another special committee for such discussion."

The majority report of the Reference Committee, which was rejected by the House, made the following recommendation:

"Your Reference Committee, after a study of the report of the Committee for the Study of Relations Between Osteopathy and Medicine and the study of other evidence submitted, is not completely satisfied that the current education in colleges of osteopathy is free of the teaching of 'cultist' healing.

"In view of the desire to elevate the standards of teaching in colleges of osteopathy, your Reference Committee recommends approval of the recommendation of the Committee that doctors of medicine may accept invitations to assist in osteopathic undergraduate and postgraduate medical education programs in those states in which such participation is not contrary to the announced policy of the respective county and state medical associations. Such teaching services would be ethical.

"Your Reference Committee approves the recommendation of the Committee that the House of Delegates request state medical associations to assume the responsibility of determining the relationship of doctors of medicine to doctors of osteopathy within their respective states, or request their component county societies to do so.

"Your Reference Committee recommends that a committee be appointed at the discretion of the Board of Trustees, to confer with representatives of the American Osteopathic Association concerning common or interprofessional problems on the national level."

The minority report was adopted by a vote of 101 to 81.

It is quite evident we will hear more about this question in the future.

Among a large number of actions on a wide variety of subjects, the House of Delegates also:

Commended the "Medic" television program.

Reaffirmed its previous recommendation that the United States withdraw from the International Labor Organization.

Approved the Headquarters Survey Report, which included the statement that "The only public relations program of any permanent value is the private and public relations of the individual doctor."

Expressed regret that the Hoover Commission saw fit to alter or eliminate some of the recommendations of its Medical Task Force.

Reaffirmed its opposition to extension of the doctor draft law.

Recommended the creation of an AMA Committee on Geriatrics.

Warned against the danger embodied in state legislative proposals designed to restrict the entire field of visual care to the profession of optometry.

Each year the work of the House goes more intimately into all phases of scientific and economic medicine, which is a very healthy state for the American Medical Association.

In carrying out some of the ideas suggested in the Pino resolution from this House of a year ago, a public relations firm has been employed to aid the American Medical Association's relations with the public and keep abreast of many of the political implications in actions of the Senate and Congress. Further, the Legal Department has been expanded and individualized, this in order to at all times keep the organization within its privileges of the federal laws, rather than to suddenly have the power that be of the government descend on us with a summons to answer for actions innocently taken but outside of the interpretation of the law as related to the organization.

Each day your delegates, alternates, officers, legal adviser and members of our Society who happened to be attending the meeting met at breakfast and discussed various economic phases of the session. Some of the leading figures in medicine, who were acquainted with pertinent subjects of the session, joined in and freely discussed with us their opinions, which in all cases proved very helpful.

We were honored also by the President of the Pakistan Medical Association, who is very positive that world peace will come through the leadership of the physicians in all countries. He believes that our common ground in caring for health brings our profession closer than other groups, and our honest discussions of medical subjects will convince all peoples of our sincerity, and that after this trustful attitude is established rapid progress toward world health and peace will be well started. He really convinced me.

This thought was given further impetus by the head of one of the leading military academies of this country, General Milton Baker, Commander of Valley Forge Military Academy, at a medical meeting in the East within the last ten days, when he stated, "The doctor's satchel has a world peace role, as it can reach into places where the diplomat's briefcase is powerless."

Respectfully submitted by the Michigan Delegates to the American Medical Association:

W. A. Hyland, M.D., *Chairman*
W. D. Barrett, M.D.
J. S. DeTar, M.D.
W. H. Huron, M.D.
R. A. Johnson, M.D.
R. L. Novy, M.D.

Dr. Hyland: Dr. Grover Penberthy, Chairman of the Surgical Division, must be included in this group, due to his intense interest and wise counsel at all times. He is a father councilor to all of us. Next year, in addition, we will have with us Dr. Arnold of Hawaii.

The Chairman wishes to express his personal appreciation to the delegates from Michigan: W. D. Barrett, M.D.; J. S. DeTar, M.D.; W. H. Huron, M.D.; R. A. Johnson, M.D., and R. L. Novy, M.D.

To the alternate delegates: W. W. Babcock, M.D.; O. J. Johnson, M.D.; C. I. Owen, M.D.; E. F. Sladek, M.D.; J. R. Rodger, M.D., and G. W. Slagle, M.D.

To the officers: R. H. Baker, M.D., President; W. S. Jones, M.D., President-elect; William Bromme, M.D., Chairman of The Council; L. Fernald Foster, M.D., Secretary; Wilfrid Haughey, M.D., Editor; William J. Burns, LL.B, Executive Director, and J. Joseph Herbert, Legal Councilor.

To these and many others of the Michigan State Medical Society I wish to express my appreciation for their wise counsel and advice; also the delegates and alternates through me wish to express appreciation to you, the members of the House of Delegates, for allowing us to represent your views in the parent organization, the American Medical Association.

The following is an editorial from the August 20, 1955, issue of the *Journal of the American Medical Association*, entitled, "Progress on Jenkins-Keogh Bills," and it reads as follows:

"On July 19 the Committee on Ways and Means of the House of Representatives, by a vote of 16 to 8, included an amended version of the Jenkins-Keogh bills in the 'bobtail' revenue bill. In the hectic last days of the first session of the 84th Congress, Chairman Jere Cooper (D., Tenn.) officialy killed this catch-all revenue bill for this year, and stated that the Committee will try to complete the bill after Congress reconvenes next January.

"This favorable Committee vote in July is the high water-mark in the long struggle to obtain tax deferment equality for the self employed and the pensionless employed.

"During the hearings on the Jenkins-Keogh bills on June 27 and 28, eight Congressmen who are not members of the House Ways and Means Committee testified in favor of the principle of these bills. (The testimony presented by the American Bar Association, American Dental Association, American Farm Bureau Federation, American Medical Association, and the statement and analytical report on the bills by the Treasury Department have been published in Bulletin 100 by and may be obtained from the AMA Bureau of Medical Economic Research.)

"The Secretary of the Treasury three times granted that the federal revenue laws are unfair to the self-employed and strongly urged that the bills, if approved, exclude the pensionless employed in order to reduce the revenue loss. The bill was so amended.

"Other changes were the reduction in the maximum amounts that could be excluded annually from $7,500 to $5,000 and in the lifetime maximum from $150,000 to $100,000.

"Other amendments would permit combinations of an annuity contract with a life insurance policy, with tax deferment only on the annuity part of the premium, and the use of a bank as a custodian of retirement funds.

"These four amendments were made before the 16 to 8 vote was taken. The failure of the Ways and Means Committee to report out the 'bobtail' tax bill before adjournment in August means that the amended Jenkins-Keogh bills cannot be acted upon in the House until the Committee approves the completed 'bobtail' bill after Congress reconvenes next January. The possibility that the Committee will not complete the 'bobtail' bill during the next session, or will report it out with the amended Jenkins-Keogh bills omitted, now seems remote.

"The progress made during this first session of the 84th Congress, and the strong statements made by many members of Congress during the hearings of June 27 and 28, should encourage physicians, other self-employed persons, and other interested individuals to inform their congressmen of their views while they are at home this fall. The prospects for the enactment of these bipartisan bills to establish a voluntary pension system for the self-employed are definitely on the upgrade. Perhaps the time is approaching when it will no longer be an economic sin to be self employed."

* * *

THE SPEAKER: The report of our delegates, as given by Dr. Hyland, will be referred to the Reference Committee on Officers' Reports.

VI. REPORT OF WOMAN'S AUXILIARY TO MSMS

By Mrs. A. F. Milford, President

No written report was presented to the House of Delegates. Mrs. Milford's "off-the-cuff" talk was a general review of the activities of the Woman's Auxiliary to the Michigan State Medical Society during the past year.

THE SPEAKER: This report will be referred to the Reference Committee on Officers' Reports.

ATAE Grand Award Won by MSMS

Before we call for the next item on the agenda, I would like to remind you of what Dr. Bromme told you about the award given the Michigan State Medical Society by the American Trade Association Executives for the project of promoting medical assistants.

I would like to show it to you. It is a very lovely thing. It will look nice in 606 Townsend. It is signed by A. Boyd Campbell, President of the Chamber of Commerce of the United States, Henry G. Riter, President of the National Association of Manufacturers, Richard L. Rozelka, Dean of the School of Business Administration, University of Minnesota, and Dr. Russell A. Stevenson, Dean of Business Administration, University of Michigan.

VII. REPORT OF MICHIGAN STATE MEDICAL ASSISTANTS SOCIETY

By Mrs. Charlotte Ash, President

The medical assistants are happy to be at your State meeting, and we have planned a very full and interesting program.

We know that the Michigan State Medical Society has been a leader in progressive steps in the medical field, and we hope that bringing in our group of medical assistants is another one of those steps in which Michigan medicine is leading.

There is a total of sixteen component societies in Michigan, six having been formed this past year, with a total membership of 695. On the State level we have participated in the panel discussion on medical health education and the Secretaries' Conference. On the county level, meetings are held monthly, with programs consisting of lectures, demonstrations in office technique, meeting the public, and various phases of medical services in which we take part.

Several societies have sponsored adult educational courses and have Placement Bureaus in aiding the doctors to find competent help. We feel that this has made our work of more value to you, and we hope it will help us bring back to the medical profession some of the esteem which the family doctor of yesterday enjoyed. In turn, we hope that you will continue to make it possible for the girls who work in your offices to take part in this program. Allow them the time necessary to carry on the work, and encourage their participation. We feel it will pay dividends to you, to us, and to the public we serve.

We want to thank you for the "You Are Eligible" pamphlets you had printed for us. They are very attractive and very much in demand.

Our meeting is being held on Wednesday and Thursday of this week at the Manger Rowe Hotel. We would be honored to have you attend any of our lectures that would be of interest to you.

Thank you for including us in your program.

* * *

THE SPEAKER: This report will be referred to the Reference Committee on Officers' Reports.

VIII. SELECTION OF MICHIGAN'S FOREMOST FAMILY PHYSICIAN

(Vice Speaker K. H. Johnson, M.D., assumed the Chair.)

As you know, it is the privilege of this group to select Michigan's Foremost Family Physician for an award. The names are presented by whichever county medical society wishes to submit a name. The County Society's Committee of The Council goes over the names and presents them to The Council. The Council then narrows the field down to three, and Dr. Bromme presented to you the names of the three men who will be voted upon at this time.

They are: John W. Rigterink, M.D., Grand Rapids, presented by Kent County. Paul Van Riper, M.D., Champion, presented by Marquette-Alger County. Walter H. Winchester, M.D., Flint, presented by Genesee County. Our Secretary will now present biographical data on these three nominees which will help you judge.

(Subsequently the Chair announced that Walter H. Winchester, M.D., Flint, had been chosen for this honor.)

We will reconvene promptly at 2 p.m.

(The meeting recessed at 12:15 p.m.)

MONDAY AFTERNOON SESSION

September 26, 1955

The meeting reconvened at 2:10 p.m., Dr. J. E. Livesay, M.D., Speaker of the House, presiding.

IX. RESOLUTIONS AND MOTIONS

IX—1. RESOLUTION RE PERIODIC HEALTH EXAMINATIONS BY HOSPITAL STAFFS

O. B. MCGILLICUDDY, M.D. (Ingham): This is a resolution dealing with the resolution that was referred last year by the House of Delegates to The Council. The Council appointed a study committee. The study committee's report will be made available to the Reference Committee.

"Whereas, certain organizations demand periodic examination of certain of their members, and

"Whereas, certain hospital staffs have been organized to conduct these examinations, and

"Whereas, there arises the question of interference with the patient-physician relationship which represents the basic philosophy of the best method of medical practice, and

"Whereas, such examinations take hospital beds away from sick people and may make it necessary to build hospitals for examination purposes rather than for care of the sick; therefore, be it

"RESOLVED: That county medical societies and hospitals in various communities in the State should be requested to send in reports on how the problem has been handled in their localities; and be it further

"RESOLVED: That each participating physician, who is not regularly employed by the hospital, render his own bill and make sure that it is clearly identified in any complete bill rendered; and be it further

"RESOLVED: That the major part of these examinations be conducted in the doctors' offices or outpatient departments in order to conserve beds for the sick; and be it further

"RESOLVED: That the hospital medical staffs choose the physicians for these examinations by rotation from all those qualified to conduct such examinations; and be it further

"RESOLVED: That while hospital medical staffs may agree on a local solution to this problem, each hospital staff must not lose sight of the physician-patient relationship, which is primarily the concern of the county medical society as a unit."

THE SPEAKER: The Chair will refer this resolution to the Reference Committee on Legislation and Public Relations.

IX—2. RESOLUTION RE APPRECIATION OF PUBLIC SERVICE RENDERED BY R. L. NOVY, M. D.

M. A. DARLING, M.D. (Wayne):

"Whereas, Robert L. Novy, M.D., during his thirteen years as President of the Michigan Medical Service, has rendered inestimable service to that organization, to the Michigan State Medical Society and to the physicians and people of the State of Michigan, and

"Whereas, this has been a difficult period of reorganization followed by remarkable expansion, and

"Whereas, he has rendered this service entirely without compensation; therefore, be it

"RESOLVED: That the Michigan State Medical Society express its great appreciation of these valued services by having this resolution suitably inscribed on a scroll and presented to Dr. Novy."

THE SPEAKER: This resolution will be referred to the Reference Committee on Resolutions.

C. W. COLWELL, M.D. (Genesee): Mr. Speaker, with the permission of the gentleman introducing the previous resolution, I would like to add the following addendum from Genesee County:

"Whereas, we have in our County the second largest number of subscribers to Blue Cross-Blue Shield of any county in the State, and we therefore realize the immense importance of the advances made under Dr. Novy's able guidance. Although differing in many concepts, we nevertheless have always been in favor of prepaid medical insurance. We in Genesee County are very happy to have the opportunity to honor this gentleman, and respect him for the most excellent job that he has performed."

THE SPEAKER: The resolution and the addendum will be referred to the Reference Committee on Resolutions.

IX—3. RESOLUTION RE THE BEAUMONT MEMORIAL PRESERVATION

A. B. GWINN, M.D.:

"Whereas, in Senate Concurrent Resolution No. 34, adopted by both Houses of the Legislature on March 17, 1955, the Michigan Legislature expressed its interest in the Beaumont Memorial on Mackinac Island and recognized the contribution of numerous members of the Michigan State Medical Society in restoring this historic site; and,

"Whereas, the medical doctors of the Michigan State Medical Society sincerely appreciate this compliment, and share with the Legislature and citizens of Michigan a great pride in Mackinac Island State Park as one of our nation's most historic spots, and

"Whereas, the Mackinac Island State Park is a tourist mecca that, with proper encouragement, will become increasingly popular as an historic area of interest and inspiration to all who visit it, and

"Whereas, the Michigan State Medical Society, in organizing a campaign for private voluntary contribu-

tions from its members to finance restoration of the building which is now Beaumont Memorial, has initiated an idea which could greatly benefit the future historic development of the Mackinac Island State Park by the utilization of funds from sources other than the appropriation of public moneys, and

"Whereas, the members of the Michigan State Medical Society maintain a continuing interest in the Beaumont Memorial as their own project in the total development of the Mackinac Island State Park, this being evidenced by the further provision of interior furnishings and special historical exhibits for the Beaumont Memorial after its conveyance to the people of Michigan in dedication ceremonies on July 17, 1954; therefore, be it

"RESOLVED: That the House of Delegates of the Michigan State Medical Society express its deep appreciation to the Michigan Legislature for its complimentary action in adopting Senate Concurrent Resolution No. 34; and be it further

"RESOLVED: That in the interest of preservation of the Beaumont Memorial and its future expansion as an historic shrine, the Michigan State Medical Society respectfully urges the Michigan Legislature to (a) continue its interest in the Beaumont Memorial, and (b) in order to better meet this purpose, to authorize an Advisory Committee of the Michigan State Medical Society to confer each year (or more often, as necessary) with the Mackinac Island State Park Commission as an advisory group on the maintenance and improvement of the Beaumont Memorial; and be it further

"RESOLVED: That the Michigan State Medical Society respectfully and urgently suggests that the Michigan Legislature at its earliest convenience study and put into action a program which would encourage other professional groups, trade associations, and civic and historical organizations to adopt projects supported by voluntary financial contributions for restoring and renovating the many other historical sites in the Mackinac Island State Park as a reminder of the remarkable part Michigan has played in many fields of American scientific, cultural and political progress."

THE SPEAKER: This resolution will be referred to the Reference Committee on Legislation and Public Relations.

IX—4. RESOLUTION RE JOINT COMMISSION ON ACCREDITATION OF HOSPITALS

J. M. WELLMAN, M.D. (Ingham):

"RESOLVED: That the House of Delegates of the Michigan State Medical Society instruct its delegates to the House of Delegates of the American Medical Association to ask for a review of the actions and recommendations of the Joint Commission on Accreditation of Hospitals by a committee the majority of which shall be selected from doctors of medicine actively engaged in private practice."

THE SPEAKER: This will be referred to the Reference Committee on Reports of The Council which already has this subject on its agenda.

IX—5. RESOLUTION RE THE SCREENING OF FOREIGN INTERNS

A. E. SCHILLER, M.D. (Wayne):

"Whereas, this problem concerns hospitals, educational programs, the physicians and the people in Michigan, and

"Whereas, it has long been an established fact that there are almost double the number of approved internships in this country as there are American graduates to fill the available places, and

"Whereas, the use of foreign graduates has fulfilled this need as well as encouraged the 'Good Neighbor' policy established by the State Department, and

"Whereas, a list of acceptable foreign medical schools has been prepared by the Council on Medical Education and Hospitals of the American Medical Association and the Executive Council of the Association of American Medical Colleges, and

"Whereas, in Michigan the State Board of Registration, its then Secretary, has ruled that all foreign graduates must be screened by it prior to appointment to internships, and

Whereas, although the hospitals wish to co-operate with the State Board of Registration in its efforts to maintain a strict supervision of all interns, it is their feeling that the 'cease and desist' order and the screening requirements of the State Department of the federal government and the hospitals were sufficient safeguards to prevent the flooding of the State of Michigan with foreign graduates insofar as these graduates must fully comply with the laws and regulations prior to licensure, and

"Whereas, the responsibility rests squarely on the hospitals and is knowingly assumed by them, and

"Whereas, these problems were presented to the State Board of Registration and signed by representatives of both the Wayne County Medical Society and the Detroit Area Hospital Council with the approval of the governing bodies of both organizations, and no explanation or action was forthcoming; therefore, be it

"RESOLVED, That the House of Delegates of the Michigan State Medical Society strongly recommend to the State Board of Registration a resumption of the previous methods of handling and admitting foreign graduates, or a modification of the present ruling which will permit a suitable time for these graduates to learn medical English before presenting themselves for examination."

THE SPEAKER: This resolution will be referred to the Reference Committee on Legislation and Public Relations.

IX—6. RESOLUTION RE APPRECIATION OF PUBLIC SERVICE OF R. L. NOVY, M.D.

D. W. THORUP, M.D. (Berrien):

"Whereas, Robert L. Novy, M.D., has served the medical profession of the State of Michigan in the capacity of President of Michigan Medical Service, and

"Whereas, this service has been rendered with intelligence, integrity and at considerable sacrifice, and

"Whereas, these services have been of inestimable value to the members of the Michigan State Medical Society and to doctors of medicine everywhere, and

"Whereas, Robert L. Novy, M.D., has submitted his resignation as President of Michigan Medical Service; therefore, be it

"RESOLVED: That the Berrien County Medical Society go on record as tendering to Robert L. Novy, M.D., their grateful appreciation of his service to the Michigan State Medical Society and to the medical profession of this country, and do formally request the adoption of this or similar resolution by the House of Delegates of the Michigan State Medical Sciety, and recommend that some suitable token of appreciation be presented to Robert L. Novy, M.D., by the Michigan State Medical Society."

THE SPEAKER: This resolution will be referred to the Reference Committee on Resolutions.

IX—7. RESOLUTION RE THE JENKINS-KEOGH BILL

J. M. MARKLEY, M.D. (Oakland):

"Whereas, physicians as a self-employed group have been discriminated against in the matter of an allowance for pension plans as a pretax offset against income tax, and

"Whereas, the Jenkins-Keogh bill now under consideration in Congress provides for a decent measure of correction of this inequity, and

"Whereas, by the merit of its being voluntary and capable of expansion to meet individual needs, the

Jenkins-Keogh bill is to be preferred over compulsory and self-vitiating social security; therefore, be it

"RESOLVED: That the Michigan State Medical Society support the Jenkins-Keogh bill; and be it further

"RESOLVED: That copies of this resolution be sent to all Congressmen and both U. S. Senators from the State of Michigan."

THE SPEAKER: I will refer this to the Reference Committee on Legislation and Public Relations.

IX—8. RESOLUTION RE MEDIC—COMMENDATION TO LOS ANGELES COUNTY MEDICAL SOCIETY

R. M. BRADLEY, M.D. (Genesee):

"Whereas, the weekly television production entitled 'The Medic' presents a realistic and dignified portrayal of recent progress in medical knowledge and techniques, enlightening millions of Americans on the role of today's doctor of medicine in modern society, and

"Whereas, 'The Medic' has cultivated public esteem for the medical profession as a whole, fostered the concept of private practice, gained favorable recognition of the philosophy of service held by the doctor of medicine, and widened appreciation for the discipline to which the ethical physician voluntarily complies, and

"Whereas, production of 'The Medic' would have been impossible without the co-operation and guidance of the Los Angeles County Medical Society, Los Angeles, California, and the many hours of technical assistance which individual members of that Society contribute week by week; therefore, be it

"RESOLVED: That the Michigan State Medical Society warmly commend the Los Angeles County Medical Society for outstanding service to both the American public and the medical profession through its co-sponsorship of 'The Medic,' and sincerely expresses the deepest gratitude of their Michigan colleagues to every member of the Los Angeles Society who has given his time and talent toward the success of that production."

THE SPEAKER: This will be referred to the Reference Committee on Miscellaneous Business.

IX—9. RESOLUTION RE MEDICAL REPRESENTATION ON VOICE OF AMERICA

W. W. BABCOCK, M.D. (Wayne):

"Whereas, health conditions in all other countries of the world affect the health of the people of Michigan, and

"Whereas, the practice of medicine in Michigan is influenced by methods of practice in nations other than the United States, and

"Whereas, the Voice of America can be a powerful influence to spread to all nations the health knowledge of American medicine and the advantages to patients and professions of the system of medical practice current in the United States today, and

"Whereas, expression of this health and medical information can be made best by representatives selected from the American medical profession; therefore, be it

"RESOLVED: That the Michigan State Medical Society House of Delegates request the Michigan delegation to introduce and support in the next session of the American Medical Association House of Delegates a resolution calling for the American Medical Association to request the Voice of America to include upon its regular broadcasts the person and message of M.D. representatives of the American medical profession; and further be it

"RESOLVED: That the Board of Trustees of the American Medical Association be respectfully requested to defray the expenses and salaries involved in supplying personnel for the above purpose to the Voice of America."

THE SPEAKER: This will be referred to the Reference Committee on Resolutions.

IX—10. RESOLUTION RE PROPAGANDA ON SALK VACCINE

W. L. SHERMAN, M.D. (Wayne):

"Whereas, physicians who are responsible for all medical treatment have established standard procedures for the testing and release of all new drugs, and

"Whereas, one of the basic tenets for administration of treatment is the physician-patient relation, and

"Whereas, the physicians in Wayne County and the Detroit Department of Health have effectively applied this principle for twenty-eight years to preventive as well as curative medicine, and

"Whereas, the National Foundation for Infantile Paralysis, Inc., a lay organization, released the Salk polio vaccine, a medical treatment, to the public on a promotional basis and arbitrarily ruled that the polio vaccine could only be given in group clinics; therefore, be it

"RESOLVED: That the Michigan State Medical Society express its objections to the National Polio Foundation for its violation of basic medical procedures and principles; and be it further

"RESOLVED: That a special committee be appointed to determine the positions of physicians should such encroachments by a lay organization occur in the future."

THE SPEAKER: I will refer that to the Reference Committee on Hygiene and Public Health.

IX—11. RESOLUTION RE COUNTY SOCIETY MEMBERSHIP

N. F. GEHRINGER, M.D. (Oakland):

"Whereas, the Bylaws of the Michigan State Medical Society do not definitely state that a doctor of medicine is expected to become a member of the component society of the county in which his office is located, and

"Whereas, Chapter II, Section 3 of Bylaws of the Michigan State Medical Society, which provides for an exception, implies that a doctor of medicine is expected to hold his membership in the component society of the county in which his office is located, and

"Whereas, Chapter II, Section 3 of the Bylaws of the Michigan State Medical Society states that each component county society shall have general direction of the affairs of the profession in the county and shall exert its influence for bettering the scientific, moral and material conditions of every doctor of medicine in the county and

"Whereas, a component county society is unable to exert its influence to the fullest degree for the betterment of the practice of medicine in the county unless all eligible doctors of medicine practicing in the county are members, and

"Whereas, Chapter II, Section 3 of the Bylaws of the Michigan State Medical Society urges each component county society to increase its membership until it embraces every eligible doctor of medicine in the county, and

"Whereas, Chapter IV of the Bylaws of the Michigan State Medical Society provides for the transfer of membership from one component county society to another upon the change of location; therefore, be it

"RESOLVED: That Chapter II, Section 2 of the Bylaws of the Michigan State Medical Society be changed to read as follows: 'A doctor of medicine must hold his active membership in the component society of the county in which his office is located.'"

THE SPEAKER: This will be referred to the Reference Committee on Constitution and Bylaws.

IX—12. RESOLUTION RE HOSPITAL PRIVILEGES

E. H. FENTON, M.D. (Wayne):

"Whereas, sufficient interest was manifested by the delegates at the last meeting of the American Medical Association in the state of tension caused by the disproportionate financial reward for surgical as opposed

to diagnostic and medical procedures, with its resultant encouragement of unethical procedures and unfavorable publicity, to demand that the full report of the Special Committee on Medical Practice be made available to them, and

"Whereas, our own delegates to the AMA can only act intelligently if they are made aware of our own feelings in the matter; be it therefore

"RESOLVED: That this body go on record as strongly urging that if the following program is not already satisfactorily put into operation, it be initiated immediately:

"1—That a subcommittee of the Medical Practice Committee be created to begin work on a relative value scale for the whole of the practice of medicine and surgery. Such a subcommittee could begin with the relative value scale produced by the thoracic surgeons (the only group which, as far as we can determine, has produced such a scale), and develop and broaden this approach, calling in as consultants representatives of general practice and all the specialties, as well as using the service of such nonmedical advisers as are needed.

"2—That a program of public education on the value of diagnostic and medical work be fostered by the AMA Public Relations Department to increase public appreciation of non-surgical work.

"3—That the AMA communicate to the specialty boards the findings of this survey, encouraging the boards to reappraise the value of their regulations restrictive on the practice of those seeking or holding board certificates during their early years of practice (with consideration of the removal of the restrictions in keeping with good medical practice). (Amended by Reference Committee. See Page 1512).

"4—And that the AMA continue to use its full influence to discourage the restrictions by hospitals against general practitioners as a group, regardless of their qualifications as individuals." (Amended by Reference Committee. See Page 1512).

THE SPEAKER: This will be referred to the Reference Committee on Resolutions.

IX—13. RESOLUTION RE FLUORIDATION OF WATER

E. G. M. KRIEG, M.D. (Wayne):

"Whereas, the addition of fluoride compounds to the general water supply of communities leaves no freedom of choice to those who do not wish such treatment, and

"Whereas, the problem of tooth decay is best attended under the personal guidance of one's own dentist, and

"Whereas, this specific treatment can be easily administered to the individual by means of a prescription or treatment by his dentist; therefore, be it

"RESOLVED: That the House of Delegates of the Michigan State Medical Society recommend that the addition of fluoride compounds to the general water supply be discontinued in this State; and furthermore be it

"RESOLVED: That copies of this resolution be sent to His Honor, the Governor, the presidents of the state and county dental health societies, and the Commissioner of Public Health of the State of Michigan; and furthermore be it

"RESOLVED: That the intent of this resolution be called to the attention of our delegates to the American Medical Association, instructing them to present our feelings in this matter at their next meeting."

THE SPEAKER: I will refer that resolution to the Reference Committee on Hygiene and Public Health.

IX—14. RESOLUTION RE HOSPITAL FACILITIES FOR MENTALLY ILL

I. C. BERLIEN, M.D. (Wayne):

"Whereas, Michigan's facilities for the care of the mentally defectives are overtaxed and overcrowded, and long delays are being encountered in gaining admission to our State institutions, to the great detriment of the mental hygiene of the families involved, and

"Whereas, at the present time there are about 1,200 committed patients of young age and 'crib status' who are in urgent need of immediate medical care in hospital setting, and

"Whereas, there is also a great and ever-growing number of additional mentally defectives who likewise require training and medical care, and who are a hazard to the mental health (adjustment) of their immediate relatives; therefore, be it

"RESOLVED: That the Michigan State Medical Society recommend immediate definitive action by the Governor and Legislature of the State of Michigan to correct and prevent the recurrence of this deplorable condition." (See Page 1509 for balance of resolution, amendment.)

THE SPEAKER: That is referred to the Reference Committee on Legislation and Public Relations.

IX—15. RESOLUTION RE INCREASING PERSONNEL FOR THE MENTALLY ILL

R. W. TEED, M.D. (Washtenaw):

"Whereas, the State of Michigan continues to face an increasing number of problems in the field of mental health and

"Whereas, in past consideration of these problems many leaders in the State government have placed the greatest emphasis on construction and expansion of facilities to house the mentally retarded and the mentally ill, subordinating the fact that such facilities will be of limited value in meeting Michigan's mental health needs unless adequate personnel is available to staff these institutions, and

"Whereas, the Michigan State Medical Society believes—and has so recommended for the past several years—that any reasonable approach to Michigan's mental health problems must attach primary importance to programs for the training and recruitment of personnel skilled in the care, treatment and/or rehabilitation of the mentally ill and the mentally handicapped; therefore, be it

"RESOLVED: That the House of Delegates of the Michigan State Medical Society respectfully calls upon the Michigan legislature to make State funds available to provide scholarships for doctors of medicine and nurses wishing to complete advanced study in psychiatric treatment and related fields, and for training other persons for careers associated with mental health; and be it further

"RESOLVED: That the qualifications for all such scholarships contain an agreement obligating the recipient to serve in Michigan's mental health system for a specified period commensurate with the value of the scholarship."

THE SPEAKER: That will be referred to the Reference Committee on Legislation and Public Relations.

IX—16. RESOLUTION RE OA & SI PROGRAM

R. W. TEED, M.D. (Washtenaw):

"Whereas, the membership of the Washtenaw County Medical Society believes that inclusion of physicians in the Old Age and Survivors Insurance program would bring financial advantages to these physicians and protection to their dependents, and

"Whereas, the House of Delegates of the American Medical Association has declared itself in opposition to the compulsory inclusion of physicians in the social security program, and

"Whereas, the prevalent opinion is that the government would not consider it feasible to include physicians on a voluntary basis; therefore, be it

"RESOLVED: That the Washtenaw County Medical Society go on record as favoring the inclusion of physicians under the Old Age and Survivors Insurance program; and be it further

"RESOLVED: That the Washtenaw Medical Society instruct its delegates to the House of Delegates of the Michigan State Medical Society to take action in the House leading to favorable consideration by the House of Delegates in this matter, and to the further instruction of its delegates to the House of Delegates of the American Medical Association; and be it further

"RESOLVED: That a copy of this resolution be forwarded to The Council of the Michigan State Medical Society and to the Board of Trustees of the American Medical Association, with the request that appropriate action with respect to Congress be taken; and be it further

"RESOLVED: That a copy of this resolution be forwarded to every county society in the State of Michigan, urging them to take similar action; and be it further

"RESOLVED: That the Michigan State Medical Society instruct its delegates to the House of Delegates of the American Medical Association to initiate action to poll the membership of the American Medical Association for an expression of their stand on social security for physicians."

THE SPEAKER: This will be referred to the Reference Committee on Resolutions.

IX—17. RESOLUTION RE FEE FOR EXAMINATION OF MENTALLY ILL

D. A. BOWMAN, M.D. (Bay-Arenac-Iosco):

"Whereas, the fee established by legislative enactment for the examination of mentally ill has not been increased in over twenty years, and

"Whereas, this makes it difficult for the Probate Court to obtain such examinations; therefore, be it

"RESOLVED: That the MSMS take steps to bring an increase in this fee."

THE SPEAKER: We will refer this to the Reference Committee on Legislation and Public Relations.

IX—18.—RESOLUTION RE POLLUTION OF INLAND WATERWAYS

H. F. FALLS, M.D. (Washtenaw):

"Whereas, the State Department of Conservation has, by purchase of waterfront land, opened up inland waterways and lakes and thereby made these waterways accessible to our citizens, including owners of large boats, and

"Whereas, pollution of Michigan inland waterways may therefore occur by insanitary disposal of human and other wastes; therefore, be it

"RESOLVED: That the Michigan State Medical Society urge the State Legislature to investigate this situation and take proper steps to eliminate any problem which may be disclosed."

THE SPEAKER: This is referred to the Reference Committee on Hygiene and Public Health.

IX—19. RESOLUTION RE POSSIBLE OPTOMETRIC LEGISLATION

H. F. FALLS, M.D. (Washtenaw):

"Whereas, an organized effort is being made to curtail the rights of the licensed physician, to wit, the attempt by the American Optometric Association to restrict visual care exclusively to the field of optometry, and

"Whereas, this same restriction is intended to apply to office aides, technical assistants and orthoptic technicians who aid the licensed physician in his office, and

"Whereas, such limitation would eventually result in inadequate service to the patient by the licensed physician, and

"Whereas, such unprecedented restriction of medical care by a lay group is a threat to all physicians; therefore, be it

"RESOLVED: That the House of Delegates of the Michigan State Medical Society record their disapproval of such potential legislation in the State of Michigan; and be it further

"RESOLVED: That The Council of the Michigan State Medical Society be alerted to possible similar attempts by organized optometry, in order that a close perusal be made of all projected legislation; and be it further

"RESOLVED: That vigorous measures be authorized for informing the members of the State Legislature as to the intent of such legislation, in order that the rights of the patient to complete care and examination by the licensed physician will not be jeopardized; and be it further

"RESOLVED: That the Board of Trustees of the American Medical Association be informed immediately of action taken on this resolution."

THE SPEAKER: That will go to the Reference Committee on Resolutions.

IX—20. RESOLUTION RE ELECTION OF EXECUTIVE COMMITTEE OF THE COUNCIL

F. L. TROOST, M.D. (Ingham):

"Whereas, the House of Delegates of the Michigan State Medical Society is the policy-making and legislative body of the Society, and

"Whereas, it is recognized that The Council and the Executive Committee of The Council must act for the House of Delegates between sessions of the House of Delegates, and

"Whereas, the Executive Committee of The Council is composed of eleven members, only four of whom are directly elected by the House of Delegates, namely, the President, the President-elect, the Speaker and the Vice Speaker, and

"Whereas, the House of Delegates, being the policy-making body of the Society, should have the major voice in the selection of the Executive Committee of The Council; therefore, be it

"RESOLVED: That the Bylaws of the Michigan State Medical Society be amended as follows:

"'At its annual session the House of Delegates shall elect from The Council five members to serve on the Executive Committee of The Council, the term of office being one year. From these five electees The Council shall choose a Chairman, a Vice Chairman, the Chairman of the Finance Committee, the Chairman of the County Societies Committee, and the Chairman of the Publication Committee'; and be it further

"RESOLVED: That Chapter VIII, Section 10(h) be added to the Bylaws to provide for the election of five Councilors to the Executive Committee of The Council by the House of Delegates; and be it further

"RESOLVED: That Chapter IX, Section 1 of the Bylaws be amended to provide that the Chairman of The Council, the Vice Chairman of The Council, the Chairman of the Finance Committee, the Chairman of the County Societies Committee, and the Chairman of the Publication Committee be elected by The Council from the five members of the Executive Committee of The Council elected by the House of Delegates."

THE SPEAKER: This will be referred to the Reference Committee on Constitution and Bylaws.

IX—21. RESOLUTION RE STUDY OF SURGICAL FEES (MMS)

H. W. HARRIS, M.D. (Ingham):

"Whereas, the Michigan Medical Service is the creation of the Michigan State Medical Society and of the physicians of Michigan, and

"Whereas, its continued growth and function requires, and indeed deserves, the full support and co-operation of all the physicians in the State, and

"Whereas, it is now proposed that coverage be expanded to a still higher income group of the people of the State of Michigan, and

"Whereas, the surgical fee schedule presently estab-

lished by the Michigan Medical Service is not realistic in many respects, and

"Whereas, this fee schedule is especially low for many operations usually done by the physicians in the so-called specialties groups, and

"Whereas, the fee in these fields is often not commensurate with the skill, time and effort required, as compared with other surgery of a more general, or frequent, or more publicized nature, and

"Whereas, this is particularly true in the operations not listed in the printed fee schedule; therefore, be it

"RESOLVED: That a committee, composed of a representative group of physicians of Michigan, including persons from the so-called surgical specialties, be appointed and directed to study the entire surgical fee schedule, with a view to correction of the above-mentioned, and any other inequities found in such study; and that this committee be directed to report its findings and recommendations to Dr. Hull's Committee on the Study of the Fee Schedules of the Michigan Medical Service, at a time to be determined by the Chairman of that Committee." (Amended by Reference Committee. See Page 1516.)

THE SPEAKER: This will be referred to the Reference Committee on Medical Service and Prepayment Insurance.

IX—22. RESOLUTION RE BLUE SHIELD REPORTING IN MEDIATION CASES TO COUNTY MEDICAL SOCIETIES

R. F. FENTON, M.D. (Wayne):

"Whereas, the county and state medical societies are charged with the responsibility of maintaining a high standard of integrity and ethics within our profession, and,

"Whereas, it is the moral duty of every member to report obvious violations of this Code, and

"Whereas, the Blue Shield organization has at the present time no adequate liaison with the various county medical societies in such matters, and

"Whereas, problems involving integrity are bound to arise between the Blue Shield organization and individual doctors of medicine; therefore, be it (See Page 1516)

"RESOLVED: That the Blue Shield organization be encouraged to report cases in which moral principles seem to be involved, to the physician's county medical society for investigation through its ethics or mediation committees. This resolution is not to be interpreted as precluding the right of the Advisory Committee of Michigan Medical Service to call before it individual doctors when it deems such advisable."

THE SPEAKER: This will be referred to the Reference Committee on Medical Service and Prepayment Insurance.

IX—23. RESOLUTION RE CONTRIBUTIONS TO BEAUMONT MEMORIAL

R. F. FENTON, M.D. (Wayne):

"Whereas, the Beaumont Memorial restoration at Mackinac Island is a monument which will stand for generations as a symbol of pioneering in medical progress, and

"Whereas, every doctor of medicine can be justly proud of this emblem of advancing medical knowledge and of those members who have made it possible, and

"Whereas, the public relations value of this restoration has been and will continue to be extensive, and

"Whereas, the individual subsidy by doctors of medicine rather than by Council action will make every member more aware and a part of this worthy project; be it therefore

"RESOLVED: That the House of Delegates of the Michigan State Medical Society recommend to The Council that the membership-at-large be given one more year of opportunity in which to contribute and at the termination of this time the deficit be met by use of public relations funds of the Michigan State Medical Society." (Reference Committee deleted final clause. See Page 1513.)

THE SPEAKER: This will be referred to the Reference Committee on Resolutions.

IX—24. RESOLUTION RE CREATION OF OCCUPATIONAL HEALTH SECTION

O. J. JOHNSON, M.D. (Bay-Arenac-Iosco):

"Whereas, Michigan is a highly industrialized State, and

"Whereas, there is a continuing need for closer relationship between physicians and industry and the development of preventive medical programs in small plants, and

"Whereas, the Committee on Industrial Health of the Michigan State Medical Society has recommended the creation of a Section on Occupational Health in the Michigan State Medical Society as an additional means of bringing information to its members; therefore, be it

"RESOLVED: That a Section on Occupational Health be created in the Michigan State Medical Society."

THE SPEAKER: This is referred to the Reference Committee on Miscellaneous Business.

IX—25. RESOLUTION RE DRIVER TRAINING PROGRAM

J. R. RODGER, M.D. (Northern Michigan):

"Whereas, at the forthcoming special session of the Legislature of Michigan the matter of State subsidy to schools for student driver training will be seriously considered, and

"Whereas, the universal adoption of an adequate driver training program in Michigan's schools within ten years promises at least a 10 per cent reduction in highway fatalities, or the saving of approximately 200 lives a year; therefore, be it

"RESOLVED: That this House of Delegates go on record as strongly endorsing the principle of State subsidy of student driver training; and that each delegate here, and so far as possible each member of the Michigan State Medical Society as an individual citizen, bring this matter to the attention of civic groups in his community as well as to his State senator and representative."

THE SPEAKER: This will be referred to the Reference Committee on Legislation and Public Relations.

IX—26. RESOLUTION RE AMA STUDY COMMITTEE ON HIGHWAY ACCIDENTS

J. R. RODGER, M.D. (Northern Michigan): This is a resolution requesting the Michigan delegation to the American Medical Association to introduce at the forthcoming Boston meeting of the AMA House of Delegates a resolution requesting the Board of Trustees of the American Medical Association to appoint a special committee to study the prevention of highway accidents.

THE SPEAKER: This will be referred to the Reference Committee on Resolutions.

IX—27. RESOLUTION RE EXPANSION OF AMA ADMINISTRATIVE FACILITIES

R. H. PINO, M.D. (Wayne):

"Whereas, the American Medical Association is an organization for which its membership is responsible, and

"Whereas, there is evidence that our responsibilities and the complications of procedure are increasing out of proportion to the increase of aid to our central personnel, and therefore to our delegates and officers, and

"Whereas, this is neither fair nor safe to our central organization and to our officers and delegates whose

combined accomplishments have been outstanding, nor therefore to our membership and the public, and

"Whereas, serious evidences of this are available, and

"Whereas, no occupation is more basically grounded in the method of comprehensive analysis and diagnosis before arriving at conclusions and procedures than the medical profession which can therefore apply increasingly practical methods of leadership, and

"Whereas, the AMA is in need not of reorganization but of increased aid in central management to facilitate diagnostic methods in our problems; therefore, be it

"RESOLVED: That the Michigan delegates to the AMA be instructed to introduce at the next meeting of the House of Delegates a resolution calling for the revision of the Constitution and Bylaws, if necessary, for the creation of the position of Executive Vice President of the American Medical Association; and be it further

"RESOLVED: That the Executive Vice President formulate an investigative staff on the order of a diagnostic clinic for a factual study and processing of major problems; such staff to be made up of the Secretary and General Manager and the Assistant Secretary, together with the current heads of the Departments of Economics, Education, Science, Distribution, Law and Government, Public Relations, and Publications; and that these be supplemented with such aid as may be essential to the purpose of adequate study, the health needs of the public, and the needs of the health professions warrant."

THE SPEAKER: This will be referred to the Reference Committee on Resolutions.

IX—28. RESOLUTION RE NON-SCIENTIFIC SESSION AT AMA CONVENTION

R. H. PINO, M.D.: This resolution has to do with stimulating an increased study on the part of the specialties concerning their problems, other than scientific, of the distribution of specialty medical care:

"Whereas, many problems other than scientific beset the various Sections as represented in the Scientific Assembly of the American Medical Association, and

"Whereas, most of the nonscientific problems are basic to the distribution of all the medical sciences, and

"Whereas, the heavy agenda of the meetings of the House of Delegates, including that of the reference committees, preclude adequate time for deliberation as compared to the vital importance of much of the material that requires legislative action by the House of Delegates, and

"Whereas, the time allotted to other than scientific problems is practically nil in the various specialty Sections at annual AMA meetings, as is true of state and local specialty meetings throughout the United States, and

"Whereas, this condition dangerously slows up the accumulation of information vital to the medical profession and the House of Delegates in the discharge of its legislative responsibilities; therefore, be it

"RESOLVED: That the Michigan delegates to the AMA, through the AMA House, urge upon the Executive Committee of the Scientific Assembly and of the Section committees the need for time being given for a nonscientific session at national meetings, conducted on subjects of distribution, education, legislation, etc., using the same techniques of procedure as in the scientific sessions, and that important findings and conclusions be turned over to the House of Delegates and others concerned for their deliberation."

THE SPEAKER: We will refer this to the Reference Committee on Resolutions.

IX—29. RESOLUTION RE APPRECIATION OF SERVICE RENDERED BY L. A. DROLETT, M.D.

C. L. WESTON, M.D. (Shiawassee):

"Whereas, an ever-increasing amount of legislation of great significance to the health of the people of Michigan and to the practice of medicine has been and is being considered by the State Legislature of Michigan and by the national Congress, and

"Whereas, the review of these legislative proposals by the Michigan State Medical Society, through its Committee on Legislation, has served the people of this State by significantly improving health facilities and by avoiding tragic errors that would endanger their medical care, and

"Whereas, the Committee on Legislation of the Michigan State Medical Society has been headed for ten years by L. A. Drolett, M.D., of Lansing, who has carried a major responsibility for our success in health legislation efforts; therefore, it be

"RESOLVED: That the House of Delegates of the Michigan State Medical Society does hereby express the thanks and appreciation of the doctors of medicine of Michigan and their patients to L. A. Drolett, M.D., of Lansing, for his unstinting and devoted service, and congratulates him upon the splendid record he and his Committee have made. The House of Delegates sends him its true wishes for continued success."

THE SPEAKER: This will be referred to the Reference Committee on Miscellaneous Business.

The Vice Speaker will take the Chair.

(K. H. Johnson, M.D., resumed the Chair.)

X. REPORTS OF STANDING COMMITTEES

X—1. COMMITTEE ON POSTGRADUATE MEDICAL EDUCATION

CHAIRMAN JOHNSON:

This report appears on page 79. Is there an additional report?

These reports will all be referred to the Reference Committee on Standing Committees. I won't say that each time.

X—2. COMMITTEE ON PREVENTIVE MEDICINE AND SUBCOMMITTEES

Is there a further report?

Committee on Rheumatic Fever Control.—The report appears on page 86. Is there a further report?

Committee on Cancer Control.—I do not find a report in the Handbook.

Maternal Health Committee and Subcommittees.—The report is on page 89. Is there a further report?

Venereal Disease Control Committee.—The report appears on page 90. Is there a further report?

The Tuberculosis Control Committee report appears on page 93. Is there a further report?

Industrial Health Committee, reported on page 96. Is there a further report?

Child Welfare Committee and Subcommittees.—The report appears on page 99. Is there a further report?

Iodized Salt Committee, appearing on page 100. Is there a further report?

Geriatrics Committee and Subcommittees.—The report appears on page 101. Is there a further report?

X—3. PUBLIC RELATIONS COMMITTEE AND SUBCOMMITTEES

The report begins on page 102. Is there a further report from this Committee?

X—4. ETHICS COMMITTEE

The Ethics Committee report appears on page 113. Is there a further report?

X—5. LEGISLATIVE COMMITTEE

The Legislative Committee's report appears on page 114. Is there a further report?

All of these reports will be referred to the Reference Committee on Standing Committees.

XI. REPORTS OF SPECIAL COMMITTEES

XI—1. BEAUMONT MEMORIAL COMMITTEE

The Beaumont Memorial Committee did not have a report appearing separately in the Handbook, but on page 58 there is a report from The Council concerning the Beaumont Memorial. Is there a further report from that Committee?

XI—2. SCIENTIFIC RADIO COMMITTEE

The report appears on page 119. Is there a further report from this Committee?

XI—3. ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The report appears on page 120. Is there a further report?

XI—4. ADVISORY COMMITTEE TO MICHIGAN STATE MEDICAL ASSISTANTS SOCIETY

The report appears on page 121. Is there a further report from that Committee?

XI—5. MEDIATION COMMITTEE

There is a report of the Mediation Committee on page 122. Is there a further report from this Committee?

These reports will all be referred to the Reference Committee on Special Committee Reports.

(The meeting recessed at 3:25 p.m.)

MONDAY EVENING SESSION

September 26, 1955

The meeting reconvened at 8:15 p.m., J. E. Livesay, M.D., Speaker of the House, presiding.

IX—30. RESOLUTION RE SPEEDY RECOVERY OF PRESIDENT EISENHOWER

S. E. Gould, M.D. (Wayne):

"Whereas, the President of the United States lies ill at the present moment, and

"Whereas, all Americans are concerned for his well-being; therefore, be it

"RESOLVED: That this House of Delegates of the Michigan State Medical Society, now in session, pause in its deliberations and through its Secretary express its genuine hope for the speedy and full recovery of our President."

The Speaker: This will be referred to the Reference Committee on Miscellaneous Business.

IX—31. RESOLUTION RE COMMITTEE ON DIVISION OF FEES (MMS)

O. J. Johnson, M.D.:

"Whereas, the Board of Directors of Michigan Medical Service has adopted the recommendations of the Special Committee of the Board of Directors of Michigan Medical Service, to divide the scheduled fee of Michigan Medical Service between physicians, and

"Whereas, both the Committee and Board of Directors of Michigan Medical Service have recommended that Michigan State Medical Society develop the methods of implementation of this procedure; therefore, be it

(See Page 1516)

"RESOLVED: That the President of the Michigan State Medical Society appoint a committee to formulate this procedure, and when the methods are approved by The Council of the Michigan State Medical Society they be transmitted to Michigan Medical Service, to be made effective; and be it further

"RESOLVED: That due consideration shall be given to the ethical, legal and administrative and other phases involved."

The Speaker: This resolution will be referred to the Reference Committee on Medical Service and Prepayment Insurance.

XII. REPORTS OF REFERENCE COMMITTEES

XII—1. ON OFFICERS' REPORTS

Otto Van Der Velde, M.D. (Ottawa):

XII—1 (a) *President's Address.*—The Reference Committee wishes to commend the address of Dr. Baker, first as to his suggestion of closer relationship of individual county and Michigan medical societies.

Secondly, to commend Dr. Baker's suggestion to protect the well qualified physician against the uncertainty of staff appointments in various hospitals, and we also wish to commend his reminder that all physicians should familiarize themselves more earnestly on legislation at county, State and national levels, especially that which affects medicine as a whole, and recommend approval of same.

XII—1(b) *President-elect's Address.*—The Reference Committee extends commendation and approval to President-elect Dr. William Jones for his address, and wishes to extend the hope and assurance that the House of Delegates of the Michigan State Medical Society and the various county societies will give him their full cooperation during his tenure of office.

XII—1 (c) *Report of Delegates to the AMA.*—The Reference Committee wishes to commend the delegates to the AMA on their action in maintaining the status of teaching hospitals by lowering their intern quotas.

Also, the Reference Committee commends the delegates for requesting the Board of Trustees of the AMA to submit reports of the Committee on Medical Practices in toto, rather than with their deletions. The Reference Committee recommends acceptance of the report as a whole.

XII—1 (d) *Report of Woman's Auxiliary President.*—The Reference Committee wishes to commend the Woman's Auxiliary for their activity on the part of medicine during the past year.

XII—1 (e) *Report of Michigan State Medical Assistants Society.*—The Reference Committee wishes to commend Mrs. Charlotte Ash, President of the MSMAS, for the excellent growth of the organization and its activity in serving the profession.

Mr. Speaker, I move that this report be accepted as a whole.

Otto O. Beck, M.D. (Oakland): Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—4. ON REPORTS OF SPECIAL COMMITTEES

XII—4 (a). BEAUMONT MEMORIAL COMMITTEE

E. H. Fenton, M.D. (Wayne): The report will be found on page 56 of the Handbook. The recommendation of The Council is on page 71.

Your Reference Committee acknowledges and extends appreciation to President-elect and Mrs. W. S. Jones for their generous gift to the Memorial in the form of eighty valuable books of the Beaumont era, preserved by courtesy of the Burton Historical Library, and also to the St. Louis Medical Society for a bed used by Dr. Beaumont during his lifetime, and to the Wayne County Medical Society for the loan of its painting.

Your Reference Committee feels the importance of obtaining further donations from the members for this important project, and suggests that The Council inform the members by suitable means of their opportunity still to contribute to this splendid Memorial.

Mr. Speaker, I move adoption of this portion of the report.

F. W. Baske, M.D. (Genesee): I second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—4(b). SCIENTIFIC RADIO COMMITTEE

E. H. Fenton, M.D.: Your Reference Committee realizes the immense educational value in this series of forty scientific radio programs broadcast over Station WUOM on a large variety of medical subjects. The Scientific Radio Committee is to be commended in the magnitude of this public service and upon their plans to establish a suitable program for the elementary schools.

Mr. Speaker. I move adoption of this portion of the report.

G. T. McKean, M.D. (Wayne): Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—4(c). ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

E. H. Fenton, M.D.: Your Reference Committee approves the report of this Committee, and wishes to compliment the Auxiliary on another splendid year of achievement.

Mr. Speaker, I move acceptance of this portion of the report.

R. W. Teed, M.D.: Second.

(The motion was put to a vote and was carried unanimously.)

XII—4(d). ADVISORY COMMITTEE TO THE MSMAS

E. H. Fenton, M.D.: Your Reference Committee recognizes the tremendous importance of properly trained medical assistants to the practicing physician. The work of the Advisory Committee to this group is significant in the encouragement of this type of training in other established institutions, such as the Ferris Institute, and in its aid to the Michigan State Medical Assistants Society in their membership drive.

Mr. Speaker, I move acceptance of this portion of the report.

S. E. Gould, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—4(e). MEDIATION COMMITTEE

E. H. Fenton, M.D.: Your Reference Committee has read the report of the Mediation Committee and notes with pleasure that only one case has come before this Committee for mediation, and this apparently is being settled satisfactorily.

Mr. Speaker, I move acceptance of the report of this Committee.

F. W. Baske, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

E. H. Fenton, M.D.: Mr. Speaker, I move acceptance of the report of the Reference Committee as a whole.

R. W. Teed, M.D.: Second.

(The motion was put to a vote and was carried unanimously.)

XII—5. ON CONSTITUTION AND BYLAWS

XII—5(a). RESOLUTION RE COUNTY SOCIETY MEMBERSHIP

S. L. Loupee, M.D. (Dowagiac): The first one on which we will report is the resolution from Oakland County, presented by Dr. Gehringer. The purpose of the resolution is to amend the Bylaws to require the physicians who live near county lines to register in the county society where they have their offices. That is the purpose of the resolution. The Bylaws do not require that at the present time, as you will see by turning to Section 2 of the Bylaws.

The enactment of the provisions of this resolution would create a hardship in many instances. Therefore, it is the opinion of the Reference Committee that this resolution be not approved and the Bylaws be unchanged in this respect.

Mr. Speaker, I move the adoption of this portion of the report of the Reference Committee.

F. P. Rhoades, M.D. (Wayne): Second the motion.

The Speaker: The motion is that the Bylaws be not changed.

(The motion was put to a vote and was carried, but not unanimously.)

XII—5(b). RESOLUTION RE ELECTION OF EXECUTIVE COMMITTEE OF THE COUNCIL

S. L. Loupee, M.D.: Mr. Speaker, our second resolution was introduced by the Ingham County Society, Dr. Troost being their spokesman. This would provide for a complete reorganization of The Council. It also involves such a radical change in the function of The Council, as viewed by the Reference Committee, that our report carries with it nonapproval of this resolution.

It is the opinion of the Reference Committee that the resolution as presented might seriously hamper the functions of The Council, and would add little to its efficiency. The resolution was disapproved by the Reference Committee.

I move approval of the report of the Reference Committee.

A. E. Schiller, M.D.: Second the motion.

The Speaker: The motion is to disapprove the resolution. Is there further discussion?

(The motion was put to a vote and was carried, but not unanimously.)

S. L. Loupee, M.D.: I move the adoption of the report of the Reference Committee as a whole.

J. B. Blodgett, M.D. (Wayne): Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—8. ON LEGISLATION AND PUBLIC RELATIONS

XII—8(a). RESOLUTION RE PERIODIC HEALTH EXAMINATIONS BY HOSPITALS

F. D. Johnson, M.D. (Genesee): This resolution was presented by Dr. O. B. McGillicuddy of Ingham County.

In this resolution he asks that consideration be given by hospitals to the doctor-patient relationship in the examination of those individuals presenting themselves at a hospital for periodic health examinations, and that this be put on a local basis.

I will read the "Resolves":

"RESOLVED: That the hospital medical staffs choose the physicians for these examinations by rotation from all those qualified to conduct such examinations; and be it further

"RESOLVED: That while hospital medical staffs may agree on a local solution to this problem, each hospital staff must not lose sight of the physician-patient relationship which is primarily the concern of the county medical society as a unit."

I move the adoption of this report.

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

XII—8(b). REGARDING THE JENKINS-KEOGH BILL

F. D. Johnson, M.D.:

"RESOLVED: That the Michigan State Medical Society supports the Jenkins-Keogh bill; and be it further

"RESOLVED: That copies of this resolution be sent to all Congressmen and both U. S. Senators from the State of Michigan."

I move adoption.

J. B. Blodgett, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—8(c). RESOLUTION RE SCREENING OF FOREIGN INTERNS

F. D. Johnson, M.D.:

"RESOLVED: That the House of Delegates of the Michigan State Medical Society strongly recommend to the State Board of Registration a resumption of the previous methods of handling and admitting foreign graduates, or a modification of the present ruling which will permit a suitable time for these graduates to learn medical English before presenting themselves for examination."

I move the adoption of this resolution.

R. W. Teed, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—8(d). RESOLUTION RE THE BEAUMONT MEMORIAL PRESERVATION

F. D. Johnson, M.D.:

"RESOLVED: That the House of Delegates of the Michigan State Medical Society express its deep appreciation to the Michigan Legislature for its complimentary action in adoption of Senate Concurrent Resolution No. 34; and be it further

"RESOLVED: That in the interest of preservation of the Beaumont Memorial and its future expansion as an historic shrine, the Michigan State Medical Society respectfully urges the Michigan Legislature (a) to continue its interest in the Beaumont Memorial, and (b) in order to better meet this purpose, to authorize an advisory committee of the Michigan State Medical Society to confer each year (or more often, as necessary) with the Mackinac Island State Park Commission as an advisory group on the maintenance and improvement of the Beaumont Memorial; and be it further

"RESOLVED: That the Michigan State Medical Society respectfully and urgently suggests that the Michigan Legislature, at its earliest convenience, study and put into action a program which would encourage other professional groups, trade associations, and civic and historical organizations, to adopt projects supported by voluntary financial contributions for restoring and renovating and many other historical sites in the Mackinac Island State Park as a reminder of the remarkable part Michigan has played in many fields of American scientific, cultural and political progress."

I move adoption of this portion of the report.

O. B. McGillicuddy, M.D.: I second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—8(e). RE FEE FOR EXAMINATION OF MENTALLY ILL

F. D. Johnson, M.D.:

"Whereas, the fee established by legislative enactment for the examination of mentally ill has not been increased in over twenty years, and

"Whereas, this makes it difficult for the Probate Court to obtain such examinations; therefore, be it

"RESOLVED: That the Michigan State Medical Society take steps to bring an increase in this fee."

I move adoption of this portion of the report.

S. L. Loupee, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—8(f). RESOLUTION ON DRIVER TRAINING

F. D. Johnson, M.D.:

"RESOLVED: That this House of Delegates go on record as strongly endorsing the principle of State subsidy of student driver training; and that each delegate here, and as far as possible each member of the Michigan State Medical Society as an individual citizen, bring this matter to the attention of civic groups in his community, as well as to his State senator and representative."

I move the adoption of this portion of the report.

W. W. Babcock, M.D.: Second the motion.

Chairman Johnson: The motion is to approve. Are you ready for the question?

(The motion was put to a vote and was carried unanimously.)

XII—8(g). RESOLUTION RE HOSPITAL FACILITIES FOR MENTALLY ILL

F. D. Johnson, M.D.: (The complete resolution was read.) I move acceptance of this portion of the report.

W. A. Scott, M.D. (Kalamazoo): Second the motion.

Dr. O. K. Engelke (Washtenaw): I move to table the motion until tomorrow morning. (See Page 1509.)

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

XII—8(h). RESOLUTION RE INCREASING HOSPITAL PERSONNEL FOR MENTALLY ILL

(Dr. Johnson read the Resolved portions of resolution No. 17.)

F. D. Johnson, M.D. (continuing): The Reference Committee recommends that this resolution be referred to the Mental Health Committee for further study before being presented to the House of Delegates.

I so move.

J. B. Blodgett, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

F. D. Johnson, M.D.: I move the adoption of this report as amended.

S. E. Gould, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

Vice Speaker Johnson: Thank you, Dr. Johnson.

(The Speaker resumed the Chair.)

XII—10. ON MISCELLANEOUS BUSINESS

XII—10(a). RESOLUTION OF THANKS AND APPRECIATION TO L. A. DROLETT, M.D., OF LANSING

G. S. Bates, M.D. (Wayne): The Reference Committee recommends approval of the resolution, and I move its adoption.

R. V. Walker, M.D. (Wayne): Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—10(b). RESOLUTION RE MEDIC—COMMENDATION TO LOS ANGELES COUNTY MEDICAL SOCIETY

G. S. Bates, M.D.: The Reference Committee approves this resolution. I move the adoption of this recommendation.

L. R. Leader, M.D. (Wayne): Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—10(c). RESOLUTION RE THE CREATION OF A SECTION ON OCCUPATIONAL HEALTH OF THE MICHIGAN STATE MEDICAL SOCIETY

G. S. Bates, M.D.: The Reference Committee approves this resolution, and I therefore move its adoption.

J. A. Kasper, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.) (See Page 1504 for fourth Resolution referred to the committee.)

IX—32. RESOLUTION RE CALIFORNIA CANCER COMMISSION

C. W. Colwell, M.D.: Mr. Speaker, I have a resolution to offer:

"Whereas, the cancer quack does untold damage with his treatment of curable cancer until it is incurable,

thereby actively assisting the disease in destroying the patient, and also destroying the faith of the public in recognized methods of treatment, and

"Whereas, the California Cancer Commission has recognized this and other facts and has maintained a Cancer Commission since 1931, and this Commission has led an active attack on quackery, and

"Whereas, there is no doubt about the efficacy of this attack as shown by the continued reappointment and broadened activities of this Commission; therefore, be it

"RESOLVED: That the Genesee County Medical Society recommend to the Michigan State Medical Society that a committee be appointed to investigate the workings of the California Cancer Commission and others now functioning, and to make recommendations concerning the advisability of organizing a Michigan Cancer Commission or to utilize existing committees for the purpose of investigating, evaluating and exposing all so-called cancer cures that are presently known or may appear in the State of Michigan."

THE SPEAKER: This will be referred to the Reference Committee on Resolutions. The meeting is recessed until 9:30 tomorrow morning.

(The meeting recessed at 10:05 p.m.)

TUESDAY MORNING SESSION

September 27, 1955

The meeting reconvened at 9:45 a.m., J. E. Livesay, M.D., Speaker of the House, presiding.

XII—8(g). HOSPITAL FACILITIES FOR MENTALLY ILL

O. K. ENGELKE, M.D.: Mr. Speaker, if you will recall, last evening I moved that the resolution No. 16, presented by the Committee on Legislation and Public Relations, be tabled until this morning to permit me to prepare an amendment to the resolution.

At this time I would like to move that this resolution be removed from the table.

E. G. M. KRIEG, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

THE SPEAKER: Would you like to have the Chair read the motion, or do you have the motion in question before you?

O. K. ENGELKE, M.D.: I have a copy of the motion. In the event it may not be complete, I will be pleased to have the Chair read the one that is available.

THE SPEAKER: The motion on the floor is to approve this resolution.

(The Speaker re-read resolution.)

O. K. ENGELKE, M.D.: Mr. Speaker, I am in complete accord with the resolution as it has been read. My amendment will not change the content. However, I have been acutely aware in the past year of the possibility that in an effort to care for mentally defectives, the rather efficient tuberculosis control program now under way, and planned for Michigan, might be jeopardized.

I am also aware of the fact that the Committee and the original presentors of this resolution had no such thing in mind. However, it is my belief that the resolution as presented might be misconstrued by well-intentioned people, and so I offer this amendment to the resolution. The amendment is simply to add, at the end of the resolution as it now stands, the following:

"And be it further RESOLVED: That such definitive action not be allowed to impair in any way the efficient tuberculosis control programs now in effect and planned for this State; and be it further

"RESOLVED: That copies of this resolution be delivered to all of the State legislators as well as the Governor before the next session of the Legislature."

Mr. Speaker, I move this as an amendment.

R. W. TEED, M.D.: Second the motion.

(The amendment was put to a vote and was carried unanimously.)

(The motion as amended was then put to a vote and was carried unanimously.)

XII—2. ON REPORTS OF THE COUNCIL

L. J. BAILEY, M.D.: Mr. Speaker, the Reference Committee on Reports of The Council wishes particularly to commend The Council on the large amount of Society business which it transacted during the year, representing, as it did, 121 hours of deliberation, as reported in the preamble to the report.

Membership.—The Reference Committee noted the reported increase in membership with gratification.

Finances.—The supplemental report of The Council called attention to the critical status of the General Fund. It moved to adopt the recommendation of The Council to increase Society dues by $10. After discussion with the Chairman of the Finance Committee, the Reference Committee was assured that fully adequate consideration had been given by The Council to the matter of possible economies, and that the needs of the Society genuinely require additional income.

The Journal.—The Reference Committee commends the Editor and the Publications Committee on the continuing quality of THE JOURNAL—its scientific material and format.

Organization.—This part of the report was reviewed, and the recommendation of The Council to extend the County Secretaries-Public Relations Conference from one to three days was favorably received.

The Reference Committee regrets the financial loss incurred by the Michigan Clinical Institute. Meetings are multiplying, and it was the feeling of the Reference Committee that competition between the Michigan Clinical Institute and groups which it was intended to benefit might profitably be merged with the Michigan Clinical Institute, to the benefit of each.

The Resident Intern and Senior Medical Student Conference, held coincidentally with the Michigan Clinical Institute, was especially commended, together with the action on the part of the Michigan State Medical Society in sending delegates to the Student AMA convention.

It was noted that the indoctrination of the new MSMS members and medical students was successfully being carried on, and the Reference Committee urges the desirability of continuing this activity in the case of students, not necessarily early in their medical school career, but in any event extracurricular, if time does not permit inclusion of this activity in the medical school's teaching program.

The remainder of that portion of the report dealing with organization was approved, as was the entire portion following, on public relations. The public relations program is enthusiastically supported and should continue.

Woman's Auxiliary.—The report of The Council on the activities of the Woman's Auxiliary adequately reflects the achievements of this organization under the energetic leadership of Mrs. Albert F. Milford.

Contacts with Voluntary Agencies and Organizations.—The original and supplementary report regarding Michigan Medical Service was reviewed, and we recommend that the members of the Michigan State Medical Society respond realistically to the request that they aid in the development of the fee schedule for the $6,000 family income level medical-surgical care policy.

Thanks are extended to the Beaumont Memorial Committee and to its Chairman, Otto O. Beck, M.D., for the completion of this fitting memorial. The large deficit incurred by the project is looked upon with regret, and the membership of the Society is urged, in the spirit of that pride, allusion to which is made in the recom-

mendations of The Council, to contribute to the Beaumont Fund the sum which is needed to erase the deficit.

The Council is commended for the caution and circumspection with which it dealt with the difficulties posed by the vexatious manner with which the Salk polio vaccine was introduced to the public and to the profession.

Reports of Committees of The Council

Committee to Co-operate with the Michigan Health Council re Periodic Health Appraisal.—It is emphasized that the periodic health examination should be promoted, and especially in the spirit of the recommendation of The Council that this function reside with the private practitioner. It is stressed that the objective of the program is to apprehend incipient disease, to which end an adequate physical and laboratory examination will be required.

Hospital Relations Committee.—The activity of this Committee was particularly meritorious. The recommendations of the Committee are approved.

Matters Referred to The Council

No changes or recommendations were made, with the exception of that portion of the report and the supplemental report which dealt with migrant workers.

Dr. Sladek's letter was reviewed, and Dr. Sladek addressed the Reference Committee. He amplified the information read by the Chairman of The Council in his supplemental report. The recommendations implied in his letter were strongly approved, and this House is therefore asked to empower the Executive Secretary of the Michigan State Medical Society actively to promote a program in the counties involved with the migrant worker, to the end that a workable insurance program be developed well in advance of the 1956 season, through meetings with the growers, as indicated in the report.

Supplemental Report

MSMS Health and Accident Insurance Program.—Attention is called to the high loss ratio of 61 per cent incurred by the health and accident insurance program. A higher participation on the part of members would reduce this loss; but the Reference Committee is unable to make any recommendations.

Contacts with Governmental Agencies.—It was noted with pleasure that the liaison committee with the State's Executive Office had been well accepted, and the election of E. C. Swanson, M.D., to the position of Secretary of the Michigan State Board of Registration in Medicine was approved. Further, the hope was expressed that this interim filling of the office of Secretary will ultimately be confirmed by the Governor and Legislature of this State.

Standards of Membership.—The progress report of the Committee of The Council on Mediation, Grievance and Ethics was accepted.

Annual Reports of Committees.—The special committee which studied the resolution re Joint Commission on Accreditation made six recommendations, which were approved. It is understood that in the wording of paragraph 5, "Basically, we believe that the policy underlying the establishment of outpatient departments should be determined by the local county medical society," it was the intent of the Committee of The Council that the necessity for outpatient departments be determined by the county medical society strictly, with local needs as the determining factor. This wording should be incorporated in this part of the report.

With this change, the report is enthusiastically adopted, together with the recommendation of The Council on this subject at the end of its report.

Michigan State Medical Assistants Society.—The activities of the Medical Assistants' Society, under the leadership of Mrs. Charlotte Ash, as reported by The Council, were noted with approval, and every encouragement is extended to this organization. Doctors are asked to invite their *eligible* personnel to ally themselves with the Society.

Matters Referred to The Council.—Your Reference Committee hopes that the highly desirable Uniform Health Insurance Claim forms will soon materialize. Anything that simplifies anything is good.

The supplemental report on the basic science law was much more detailed than the original report, although the improvements in the basic science law described in each report are essentially the same.

The conclusions and recommendations appended to the supplemental report were accepted with commendation, and the recommendation that the Committee be continued.

Mr. Speaker, I move the adoption of the original and supplemental reports of The Council, with the one minor addition suggested, and including the specific recommendations of The Council and the Reference Committee.

May I acknowledge gratefully the patient co-operation of the members of the Reference Committee, and the members of the House of Delegates and The Council who aided in our deliberations.

(The motion was severally seconded.)

W. W. Babcock: **I would like to offer an amendment to Dr. Bailey's motion to approve the report, that as far as the raise in dues is concerned, a study committee, composed of members of this House of Delegates, be appointed by the Chair to study this problem for one year, and report at the next annual session.**

E. A. Bicknell, M.D. (Wayne): I would like to amend Dr. Babcock's amendment, that a study committee be appointed for next year, and that the increase be an assessment of $10 for one year until the committee reports next year.

I so move.

E. G. M. Krieg, M.D.: I second that.

The Speaker: The action now is to have a special assessment of $10, for one year only, next year, and that a study committee be appointed to recommend to the next House of Delegates. Are you ready for the question? Those in favor will say "aye"; opposed, "no." We will have a show of hands. Those in favor of the motion will raise their hands. (65). Those voting "no," raise your hands. (27).

The "ayes" have it and the motion is carried.

We are now back to Dr. Babcock's amendatory motion. Dr. Babcock's motion carries with it the appointment of a study committee from the House of Delegates, to be appointed by the Chair with the approval of the President of the Society, as provided for in the Constitution.

Are you ready for that motion? Those in favor will say "aye"; opposed, "no." The motion as amended is carried.

We are now back to the report of the Reference Committee on Reports of The Council. Is there further discussion? The motion is to approve the report of the Reference Committee on Reports of The Council as amended.

(The motion was put to a vote and was carried unanimously.)

L. J. Bailey, M.D.: The Reference Committee received a resolution from Dr. Wellman, that the House of Delegates of the Michigan State Medical Society instruct its delegates to the House of Delegates of the AMA to ask for a review of the actions and recommendations of the Joint Commission on the Accreditation

of Hospitals by a committee, the majority of which shall be selected from doctors of medicine actively engaged in private practice.

The resolution as introduced is not clear as to intent, and it is referred back to the proposer for clarification.

I so move.

A. E. Schiller, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

The Speaker: Dr. Bailey, will you continue.

L. J. Bailey, M.D.: Mr. Speaker, I move the adoption of the report as a whole.

M. R. Weed, M.D. (Wayne): I second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—3. ON REPORTS OF STANDING COMMITTEES

H. F. Falls, M.D.: Mr. Speaker and delegates, this is the report of the Reference Committee on Reports of Standing Committees:

XII—3(a). POSTGRADUATE MEDICAL EDUCATION COMMITTEE

In reviewing this report your Reference Committee was favorably impressed with the wide scope and excellence of the subject material presented at the fall and spring postgraduate programs. Most favorable commendation was expressed by the members of the Reference Committee for the excellence of presentation on the part of the majority of the selected speakers.

A vote of sincere thanks was approved for those men who gave so freely of their teaching services in this program. The Reference Committee is heartened by the apparent fact that there is no significant waning in interest in postgraduate medicine on the part of practitioners in Michigan. The Reference Committee would like to recommend a more vigorous advertisement at a local level of the forthcoming programs.

The Reference Committee approved this report as published in the Handbook. Mr. Speaker, I move the adoption of this report.

R. W. Teed, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—3(b). PREVENTIVE MEDICINE COMMITTEE

H. F. Falls, M.D.: Since this report includes a number of summaries of the work of advisory subcommittees, disposition of this particular Committee's report is deferred until the ancillary committee reports are separately considered:

(a) Annual Report of the Committee on Rheumatic Fever Control: The Reference Committee was impressed with the industry and accomplishment of this Committee. The Committee's report as published in the Handbook was approved.

Mr. Speaker, I move the adoption of this report.

J. A. Kasper, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

H. F. Falls, M.D.: *(b) Annual Report of the Maternal Health Committee:* The Reference Committee notes that this Committee is continuing the survey of maternal mortality, and that the results of the first three years' work have been published in The Journal of the Michigan State Medical Society.

Mr. Speaker, I move the adoption of this report.

J. B. Blodgett, M.D.: Second.

(The motion was put to a vote and was carried unanimously.)

H. F. Falls, M.D.: *(c) Annual Report of the Venereal Disease Control Committee:* The matter of prophylaxis for gonorrheal ophthalmia neonatorium was discussed at length by your Reference Committee. The suggestion that 1 per cent penicillin ointment be substituted for 1 per cent silver nitrate is believed by the Reference Committee to be fraught with potential danger. in light of a reported increasing incidence of penicillin-fast organisms and an occasional sensitization encountered with topical administration of this drug.

We will await with interest the results of the seven-county mobile trailer examination of the migratory agricultural workers.

The Reference Committee approved this report as printed in the Handbook, and recommends its adoption.

Mr. Speaker, I so move.

G. W. DeBoer, M.D. (Kent): Second the motion.

(The motion was put to a vote and was carried unanimously.)

H. F. Falls, M.D.: *(d) Annual Report of the Tuberculosis Control Committee:* The Reference Committee urges the careful perusal of this report by each of the delegates in an effort to further emphasize the following points:

1. Decreasing utilization of tuberculosis beds in Michigan.

2. The economic dilemma of the county and municipal tuberculosis institutions.

3. The need for subsidization of these same institutions.

The Reference Committee would like to support the Committee's recommendation that the Michigan State Medical Society form a commission to study this situation and other problems concerning tuberculosis hospitals in Michigan.

It is urged that the delegates should bring to the attention of their county society program chairmen the generous offer of the Michigan Tuberculosis Association to defray expenses of prominent speakers on tuberculosis upon request of local medical societies.

The report of this Committee was approved as printed in the Handbook, and the Committee congratulated for its industry.

Mr. Speaker, I move the adoption of this report.

C. W. Sellers, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.

H. F. Falls, M.D.: *(e) Annual Report of the Committee on Industrial Health:* The Reference Committee supported the recommendation of this Committee that a Section on Occupational Health be created in the Michigan State Medical Society.

The Reference Committee approved the report of the Committee as published in the Handbook.

Mr. Speaker. I move the adoption of this report.

W. W. Babcock, M.D.: Second.

(The motion was put to a vote and was carried unanimously.)

H. F. Falls, M.D.: *(f) Annual Report of the Committee on Mental Health:* The Reference Committee was impressed with the orderly and precise nature of this Committee's report. The recommendation that the component county medical societies form committees on mental health should be given serious consideration, as should also the establishment of a committee on medical testimony on a State level.

The Reference Committee approved the report of the Committee as published in the Handbook.

Mr. Speaker, I move the adoption of this report.

R. W. Teed, M.D.: I second the motion.

(The motion was put to a vote and was carried unanimously.)

H. F. Falls, M.D.: *(g) Annual Report of the Child Welfare Committee:* This report was approved as published in the Handbook. This Committee and its Subcommittee deserve our thanks for jobs well done.

Mr. Speaker, I move the adoption of this report.

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

H. F. Falls, M.D.: *(h) Annual Report of the Iodized Salt Committee:* The Reference Committee approved the report of the Committee as presented in the Handbook.

Mr. Speaker, I move the adoption of this report.

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

H. F. Falls, M.D.: At the suggestion of the Speaker I will read the remainder of the report of the Reference Committee:

(i) Annual Report of the Geriatrics Committee: The Reference Committee wishes to commend the increasing scope and activity of this Committee, and particularly notes the success and reputation that the conferences on the aging system are enjoying.

The Reference Committee approved the report of this Committee as published in the Handbook.

We will now finally consider the annual report of the Preventive Medicine Committee.

The *Subcommittee on Cancer Control* did not submit a report; otherwise, the reports of the various subcommittees have been reviewed. The proposed expansion of the *Scientific Radio Committee* is commended. The Reference Committee wishes to echo the thanks extended to A. E. Heustis, M.D. and J. K. Altland, M.D., for their courteous and helpful support and consultation.

XII—3(c). PUBLIC RELATIONS COMMITTEE

The activity of this Committee was most highly endorsed by the Reference Committee.

The publication, "Winning Friends for Medicine," warrants the endorsement of all physicians.

The significant interest in the promotion of public relations has become evident in all county societies. The success of the Committee in thwarting legislative action to control the professional fee for polio vaccinations is evident.

The utilization of movies, radio, television and the press to tell the story of medicine in Michigan has been thoughtfully and judiciously exploited by this Committee. The Reference Committee highly approves the honoring of six daily newspapers in Michigan for their public service in promoting better understanding of medical progress and of the medical profession.

The Reference Committee endorses and wishes to quote the concluding sentence of this Committee's report: "The Committee reaffirms its belief that the most effective public relations program for the medical profession must be rooted in sincere action on the part of county medical societies and the conscientious practice of personal public relations in the private office of the individual physician."

XII—3(d). ETHICS COMMITTEE

This report was approved by the Reference Committee as printed in the Handbook.

XII—3(e). LEGISLATIVE COMMITTEE

As has been previously noted, the vigilance and guidance of this Committee on subject material brought before our State Legislature is most assuring. It is indeed encouraging to note that the legislators are beginning to seek the advice of this Committee on matters pertaining to health and medicine. The concluding sentence of this Committee's report may be altered somewhat in its original intent, but best expresses the sentiments of the Reference Committee when we quote: "They deserve the heartfelt thanks not only of their colleagues, but all the citizens of Michigan."

The Reference Committee approves the report of this Committee as published in the Handbook.

Mr. Speaker, I move the adoption of these reports as a whole.

R. W. Teed, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—6. REFERENCE COMMITTEE ON RESOLUTIONS

XII—6(b). RESOLUTIONS RE COMMENDATION OF DR. ROBERT L. NOVY

W. L. Brosius, M.D.: Inasmuch as the intent of these resolutions was identical, the Reference Committee recommends the adoption of all three resolutions, but suggests that they be incorporated into one suitably inscribed scroll for presentation to Dr. Novy.

I so move.

R. W. Teed, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—6(c). RESOLUTION RE "THE VOICE OF AMERICA"

W. L. Brosius, M.D.: The Reference Committee recommends adoption of this resolution, and I so move.

C. W. Sellers, M.D.: Second the motion.

Vice Speaker Johnson: All those in favor, respond by "aye"; opposed, "no." The motion is carried.

XII—6(d). RESOLUTION RE HOSPITAL PRIVILEGE

W. L. Brosius, M.D.: The Reference Committee considered this resolution in four parts, as there are four separate items covered in it.

Item 1: The Reference Committee recommends the adoption of this part of the resolution as submitted.

Item 2: The Reference Committee recommends the adoption of this part of the resolution as submitted.

Item 3: The Reference Committee recommends the substitution of the following wording for this portion of the resolution: **"That the AMA Public Relations Committee recommend to the various specialty boards consideration of the hardships imposed on recent diplomates by the restrictive regulations which limit their practice of their specialty during the early years of establishing a practice."**

Item 4: The Reference Committee recommends the substitution of the following wording for this portion of the resolution: **"That the AMA, through its official channels, encourage the formation of general practice sections in the organization of hospital staffs, and that each staff applicant be evaluated on his individual merit."**

Mr. Chairman, your Reference Committee recommends the adoption of its report, and I so move.

W. W. Babcock, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—6(e). RESOLUTION RE OA AND SI PROGRAM (SOCIAL SECURITY)

W. L. Brosius, M.D.: The Reference Committee recognizes the importance of the subject matter of this resolution, but recommends that the resolution be not adopted, for the reason that it may jeopardize the progress already made by the AMA toward the passage of the Jenkins-Keogh bill. Because the Reference Committee feels that further study of this matter is essential, the Reference Committee suggests that educational matter be obtained by The Council and disseminated by various means of communication to the county societies, and

that a poll be conducted by each county society to determine as accurately as possible the consensus of the medical profession in the State, and that the result of this poll be presented to the House of Delegates at the 1956 session.

Your Reference Committee heard from two counties that had conducted such polls and that had voted not to be included in social security. From another organization, including physicians, the result was similar. The Reference Committee did not feel that this State Society could go on record at this time without further information, and hence the recommendation.

I so move.

J. E. Lofstrom, M.D. (Wayne): Second the motion.

F. L. Troost, M.D.: I would like to amend the Reference Committee's motion, that the poll conducted on a State level for the State Medical Society be in writing. Not necessarily that each doctor has to sign his own name, but that the Secretary of the Society send out a letter to each member of the Society, rather than have it on a county level.

P. S. Barker, M.D. (Washtenaw): I second that.

L. R. Leader, M.D.: Just a word or two on the amendment. It seems that a moment or two ago we discussed the idea that the dues in the State were too high, and that we should cut down on various committee work. Now we have an amendment to have the State conduct this poll, which would be another expense. I see no reason for the counties not conducting their own poll and turning in the results to the State, which will cut down our expenses.

(The amendment was put to a vote and was lost.)

Vice Speaker Johnson: We are now back to the motion itself.

(The motion was put to a vote and was carried, but not unanimously.)

XII—6(f). RESOLUTION RE POSSIBLE OPTOMETRIC LEGISLATION

W. L. Brosius, M.D.: The Reference Committee recommends the adoption of this resolution, and I so move.

C. W. Sellers, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—6(g). RESOLUTION RE "BEAUMONT MEMORIAL CONTRIBUTIONS"

W. L. Brosius, M.D.: The Reference Committee recommends the adoption of the resolution as presented.

I move that we adopt this resolution.

P. C. Gittins, M.D. (Wayne): Second the motion.

E. A. Osius, M.D.: As it reads now, we will make the effort for a year, and if it is not successful the money will have to be taken out of public relations funds. If you do that you will immediately weaken any attempt to collect from the membership, because they will say, "Oh, well, it will be paid for by the Public Relations Committee anyway," so we might leave the public relations business out of it, and then your back won't be against a wall.

W. L. Brosius, M.D.: The purpose of the resolution was to clear the books of this matter. It hangs on the books from year to year as a debt—as a loan from the funds to the Beaumont Memorial Committee, who want to clear the books.

We have a suggestion which I would like to read at this time:

"The Reference Committee further suggests that The Council of the Michigan State Medical Society urge each component county society to continue its efforts to raise their participation of each county society to 100 per cent of their membership, and to call the Beaumont Memorial project to the special attention of new members."

There have been members taken in who have not had an opportunity to contribute. This was a voluntary project. The funds were raised within this Society by voluntary means. It is still the doctors' project, and the remaining funds are coming from the doctors; but the opportunity for voluntary contributions will end in a year, and we will write it off the books at that time by assignment of another fund. Is that clear?

The Reference Committee recommends the adoption of the resolution as presented.

L. J. Bailey, M.D.: I am in favor of the intent of Dr. Osius's discussion. May the resolution be read again, please?

(The resolution was re-read.)

L. J. Bailey, M.D.: As I said, I was in favor of the discussion as advanced by Dr. Osius, and if I am not out of order I should like to amend Dr. Osius's amendment by concluding his motion at the word "contribute."

Chairman Johnson: The motion made by Dr. Bailey, which is in the form of an amendment, has the effect of deleting the last portion of the "Resolved," and stopping at that point. I will read it as it would then state:

"RESOLVED: That the House of Delegates of the Michigan State Medical Society recommend to The Council that the membership at large be given one more year of opportunity in which to contribute."

E. G. M. Krieg, M.D.: I second that.

(The amendment was put to a vote and was carried unanimously.)

Chairman Johnson: Now we need a motion to adopt it as amended.

W. L. Brosius, M.D.: Mr. Speaker, I so move.

C. I. Owen, M.D. (Wayne): Second.

(The motion as amended was put to a vote and was carried unanimously.)

W. L. Brosius, M.D.: **The Reference Committee further suggests that The Council of the Michigan State Medical Society urge its component county societies to continue their efforts to raise their participation of each county society to 100 per cent of their membership, and to call the Beaumont Memorial project to the special attention of new members.**

Your Reference Committee recommends the adoption of this suggestion, and I so move.

S. L. Loupee, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—6(h). RESOLUTION RE AMA STUDY COMMITTEE ON HIGHWAY ACCIDENTS

W. L. Brosius, M.D.: "Requesting the Michigan delegation to the American Medical Association to introduce at the forthcoming Boston meeting of the AMA House of Delegates a resolution requesting the Board of Trustees of the American Medical Association to appoint a special committee to study the prevention of highway accidents."

Your Reference Committee recommends the adoption of the resolution, and I so move.

E. G. M. Krieg, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—6 (i). RESOLUTION RE EXPANSION OF AMA ADMINISTRATIVE FACILITIES

W. L. Brosius, M.D.: The Reference Committee recommends that the resolution as presented be not adopted, and recommends the adoption of a *substitute resolution* as follows:

"Whereas, there is evidence that our responsibilities and the complications of procedure are increasing out of proportion to the increase of aid to our central personnel, and therefore to our delegates and officers, and

"Whereas, this is neither fair nor safe to our central organization and to our officers and delegates whose

combined accomplishments have been outstanding, nor therefore to our membership and the public; therefore, be it

"RESOLVED: That the Michigan delegates to the AMA be instructed to introduce at the next meeting of the House of Delegates a resolution calling for the revision of the Constitution and Bylaws, if necessary, for the creation of the office of Executive Vice President of the American Medical Association; and be it further

"RESOLVED: That at the discretion of the officers and delegates, the present Secretary and General Manager be considered for the position of Executive Vice President."

Your Reference Committee recommends the adoption of the substitute resolution, and I so move.

E. C. Texter, M.D. (Wayne): Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—6(j). RESOLUTION RE NONSCIENTIFIC SESSION AT AMA CONVENTIONS

W. L. Brosius, M.D.: The Reference Committee recommends that the resolution as presented be not adopted, and recommends the adoption of a substitute resolution as follows:

"Whereas, many problems other than scientific beset the various sections as presented in the Scientific Assembly of the American Medical Association, and

"Whereas, most of the nonscientific problems are basic to the distribution of all the medical sciences and are essential to medical welfare; therefore, be it

"RESOLVED: That the Michigan delegates to the AMA, through the AMA House of Delegates, urge upon the Executive Committee of the Scientific Assembly and of the section committees the need for sufficient time being allotted for discussion at national meetings on subjects of distribution, education, legislation, and so on, using the same techniques of procedure as in the scientific sessions, and that important findings and conclusions be turned over to the House of Delegates and others concerned for their deliberation."

Yor Reference Committee recommends the adoption of the substitute resolution, and I so move.

J. A. Kasper, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—6(k). RESOLUTION RE CALIFORNIA CANCER COMMISSION

W. L. Brosius, M.D.: The Reference Committee recommends the adoption of this resolution as presented.

There is already a Cancer Committee; there is also a Cancer Commission. Your Reference Committee recognizes the merit of the resolution and the need for considering the cancer quack problems specifically and the valuable work done by the California committee.

The resolution recommends the appointment of a committee. If the President or whoever appoints committees appoints the Cancer Committee for the investigation of this problem, it will satisfy the resolution.

Your Reference Committee recommends the adoption of the resolution as presented, and I so move.

J. E. Lofstrom, M.D.: I second the motion.

(The motion was put to a vote and was carried unanimously.)

W. L. Brosius, M.D.: Mr. Chairman, I move adoption of the report as a whole, as amended.

R. V. Walker, M.D.: Second the motion.

M. L. Lichter, M.D. (Wayne): I would like to offer an amendment to Dr. Brosius's motion, that the record of the action of this House in reference to the commendation of the President of the Woman's Auxiliary be expunged from the record of the proceedings of this House. I feel that this is something of a rather personal nature, and it is something which will be subject to misinterpretation if it gets into our public record, and will imply criticism when none was implied.

A. W. Strom, M.D. (Hillsdale): Second.

(The amendment was put to a vote and was carried unanimously.)

Vice Speaker Johnson: That was in the form of another amendment to the proceedings of this Reference Committee. What is your pleasure in regard to the adoption of the report as a whole, as amended? Are you ready for the question?

(The motion was put to a vote and was carried unanimously.)

XII—9. ON HYGIENE AND PUBLIC HEALTH

XII—9(a). RESOLUTION RE PROPAGANDA ON SALK POLIO VACCINE

O. K. Engelke, M.D.: The Reference Committee and those advising us carefully considered this resolution, and we have prepared a substitute resolution which we think catches the spirit of the original resolution as presented, but which would be more acceptable and would better serve the citizens of the State of Michigan as well as the Society. I will read the substitute resolution:

"Whereas, the medical profession has accumulated a tremendous amount of practical experience in the proper methods of initiating new programs for the protection of the health of the people, and

"Whereas, this experience includes the administration of many different vaccines for the prevention of virus and other diseases, and

"Whereas, members of the medical profession must, in the public mind, inevitably share responsibility for any confusion or tragic consequences of the improper introduction of new procedures, and

"Whereas, the medical profession has, in the public interest, repeatedly demonstrated its desire to co-operate with its own members and with others in the implementation of such health procedures, when given time to properly review and evaluate them; now, therefore, be it

"RESOLVED: That this Society respectfully urge all legislative bodies, lay, private, and official public health agencies, to avail themselves of their opportunity to consult with the proper committees of this Medical Society and other medical societies concerned, before new health procedures are introduced; and that these private and public health agencies provide such medical societies with all scientific data available in time for its careful evaluation before programs are started; and that such legislative bodies, lay private, and official public health agencies recognize the rich experience of this and other medical societies when their advice is given for the planning of new health programs."

Mr. Speaker, I move the adoption of this resolution prepared by the Reference Committee.

D. I. Sugar, M.D. (Wayne): Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—9(b). RESOLUTION RE FLUORIDATION OF WATER

O. K. Engelke, M.D.: The Reference Committee wishes to recommend the rejection of this resolution for several reasons. They are:

1. On two previous occasions within the past five years this House has approved in principle the addition of controlled amounts of fluoride compounds to the drinking water as a safe and effective way to reduce tooth decay.

2. Our action was but one of many similar approvals recorded after careful research and study by the American Dental Association, the U. S. Public Health Service, as well as other state and local medical societies like our own.

3. Many communities in this and other states have accepted the advice of their medical societies, dental societies, health departments, and other reputable groups, and are fluoridating drinking water.

4. No new scientific evidence has been presented to indicate that this or any other society should change its stand on this matter.

5. To pass this resolution at this time, without such evidence, would be extremely unwise.

Therefore, Mr. Speaker, I move the rejection of this resolution.

R. W. Teed, M.D.: Second the motion.

(The motion was put to a vote and was carried, with E. G. M. Krieg, M.D., voting "no.")

XII—9(c). RESOLUTION RE POLLUTION OF INLAND WATERWAYS

O. K. Engelke: This resolution was changed in one or two phrases, which in no way alter its original content. In the opinion of the Reference Committee and our advisers, it makes the resolution more worthwhile to the citizens of the State as well as to this Society. I will read the proposed change:

"Whereas, the State Department of Conservation has improved recreational facilities by purchase of waterfront land and has opened inland waterways and lakes, making these waterways accessible to our citizens, including owners of large boats, and

"Whereas, pollution and desecration of Michigan inland waterways and lakes may therefore occur by insanitary disposal of human and other wastes; therefore, be it

"RESOLVED: That the Michigan State Medical Society urge the Department of Conservation to investigate this situation and take proper steps to eliminate any problem which may be disclosed."

Mr. Speaker, I move adoption of this resolution.

L. R. Leader, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

O. K. Engelke, M.D.: I move acceptance of this report as a whole.

E. G. M. Krieg, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—10. ON MISCELLANEOUS BUSINESS RE SPEEDY RECOVERY OF PRESIDENT EISENHOWER

XII—10(d). RESOLUTION

G. S. Bates, M.D.: The Reference Committee approves this resolution, and I move adoption of the report of the Reference Committee.

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

XII—7. ON SPECIAL MEMBERSHIPS

C. K. Stroup, M.D.: Your Reference Committee wishes to facilitate and expedite this procedure, and has listed the doctors whom we recommend as eligible for *life membership* by county societies. I shall read the names.

Life Membership

Bay County: Aloysius J. Zaremba, M.D., Bay City.

Branch County: Kendall B. Rees, M.D., Coldwater.

Dickinson-Iron County: George H. Boyce, M.D., Iron Mountain.

Genesee County: Clifford P. Clark, M.D., Coral Gables, Florida; Lafon Jones, M.D., Flint; Edwin E. Miller, M.D., Flint.

Ionia-Montcalm County: Robert H. Haskell, M.D., Northville; Lee E. Kelsey, M.D., Lakeview; Isaac S. Lilly, M.D., Stanton.

Jackson County: Edward W. Douglas, M.D., Jackson; Walter L. Finton, M.D., Jackson; Frank F. Pray, Jackson.

Kalamazoo County: Dirk J. Scholten, M.D., Kalamazoo.

Menominee County: Henry T. Sethney, M.D., Menominee.

Midland County: Joseph H. Sherk, M.D., Midland.

St. Joseph County: Charles G. Miller, M.D., Sturgis.

Washtenaw County: Howard H. Cummings, M.D., Ann Arbor; Warren E. Forsythe, M.D., Ann Arbor; Christopher G. Parnall, M.D., Ann Arbor; Inez R. Wisdom, M.D., Ann Arbor.

Wayne County: Alexander W. Blain, M.D., Detroit; Frederick H. Cole, M.D., Detroit; William A. Defnet, M.D., Detroit; Martin S. Dubpernell, M.D., Detroit; Samuel Glassman, M.D., Detroit; Fred L. Honhart, M.D., Detroit; Charles J. Jentgen, M.D., Detroit; E. V. Joinville, M.D., Detroit; George M. Laning, M.D., Detroit; Elbert A. Martin, M.D., Detroit; William O. Merrill, M.D., Detroit; Plinn F. Morse, M.D., Detroit; Fred W. Organ, M.D., Detroit; John B. Rieger, M.D., Detroit; Susanne M. Sanderson, M.D., Detroit.

The Reference Committee recommends that these doctors be elected to life membership, and I so move.

R. W. Teed, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

C. K. Stroup, M.D.: The following doctors have been passed by your Reference Committee as eligible for *retired membership.*

Retired Membership

Bay County: Edward S. Huckins, M.D., Bay City.

Calhoun County: Theodore Kolvoord, M.D., Battle Creek.

Delta-Schoolcraft: John J. Walch, M.D., Escanaba.

Wayne County: John R. Boland, M.D., Detroit; Jerome W. Ankley, M.D., Detroit; Ray D. Schirack, M.D., Detroit; Bertrand C. Switzer, M.D., Detroit.

C. K. Stroup, M.D. (continuing): Mr. Speaker, I move that these men be elected to retired membership.

J. B. Blodgett, M.D.: Second.

(The motion was put to a vote and was carried unanimously.)

C. K. Stroup, M.D.: The following doctors have been passed by your Reference Committee as eligible for *associate membership.*

Associate Membership

Delta-Schoolcraft County: Gilbert W. Benson, M.D., Escanaba.

Eaton County: Richard K. Meinke, M.D., Rochester, Minnesota.

Muskegon County: Robert G. Heneveld, M.D., Muskegon.

Wayne County: Henry A. Archambault, M.D., Detroit; Dorothy Fisher Caton, M.D., Detroit; Charles M. Ebner, M.D., Detroit; Martin Z. Feldstein, M.D., Detroit; Dunbar P. Gibson, M.D., Detroit; Gene L. Hackleman, M.D., Dearborn; Ralph G. Hubbard, M.D., Detroit; Werner K. Kersten, M.D., Detroit; Francine Larson, M.D., Wyandotte; Nur M. Malik, M.D., India; Charles W. Park, M.D., Detroit; Eugene V. Perrin, M.D., Washington, D. C.; Jack C. Smith, M.D., Detroit; Vincent J. Turcotte, M.D., Detroit.

C. K. Stroup, M.D. (continuing): Mr. Speaker, I move that these doctors be so elected.

F. P. Rhoades, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

C. K. Stroup, M.D.: I move that the report of the Reference Committee be accepted as a whole.

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

XII—11. ON MEDICAL SERVICE AND PREPAYMENT INSURANCE

XII—11(a). RESOLUTION RE STUDY OF SURGICAL FEES (MMS)

J. M. Wellman, M.D.: Resolution No. 23, introduced by H. W. Harris, M.D., of Ingham County, relative to some inequities in the surgical fee schedules of Michigan Medical Service. I will read the "Resolved" in the original resolution:

"RESOLVED: That a committee composed of a representative group of physicians of Michigan, including persons from the so-called surgical specialties, be appointed and directed to study the entire surgical fee schedule, with a view to correction of the above-mentioned, and any other inequities found in such study; and that this committee be directed to report its findings and recommendations to Dr. Hull's Committee on the Study of the Fee Schedules of the Michigan Medical Service at a time to be determined by the Chairman of that Committee."

Your Reference Committeee had the benefit of discussing this resolution with its sponsor, and endorses the statement embodied in the preamble. In view of the fact that there has very recently been appointed the Study Committee on Fee Schedules for Michigan Medical Service, your Reference Committee does not concur that a separate new committee be appointed, and recommends that the "Resolved" portion of the above resolution be changed to read as follows:

"RESOLVED: That the recently appointed Study Committee on Fee Schedules for Michigan Medical Service be directed to review the entire surgical fee schedules with a view to correction of the above-mentioned and any other inequities found in its study."

Mr. Speaker, I move the adoption of this substitute resolution.

J. B. Blodgett, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XII—11(b). RESOLUTION RE COMMITTEE ON DIVISION OF FEES (MMS)

Dr. Wellman, M.D.: We shall re-read the Resolution as introduced:

WHEREAS, the Board of Directors of Michigan Medical Service has adopted the recommendations of the Special Committee of the Board of Directors of Michigan Medical Service, to divide the scheduled fee of Michigan Medical Service between physicians, and

WHEREAS, both the Committee and Board of Directors of Michigan Medical Service have recommended that Michigan State Medical Society develop the methods of implementation of this procedure; therefore be it

RESOLVED: That the President of the Michigan State Medical Society appoint a committee to formulate this procedure, and when the methods are approved by The Council of the Michigan State Medical Society they be transmitted to Michigan Medical Service, to be made effective; and be it further

RESOLVED: That due consideration shall be given to the ethical, legal and administrative and other phases involved.

J. M. Wellman, M.D.: Your reference Committee approves of this resolution, but recommends that the procedures and methods developed by the Committee mentioned by the resolution be limited in their application to those instances specifically designated in the original resolution on this matter, adopted by the House of Delegates in September, 1954, as follows:

"RESOLVED: That the House of Delegates of the Michigan State Medical Society recommend to Michigan Medical Service that it develop procedures to pay surgical fees to the operating surgeon and the assisting physician who has actually and in person assisted at the surgical operation on the patient."

Mr. Speaker, I move adoption of this portion of the report.

E. A. Bicknell, M.D.: Second the motion.

O. J. Johnson, M.D.: I move that the recommendation of the Reference Committee, to restrict the division of fees to surgical fees only, be rejected, and that the original content of the resolution, which says a division of scheduled fees, stand.

(The amendment was put to a vote and was carried, but not unanimously.)

The Speaker: We are now back to the main motion, to approve the resolution as amended by the Reference Committee. Are you ready for the question on the motion? The motion is to approve. All those in favor will say "aye"; opposed, "no." The motion is carried.

J. M. Wellman, M.D.: Mr. Speaker, I move approval of this report of the Reference Committee as a whole, as amended.

L. R. Leader, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

We will recess until 8 p.m.

(The meeting recessed at 12:30 p.m.)

TUESDAY EVENING SESSION
September 27, 1955

The final session of the House of Delegates convened at 8:25 p.m., J. E. Livesay, M.D., Speaker of the House, presiding.

XII—11(c). RESOLUTION RE BLUE SHIELD REPORTING IN MEDIATION CASES.

J. M. Wellman, M.D.: Your Reference Committee on Medical Service and Prepayment Insurance is bringing up for the first time the third resolution which was referred to it. This Reference Committee considered a resolution re Blue Shield reporting in mediation cases. Your Reference Committee considered this resolution in great detail. It heartily endorses the four preambles which are stated therein. Your Reference Committee furthermore disapproves the "Resolved" portion of the resolution, and submits the following substitute resolution:

(See Page 1504 for Preamble.)

"RESOLVED: That the Blue Shield organization, upon receipt of any letters or communications alleging abuse, which are outside the province of the present liaison committee between the Michigan State Medical Society and Blue Shield, be advised to communicate with the complainants, suggesting that they should submit their complaint directly to the local county medical society."

Mr. Speaker, your Reference Committee recommends the adoption of this substitute resolution, and I so move.

A. E. Schiller, M.D.: Second the motion.

Russell Fenton, M.D.: I would like to amend the motion **that all complaints not handled by the Liaison Committee will be referred by Michigan Medical Service back to the county medical society, and a letter is to be sent to the complainant informing him of the disposition by them of his complaint.**

L. R. Leader, M.D.: Second the motion.

The Speaker: We are voting now on the amendment. All those in favor of approving the amendment will say "aye"; opposed, "no."

The Chair will ask for a show of hands. Those in favor, raise your hands. (56). Those voting "no," raise your hands. (30).

The motion is carried.

Now that the amendment is adopted, the parliamentary procedure is to vote on the main motion as amended. Is there any further discussion? All those in favor say "aye"; opposed, "no." It is carried.

J. M. Wellman, M.D.: I move the adoption of the

report of the Reference Committee as a whole, as amended.

OTTO VAN DER VELDE, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

XIV. ELECTIONS

THE SPEAKER: The floor is now open for nominations for Councilors from the 2nd District. The incumbent is R. S. Breakey, M.D. of Lansing.

XIV—1. COUNCILOR, 2nd DISTRICT

A. W. STROM, M.D.: I would like to take this opportunity, before making a nomination, to thank Dr. Robert Breakey for serving as Councilor in our District for the past five years. Dr. Breakey does not wish to be a candidate for re-election.

I should like to nominate a man well known to the members of the House of Delegates. He has served as a delegate from Ingham County for seven years. He is a Past President of the Ingham County Medical Society. He has served on several State Medical Society committees.

Dr. Oliver B. McGillicuddy.

THE SPEAKER: Dr. McGillicuddy of Lansing has been nominated.

F. L. TROOST, M.D.: As a colleague of Dr. McGillicuddy's for about twenty-five years, during which time we have been associated on both Lansing hospital staffs and associated as delegates and as members of many county society committees, I would like to second Dr. McGillicuddy's nomination. I am sure that he will be a credit to our District and an asset to The Council.

THE SPEAKER: Are there any further nominations for Councilor from the 2nd District?

C. K. HASLEY, M.D.: Mr. Speaker, I move that nominations be closed and that the Secretary be instructed to cast the unanimous ballot for Dr. McGillicuddy.

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

THE SPEAKER: Dr. McGillicuddy is declared elected.

XIV—2. COUNCILLOR, 3rd DISTRICT

Nominations are now open for Councilor from the 3rd District. Dr. George W. Slagle of Battle Creek is the incumbent.

H. J. MEIER, M.D. (Branch): I could say many nice things about the doctor whom I would like to place in nomination; at least no bad things. Suffice it to say that we had a small caucus at a table for four, and we decided we were very happy with the work that Dr. Slagle has done for us in the 3rd District. The delegates from that District would like to place Dr. Slagle's name in nomination for Councilor from the 3rd District to succeed himself.

H. C. HANSEN, M.D. (Calhoun): It certainly gives me a great deal of pleasure to usher in our candidate from our District, to carry on in the same fashion that he is so well capable of doing.

THE SPEAKER: Are there further nominations?

S. A. FIEGEL, M.D. (St. Joseph): I am most happy also to second George Slagle's nomination.

I would like to move that nominations be closed, and that the Secretary be instructed to cast the unanimous ballot in favor of Dr. Slagle.

OTTO O. BECK, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

THE SPEAKER: Dr. Slagle is declared re-elected.

XIV—3. COUNCILOR, 15th DISTRICT

Councilor for the 15th District. The incumbent is D. Bruce Wiley, M.D., of Utica. The floor is open for nominations.

SYDNEY SCHER, M.D. (Macomb): It is my pleasure to place before this House the name of a doctor for nomination and re-election as Councilor for the 15th District.

Dr. D. Bruce Wiley has practiced in Macomb County for twenty-six years, and is a highly respected general practitioner. He has served as Secretary of his County Medical Society for ten years. He is a Past President of his County Medical Society and has been a delegate in this House for ten years, and for the last five years he has served diligently and faithfully as Councilor for the 15th District.

We in the 15th District are very happy to support Bruce, who served us so faithfully and efficiently, and we see no reason to make a change. I take great pleasure in nominating Bruce Wiley for re-election as Councilor for the 15th District.

H. A. FURLONG, M.D.: Mr. Speaker, for the past five years we have enjoyed very much being associated with Dr. Wiley in Oakland County. He has been a wise Councilor in every sense of the word. We would like very much to have him continue in the office he has held. Oakland County's delegates are very proud to second his nomination.

N. F. GEHRINGER, M.D.: I would like at this time to say that we are very well satisfied with Bruce Wiley's work, and I would like to move that nominations be closed and that the Secretary cast the unanimous ballot for Dr. Wiley.

OTTO O. BECK, M.D.: Second the motion.

(The motion was put to a vote and was carried unanimously.)

THE SPEAKER: Dr. D. Bruce Wiley is declared re-elected.

XIV—4. COUNCILOR, 16th DISTRICT

Councilor for the 16th District. Dr. G. T. McKean, M.D., Detroit, is the incumbent The floor is open for nominations.

J. J. LIGHTBODY, M.D. (Wayne): Several months ago Dr. McKean was appointed by The Council of the Michigan State Medical Society to succeed Dr. Barrett, who resigned as Councilor of the 16th District. This appointment by The Council was a very happy one, and the delegates from our County have been very pleased with the appointment.

I think Dr. McKean might be considered one of the younger men in this group. He has been very active in his County Society, and much more so recently in the State Society. He has been a very welcome addition to The Council, we understand, and it is my privilege to nominate Dr. Tom McKean as Councilor for the 16th District to succeed himself.

M. A. DARLING, M.D.: It gives the Wayne delegation a great deal of pleasure, and me in particular, to have the honor of seconding the nomination of G. Thomas McKean as Councilor for the 16th District.

L. R. LEADER, M.D.: Mr. Speaker, I make a motion that nominations be closed and that the Secretary be instructed to cast the unanimous ballot for Dr. Thomas McKean.

J. J. LIGHTBODY, M.D.: I second the motion.

(The motion was put to a vote and was carried unanimously.)

THE SPEAKER: Dr. McKean is declared re-elected.

XIV—5. DELEGATES TO AMA

The next item of business is the election of delegates to the AMA. Once again I call your attention to the fact that the name of W. D. Barrett, M.D., appears in error in the program. It should be the name of J. S. DeTar, M.D., and W. A. Hyland, M.D., and R. A.

Johnson, M.D. I have a letter from Jack DeTar, who is not with us at this meeting. He is at the University of Tennessee making some speeches.

The floor is now open for nominations.

(Drs. J. S. DeTar, Wm. A. Hyland and C. I. Owen were nominated.)

S. L. Loupee, M.D.: I wish to move that nominations be closed and that the Secretary cast a unanimous ballot.

O. K. Engelke, M.D.: I second the motion.

(The motion was put to a vote and was carried unanimously.)

The Speaker: I declare Drs. DeTar, Hyland and Owen elected.

XIV—6. ALTERNATE DELEGATES TO AMA

(Drs. E. F. Sladek, W. W. Babcock and O. J. Johnson were nominated. Subsequently the Speaker declared the election as balloted in this order: Babcock, Sladek, Johnson.)

J. J. Lightbody, M.D.: Mr. Speaker, I arise for a point of information. Dr. Owen, who was an alternate delegate, has now been elected to be a delegate. That then gives us another vacancy. I think there is one year left in Dr. Owen's term, so is it proper now to continue nominations in this particular way? Three of these individuals who are up for re-election are two-year terms. The man who would replace Dr. Owen would serve for one year.

(Dr. Wm. Bromme, Detroit, was nominated and elected.)

XIV—7. PRESIDENT-ELECT

C. E. Umphrey, M.D. (Wayne): It has been my privilege over the last twenty years to appear before you many times. Unfortunately, quite frequently there was a controversy. Tonight I am happy to say I do not believe there will be any controversy.

I am in a position tonight that almost any member of my delegation would give his eye teeth to be in. I am about to present the name of a man who has served us well on the local front. He has been a member of almost every committee that we have, both as committeeman and as chairman. He has been President of the Wayne County Medical Society. This pretty well takes care of the local front.

He has represented you on the State front. He has been on your State Council. He has been on the Public Relations Committee and many other committees. So, he is well qualified to carry on and do the job that we would like to have done.

I once heard him described as a big man both physically and mentally, and somebody said he was six foot four in his stocking feet all stooped over.

It gives me a great deal of pleasure tonight to mention a confrere who has been one of my keenest competitors locally, and in fact has made it very difficult for me in the practice of medicine; but I love him for it.

I give you the name of Arch Walls, M.D.

E. A. Oakes, M.D. (Manistee): Mr. Speaker and gentlemen of the House, I want to say that Arch Walls still owes me a buck in a game of golf. Fifteen years ago we played a game in Owosso. I don't forgive him. I have known him for a good many years and have worked with him a lot. I don't know a better man to represent us as President of the State Society than Arch Walls. He is a real thinking man. I am very happy to stand here and second the nomination of Arch Walls.

Thank you.

F. P. Rhoades, M.D.: I would like to move that nominations be closed, and that the House cast a unanimous ballot for Dr. Arch Walls as President-elect.

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

The Speaker: Dr. Walls is declared elected. Will President Baker and President-elect Jones please escort our new President-elect to the rostrum?

Arch Walls, M.D.: Mr. Speaker and Members of the House of Delegates:

First of all, I want to thank Dr. Umphrey for all those kind and generous words, and secondly I thank these gentlemen for the help I have had in getting up here.

I feel very humble tonight in accepting the honor that you have just bestowed upon me. I feel that it is a great honor to be placed in the position of President-elect of such a wonderful and highly recognized Society as the one we have in the Michigan State Medical Society.

Along with this responsibility, I appreciate that there are many responsibilities, and I hope I will be able to carry them out. I also realize there are many decisions that have to be made, but I am sure I will be patient and let The Council decide for me, as usual.

There are a great many things I would like to say tonight, but during the year to come and the next year, when I will take office, I hope to create a more splendid union between our profession so that there will be less publicity in the press—less criticism. I think that can be done.

I feel that probably in two years' time I will be developing a somewhat Southern brogue in my close association with my good friend, your President at the present time. I wish now to take the opportunity of resigning as a Councilor from the 1st District of the Michigan State Medical Society.

Again I want to thank you all from the bottom of my heart for this great honor that you have bestowed upon me.

Thank you.

XIV—8. COUNCILOR, 1st DISTRICT

The Speaker: The next item of business is to elect a Councilor for the 1st District to fill the one-year unexpired term of Dr. Walls.

(A. E. Schiller, M.D., Detroit, was nominated and elected.)

XIV—9. SPEAKER OF THE HOUSE

Vice Speaker Johnson: Nominations are now in order for Speaker of the House of Delegates.

F. D. Johnson, M.D.: Up in Flint we rely a great deal upon a man who gives us sagacious and unemotional opinions. We often give our Board's serious problems to him to help solve. We are proud of him. However, in the interest of the Michigan State Medical Society, both Genesee County and his wife are willing to loan him to the Society for another year.

I wish to place in nomination, for Speaker of the House, the name of Dr. Jackson Livesay.

Chairman Johnson: Are there further nominations? Dr. Livesay has been nominated.

C. W. Oakes, M.D.: I have the pleasure of moving that nominations be closed and that the ballot be cast for Dr. Livesay.

Otto O. Beck, M.D.: I second that motion.

(The motion was put to a vote and was carried unanimously.)

Chairman Johnson: Dr. Livesay, congratulations!

(The Speaker resumed the Chair.)

The Speaker: Thank you, Dr. Johnson, for your very nice remarks, and for intimating that I allowed myself to be placed in this position rather reluctantly due to the press of other business. Thank you, gentlemen. I pledge myself to continue to be your humble servant.

(Continued on Page 1540)



Cross section of active duodenal ulcer.

Dramatic Remission of Ulcer Pain

Pain of ulcer is associated with hypermotility; the pain is relieved when abnormal motility is controlled by Pro-Banthīne.

"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

". . . our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. . . .

"Prompt relief of ulcer pain by ganglionic blocking agents . . . coincided exactly with cessation of abnormal motility and relaxation of the stomach."

Pro-Banthine Bromide (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is a new, improved, well tolerated anticholinergic agent which consistently reduces hypermotility of the stomach and intestinal tract. In peptic ulcer therapy[2] Pro-Banthine has brought about dramatic remissions, based on roentgenologic evidence. Concurrently there is a reduction of pain, or in many instances, the pain and discomfort disappear early in the program of therapy.

One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

---

1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

SEARLE

Say you saw it in the Journal of the Michigan State Medical Society

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

PREVIEW OF BUDGET FOR HEALTH DEPARTMENT

A preview of the budget that will be submitted by the Michigan Department of Health to the 1956 Legislature highlights the problems faced by the department in attempting to meet the snowballing requests for service.

The requested addition of twenty-five staff members does not represent new activities. It holds the line, reinforcing current services that are carrying the heaviest pressure.

The state's changing public health needs to which the budget is geared are due largely to our rapidly growing population—heavily weighted with the young and the old—to industrial developments that make undreamed of demands upon water supplies and waste disposal systems, and to the shift from urban to suburban living that brings in its wake a whole train of variations upon old problems of sanitation.

The department's division of engineering, with its requested increase of eleven persons, typifies the present situation. The staff, ten years ago, by spreading itself thin, could fulfill the legal requirement that the department review and approve plans and specifications for public water supply systems, public sewerage systems and public swimming pools. In addition, they gave a degree of consultant service on environmental sanitation.

The same staff, today, is unable to keep up with the mounting requests for permits for new and expanded water systems and sewage disposal facilities, much less to give the close supervision that is so important in keeping intricate modern systems operating properly. Consultant services to local health departments and state agencies have increased, as has emergency service to the thirteen counties without health departments, assistance in resort sanitation, and the task of licensing trailer parks.

The problem is not only to keep up with the examination and approval of plans from municipalities, with city councils, architects and construction firms waiting impatiently to proceed. Even more time consuming and exacting is the task of field consultation, where it picks up to help guard against the horse and buggy thinking that solves the problem of a new subdivision by simply adding water mains, without considering whether yesterday's filtration plant and feeder mains can carry the load.

An equally difficult hurdle is helping to change the feeling in almost every community that it is a law unto itself in water supply and waste disposal. If we are to have the ample water supplies and the adequate waste disposal that present day living and industry require we must have area thinking, not piecemeal approaches.

All this demands the guidance that can be given only by a trained and experienced staff.

In the metropolitan district particularly, local health departments face some of their stiffest problems and have their greatest need for consultant help in handling the fringe areas. Community sanitation facilities are inadequate or non-existent and a hodgepodge of individual and group systems makes supervision extremely difficult.

Increased school health services made necessary by the jump in school enrollments account for the items in the requested budget of an additional vision technician, an added hearing technician and a nutritionist. The department works with local agencies in these services, supplementing local health department staffs and equipment and providing the inservice training needed to keep the programs up to high standard.

The budget for occupational health carries a few minor increases, including an additional clerk.

The department budget carries, as usual, an item for a physician on Beaver Island.

The amount asked for hospital licensure and certification is approximately the same as that in last year's budget, with the addition of a nurse and a dietitian.

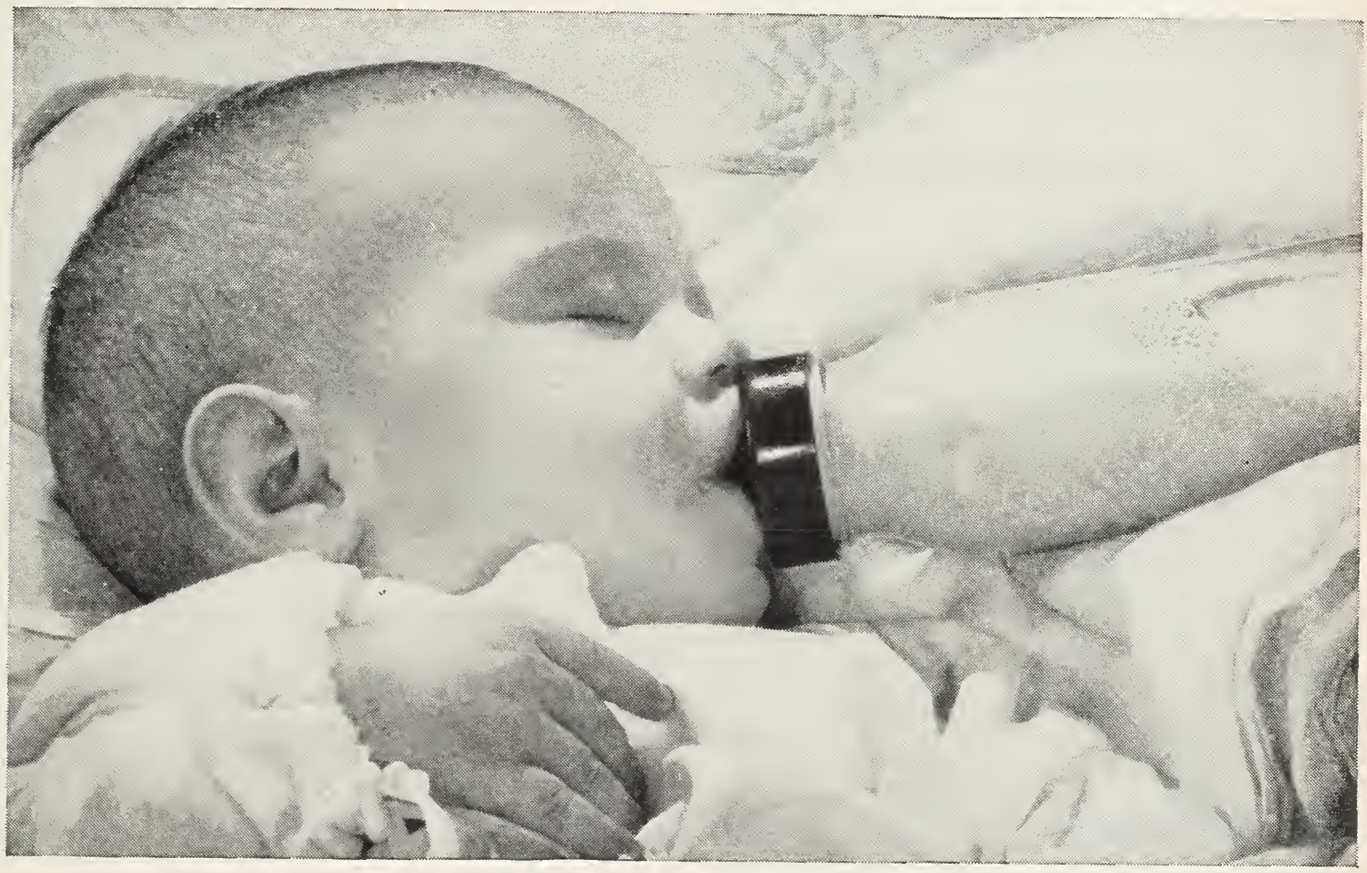
The item for venereal disease control is the same as last year, with no change in program or services.

Tuberculosis control continues to dominate the budget. A new item this year provides for subsidizing outpatient care services. Another item provides assistance to general hospitals in reporting chest x-rays of persons admitted. A fee of 50 cents is proposed for each chest x-ray reported. A third new item provides for grants to local health departments for improved casefinding and case holding, including tuberculin testing.

Program emphasis in chronic disease control will continue to focus on the collecting and analyzing of information, with special attention to methods of casefinding and prevention and to consultation to nursing and convalescent homes. A diabetes testing pilot study is planned, together with continuation of the study of screening for cancer of the cervix, teaching clinics in chronic diseases for physicians and a local demonstration of home care for the chronically ill patient.

Requested grants for local health services are increased from the $325,000 appropriated last year to $600,000 this year. The money is distributed to local health departments according to a formula set up by Act 187, P.A. 1954. The grants have two purposes. One is to provide greater incentive for the thirteen counties now without full-time health departments to establish them. The second is to assist in the maintenance of services in existing local health departments, particularly in environmetal health, problems of the chronically ill and aging and preventive mental health.

Ideal practice requires periodic adaptation of the *individualized* formula to the growing infant





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Tuckahoe, New York

In Memoriam

Glenn R. Backus, M.D., Flint, staff pathologist at Hurley, McLaren, and St. Joseph Hospitals, was a graduate of the University of Michigan Medical School, 1930, and served his internship and residency at Hurley Hospital in Flint. He was a member of the American Board of Pathology, a past president of the Michigan Pathological Society, and a Fellow of the College of American Pathologists and the American Society of Clinical Pathologists. In World War II, he served as head of the pathological laboratories at McKinney Field, Texas. He was also stationed at Wm. Beaumont Hospital, El Paso, Texas. He was born on August 16, 1906, at Calumet; he died September 5, 1955.

* * *



Wm. E. Barstow, M.D., of St. Louis, who served his native Gratiot County for more than fifty years as a practicing physician, died October 6 in Detroit, where he had been taken for treatment of complications following a heart attack last August. He was seventy-eight years old.

Dr. Barstow was President of MSMS in 1949-50, and well known and beloved throughout the state. He also served as President of the Gratiot-Isabella-Clare County Medical Society.

In addition to his leadership in MSMS affairs, Dr. Barstow was a community leader. He was a charter member and past president of the St. Louis Rotary Club and past president of the St. Louis School Board, upon which he served for many years. He devoted thirty years of active service to Boy Scout work and was awarded the Silver Beaver Award, one of the highest honors in scouting.

Dr. Barstow was born in North Star Township, Gratiot County, September 15, 1877. He was graduated from Ithaca High School and the University of Michigan Medical School, receiving his M.D. degree in 1905. He established his practice in St. Louis, immediately following graduation, and remained there.

At the 1955 Annual Session in Grand Rapids, Dr. Barstow was inducted into the MSMS "Fifty-Year Club." Unable to attend, his insignia was accepted by his daughter, Mrs. Harold Gay, of Midland, wife of an MSMS member.

Dr. Barstow is survived by his widow, Mary Belle; two sons, Donald K. Barstow, M.D., who was in practice with his father; and William Barstow, of Dearborn, and his daughter, Mrs. Gay.

* * *

A. James DeNike, M.D., Detroit, born May 4, 1875, at Belleville, Ontario, attended Rush Medical College, Chicago, and Grand Rapids Medical School, graduating in 1903. He practiced at Whitehall, Michigan, and Clinton, New York, before moving in 1923 to Detroit, where he specialized in neuropsychiatry and rehabilita-

Say you saw it in the Journal of the Michigan State Medical Society

tion of alcoholics and drug addicts. Dr. DeNike was owner and medical superintendent of a private sanitarium. He was elected to MSMS Fifty-Year Club in 1953, and to MSMS emeritus membership. He died while vacationing at Scottsdale, Arizona, February 17, 1955.

* * *

Walter D. Ford, M.D., Dearborn, Emeritus member of MSMS, was a graduate of Wayne University College of Medicine, 1899. He interned at Harper Hospital and was a resident in German and English hospitals. Dr. Ford served in the Medical Corps during World War I, attaining the rank of Major. He died October 11, 1955, at the age of seventy-seven.

* * *



Henry A. Luce, M.D., of Detroit, who recently celebrated his fiftieth anniversary as a doctor of medicine, died October 28, 1955, in Detroit following an illness of three weeks.

Nationally known for his work in the field of psychiatry, Dr. Luce was held in high esteem by all members of his profession and by the public for his many years of devoted service to Medicine.

An outstanding and nationally known leader in medical organization, Dr. Luce was State Society President in 1938-39, President of Wayne County Medical Society in 1925-26 and a Michigan Delegate to the American Medical Association for eighteen years. He was also a Past President of the Michigan Society of Neurology and Psychiatry, a former Advisor to the Michigan Society of Mental Hygiene, and an Honorary Member of the American Academy of General Practice.

In recent years, Dr. Luce has been intensely interested in training more practitioners in various phases of psychiatry to alleviate the increasing burdens on those M.D.'s limiting themselves to this branch of medicine.

Dr. Luce was a staff member of the following hospitals: Deaconess Evangelical, Harper, Jennings, Receiving, and Wayne County General.

Born on a farm near Fenton, Michigan, in 1874, Dr. Luce was graduated in 1905 from the Detroit College of Medicine and Surgery, now Wayne University College of Medicine.

Dr. Luce is survived by his widow, Stella and a daughter, Mrs. Susan Martin.

* * *

George H. Wood, M.D., Onaway, was born in Charlevoix, March 18, 1874. He graduated from Saginaw Valley Medical College and began practice in Alanson in 1901. He practiced in Onaway and Reed City prior to 1949, then in Detroit for several years, before returning to Onaway. An ardent student of constitutional government, he was the author of several articles on that subject. Dr. Wood died suddenly September 16, 1955, in Lansing while on a business trip.

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In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

Brown, H. W.: J. Pediat. 45:419, 1954.

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Tuckahoe, New York

Communications

Mr. William J. Burns
Executive Director
Michigan State Medical Society
Lansing, Michigan

Dear Mr. Burns:

During part of August and September last, it was the privilege of the writer and his wife and youngest son to spend vacation time in the Upper Peninsula of your fair State of Michigan—as has been our custom for the past several years.

Almost from the time of our arrival at the resort and for the first ten days or so, our son, who is in his nineteenth year, was quite seriously ill with an upper respiratory infection, attributable to an acute sinus condition. We, of course, were not immediately cognizant of the reason for the illness and, needless to say, were quite concerned since the symptoms were very indicative of polio.

After attempting without too much success, to enlist the services of a doctor "vacationing" at the same resort, my wife suggested that she call our family physician from a pharmacy in ..... some twenty odd miles from camp—to prescribe to pharmacist for our son. The pharmacist convinced her that it would be poor policy to try to diagnose by phone, even though he would be willing to abide by doctor's orders. My wife rather reluctantly agreed, stating that we were utter strangers and knew of no doctor in the vicinity who would be willing to offer his services, especially so far from town. Whereupon the pharmacist very obligingly stated that he would engage the services of a doctor for us. For this, we will be forever grateful.

That same evening, less than a half hour after my wife's arrival back at camp, a Doctor ..... of ..... was attending our son. His diagnosis of our son Bruce's illness was completed and he assured us that it was not polio but that we had cause for alarm. He administered 600,000 units of penicillin and left other medication and prescriptions and suggested that we bring Bruce to his office in a few days or as soon as Bruce was able to travel comfortably. I learned later that the doctor had made the trip after just having completed an appendectomy.

It was necessary for us to visit the doctor's office for further treatment three or four times during the remainder of our vacation, during which time we had plenty of time to observe that some doctors still believe in the Oath they took upon entering practice. We were especially impressed by the co-operation between those connected with the profession. All of this seems so different from what we have come to know in more urban communities.

We merely want you to know that we are very grateful for services such as rendered by Dr ....., the pharmacist (whose name I neglected to learn), and the others who were so genuinely concerned. This has been the main purpose of my writing this letter and to say that our faith in the medical profession has been firmly re-established.

Some people are too eager to criticize a doctor when things do not go well, and so reluctant to commend when experiencing a situation like ours, that I believe a little "pat on the back" might do some good. My wife Muriel and son Bruce concur in my belief.

Sincerely,
FORREST A. RANK

103 So. Cornell Ave.,
Villa Park, Illinois
Sepember 28, 1955

P.S. You may be interested in knowing that the name of your Organization and address was furnished to me by ..... of the American Society of Anesthesiologists, and our good neighbor. However, it must be understood that this is not a solicited testimonial—but entirely my own thoughts and written at my own volition.

Wilfrid Haughey, M.D., Editor
Michigan State Medical Society Journal
Battle Creek, Michigan

Dear Sir:

The Beaumont Memorial Fund's need for more money was discussed at our County Society's September meeting. A canvass of the members revealed that all had contributed, some quite generously. All were agreed that this project deserved more support. It was unanimously decided that each member be assessed $5.00. Accordingly we are sending $105.00 to the Beaumont Fund.

Sincerely,
HARVEY L. MOSS, M.D.
Secretary-Treasurer
Branch County Medical Society

Coldwater, Michigan
October 14, 1955

Plainwell Sanitarium

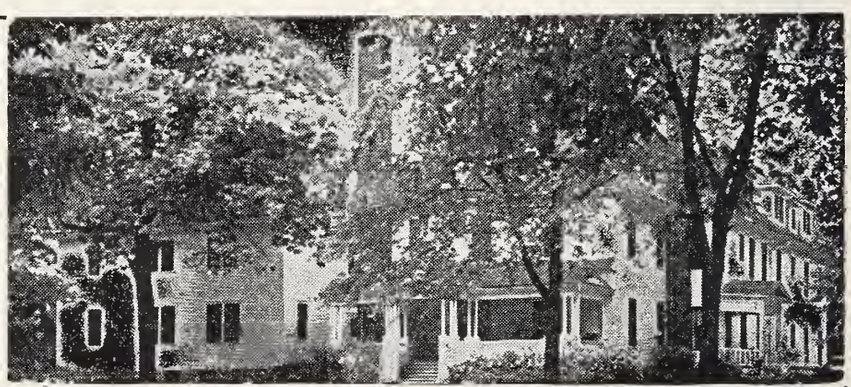
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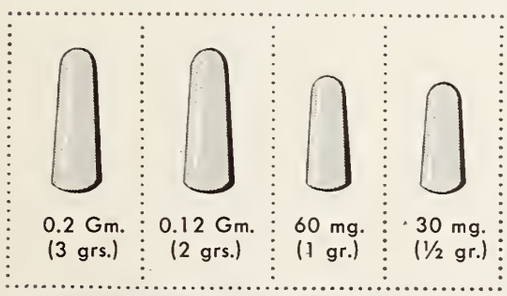
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. . . . . NEWS MEDICAL

MICHIGAN AUTHORS

Noah E. Aronstam, M.D., Detroit, is the author of an article entitled "The Treatment of Occupational or Erg Dermatoses with Titanium Oxide" which was published in the *Indian Journal of Dermatology and Venereology,* April-June, 1955.

Martin J. Urist, M.D., South Haven, is the author of an article entitled, "Eccentric Fixation in Amblyopia Ex Anopsia," published in AMA *Archives of Ophthalmology,* September, 1955.

Charles I. Cerney, M.D., and **Robert B. Wallace, M.D.,** Detroit, are the authors of an article entitled "Carcinoma of the Pancreas: A Review of 160 Cases," published in *The American Practitioner and Digest of Treatment,* September, 1955.

Murray R. Abell, M.D., Ann Arbor, is the author of an article entitled "Diseases of the Gallbladder: Their Nature and Classification," published in the *Canadian Medical Association Journal.* A condensation of this paper appeared in the *American Practitioner* and *Digest of Treatment,* September, 1955.

B. E. Brush, M.D., W. E. Chase, M.D., and **M. A. Block, M.D.,** Detroit, are the authors of an article entitled "An Evaluation of Newer Methods in the Diagnosis of Hyperparathyroidism," read at the twelfth annual meeting of the Central Surgical Association, Chicago, February 18, 1955, and published in AMA *Archives of Surgery,* September, 1955.

Robert D. Swedenburg, M.D., William M. Tuttle, M.D., and **K. E. Corrigan, Ph.D.,** of Detroit, are the authors of an article entitled "Isotype Techniques for Mediastinal Tumors," read at the twelfth annual meeting of the Central Surgical Association, Chicago, February 18, 1955, and published in the AMA *Archives of Surgery,* September, 1955.

Robert E. L. Berry, M.D., and **C. Thomas Flotte, M.D.,** Ann Arbor, are the authors of an article entitled "Peripheral Arteriosclerotic Vascular Disease in Diabetes," read at the twelfth annual meeting of the Central Surgical Association, Chicago, February 18, 1955, and published in AMA *Archives of Surgery,* September, 1955.

Prescott Jordan, Jr., M.D., and **James Wible, M.D.,** Detroit, are the authors of an article entitled "Spring Valve for Mitral Insufficiency" read at the twelfth annual meeting of the Central Surgical Association, Chicago, February 18, 1955, and published in AMA *Archives of Surgery,* September, 1955.

Paul W. Pifer, M.D., Melvin Block, M.D., and **C. Paul Hodgkinson, M.D.,** Detroit, are the authors of an article entitled "Experimental Hypofibrinogenemia," published in the *Henry Ford Hospital Medical Bulletin,* September, 1955.

William C. Noshay, M.D., Detroit, is the author of an article entitled "The Treatment and Employability of the Epileptic," published in the *Henry Ford Hospital Medical Bulletin,* September, 1955.

William E. Chase, M.D., Detroit, is the author of an article entitled "An Evaluation of Radical Perineal Prostatectomy for Carcinoma," published in the *Henry Ford Hospital Medical Bulletin,* September, 1955.

J. Dana Darnley, M.D., Detroit, is the author of an article entitled "Diastematomyelia: A Treatable Lesion In Infancy and Childhood with Case Report," published in the *Henry Ford Hospital Medical Bulletin,* September, 1955.

L. A. Swinehart, M.D., Detroit, is the author of an article entitled "Clinical Evaluation of Chlorpromazine Hydrochloride in Acute Nausea and Vomiting," published in the *Henry Ford Hospital Medical Bulletin,* September, 1955.

Claribel Westermeyer, M.D., Detroit, is the author of an article entitled "Ulcer Symptoms Due to Schistosomiasis Mansoni," published in the *Henry Ford Hospital Medical Bulletin,* September, 1955.

Brock E. Brush, M.D., William L. Lowrie, M.D., Earl Redfern, M.D., and Wayne Hollinger, M.D., Detroit, are the authors of an article entitled "Hyperinsulinism," published in the *Henry Ford Hospital Medical Bulletin,* September, 1955.

Robert J. Fetz, M.D., Detroit, is the author of an article entitled "The Prognosis in Cancer of the Kidney," published in the *Henry Ford Hospital Medical Bulletin,* September, 1955.

* * *

American Board of Obstetrics and Gynecology.—The next scheduled examination (Part I), written examination and review of case histories, for all candidates will be held in various cities of the United States, Canada, and military centers outside the continental United States, on Friday, February 3, 1956.

Case abstracts numbering 20 are to be sent by the candidate to the Secretary as soon as possible after receiving notification of eligibility to the Part I written examination.

* * *

Fourth Annual Trauma Symposium.—More than 270 physicians attended the Fourth Annual Trauma Symposium at Wayne University's College of Medicine, Wednesday, November 9, 1955.

The day-long conference is sponsored by the Michigan

(Continued on Page 1528)

After Bread Comes Wine...

*The Second Legacy of the Creator**

From the very dawn of history, wine, the classic beverage of moderation, has been acclaimed for its appetite-stimulant properties, its role in nutrition, its function as an aperitif.

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The results to date have been most gratifying. For example, we have learned that—

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—Wine increases appreciably not only the volume but the proteolytic power of gastric juice, thereby encouraging digestion notably in convalescents and older patients;

—Wine serves as a quick-energy food. Its small amount of hexose is speedily absorbed and its moderate content of alcohol is metabolized readily even by diabetics;

—Wine possesses significant vasodilating, diuretic and relaxing properties of value in the field of cardiology;

—A little Port or Sherry at bedtime is a valuable relaxant to the insomniac and may obviate the need for sedative medication.

And wine can help brighten the often unappealing character of special or restricted dietaries—a psychological boost of inestimable value to the debilitated and depressed patient.

We believe you will find "Uses of Wine in Medical Practice" a valuable addition to your files. A copy is available to you at no expense, by writing to: Wine Advisory Board, 717 Market Street, San Francisco 3, California.

*Georges Ray, Vins de France, Paris, University Press, 1946 (p. 75).

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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc., 226:172, 1953.

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(Continued from Page 1526)

committee on Trauma of the American College of Surgeons and the Wayne Medical School.

Dr. Vernon C. Abbott of Pontiac presided over the conference.

This Trauma symposium was divided into two groups of illustrated talks on the surgical care of the injured. Then, ward-walk demonstrations were held in the Farwell Annex of Detroit's Receiving Hospital to coincide with subject matter presented during the lectures.

A welcome by Dr. Gordon H. Scott, dean of Wayne's College of Medicine, was followed. Lecturers: Dr. Herbert J. Bloom, "Care of the Fractured Jaw"; Dr. Joseph M. Caputo, "Treatment of Cord Bladder"; Dr. Harold W. Woughter, "The Fractured Hand"; Dr. Lyndon E. Lee, Jr., "Colostomy in Injuries of the Colon"; Dr. John E. Webster, "Fat Embolism"; Dr. Sidney Charnas, "Fracture of the Head and Neck of the Humerus"; Dr. Alexander P. Markey, "Acoustic Trauma"; Dr. Charles W. Peabody, "Trauma to the Knee Joint"; Dr. George L. Walker, "Management of Abdominal Distension"; Dr. Jack H. Hertzler, "Esophageal Trauma in Children"; Dr. A. Jackson Day, "Injuries of the Cervical Spine"; Dr. Nicholas S. Gimbel, "The Problem of Debridement of Burn Surfaces"; Dr. Emerick Szilagyi, "Injuries to Major Arteries and their Treatment"; Dr. Albert D. Ruedemann, "Principles of Treatment in Eye Injuries."

Guest Lecturer, Edward S. Piggins, commissioner of Detroit's police department, spoke on "Accidents—Their Prevention and Treatment from the Police Point of View."

* * *

Midwinter Seminar.—The Tenth Annual University of Florida Midwinter Seminar in Ophthalmology and Otolaryngology will be held at the Sans Souci Hotel in Miami Beach the week of January 16, 1956. The lectures on ophthalmology will be presented on January 16, 17 and 18, and those on otolaryngology on January 19, 20 and 21. A midweek feature will be the Midwinter Convention of the Florida Society of Ophthalmology and Otolaryngology on Wednesday afternoon, January 18, to which all registrants are invited. The registrants and their wives may also attend the informal banquet at 8 p.m. on Wednesday. The schedule has been arranged to provide a maximum time for recreation each afternoon.

The Seminar lecturers on Ophthalmology this year are: Dr. Francis H. Adler, Philadelphia; Dr. A. Gerard DeVoe, New York; Dr. Michael J. Hogan, San Francisco; Dr. C. Wilbur Rucker, Rochester, Minnesota; and Dr. A. D. Ruedemann, Detroit, Michigan. Those lecturing on Otolaryngology are: Dr. Frederick A. Figi, Rochester, Minnesota; Dr. Lewis F. Morrison, San Francisco; Dr. Charles E. Kinney, Cleveland; Dr. John R. Lindsay, Chicago; and Dr. Bernard J. McMahon, St. Louis.

* * *

New officers of the Michigan Allergy Society are President, Sidney Friedlaender, M.D., Detroit; Vice

(Continued on Page 1530)

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(Continued from Page 1528)

President, Kenneth Mathews, M.D., Ann Arbor; and Secretary-Treasurer, E. Oskar Schreiber, M.D., Flint.

The Executive Committee is composed of Sidney Friedlaender, M.D., Detroit; Kenneth Mathews, M.D., Ann Arbor; E. O. Schreiber, M.D., Flint; Alex S. Friedlaender, M.D., Detroit; Henry Beale, M.D., Toledo, Ohio; Joseph Shaffer, M.D., Detroit.

* * *

Claire L. Straith, M.D., and **Burns G. Newby, M.D.,** Detroit, had a scientific exhibit at the annual meeting of the Indiana State Medical Society, held at French Lick Springs, Indiana, October 16-20. The subject of the exhibit was "Oral, Plastic and Hand Surgery."

Dr. Straith was also the speaker there on two occasions on the subjects, "Reconstructive Surgery in the Severely Burned Patient," and "The Treatment of Maxillofacial Injuries in Traffic Accidents."

* * *

Pan American Medical Women's Alliance.—The V Congress of Pan American Medical Women's Alliance will meet at Santiago and Vina del Mar, Chile, on March 6 to 13, 1956.

* * *

Radioactive Waste.—The peacetime disposal of radioactive waste is as crucial a problem as personal protection against fall-out created by wartime atomic bombs, declared Dr. Charles W. Shilling of the U. S. Atomic Energy Commission, Wednesday evening, November 2, 1955, at the University of Michigan.

Dr. Shilling, deputy director of the AEC's Division of Biology and Medicine, spoke before the opening session of a three-day training course on radioactive liquid wastes sponsored by the U-M School of Public Health.

He said that by the year 2000 some 41 tons of fission products will be generated in atomic reactors annually.

Since these products at present are either dissolved or suspended in liquid, anywhere from 50,000 to 500,000 gallons of radioactive liquid waste will have to be flushed down the drain per day.

"The question is what drain?" asked Dr. Shilling.

Streams and rivers have been used for other types of sewage and might be suitable for radioactive materials of low level, he declared.

But he estimated that some of the "hotter" isotopes might take as long as 600 years to decay or weaken to a point where they might safely be dumped into a drinking source.

Among the several atomic "dumps" now being considered for radioactive waste products are the following:

1. Caves, abandoned mines, underground caverns.

2. Burying the material in sealed containers at the bottom of the sea.

3. If in gas form and at sufficiently low-level intensity, simple release into the atmosphere. If of high intensity, the gas could be compressed, stored, and later released.

4. Radioactive liquids, again if of low intensity, could be dumped safely into streams and rivers. If too active,

(Continued on Page 1532)

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Surgical Anatomy and Clinical Surgery, two weeks, March 5
Surgery of Colon and Rectum, one week, February 27, April 9
General Surgery, one week, February 13, two weeks, April 23
Basic Principles in General Surgery, two weeks, April 9
Gallbladder Surgery, ten hours, April 9
Fractures and Traumatic Surgery, two weeks, March 12

GYNECOLOGY—Office and Operative Gynecology, two weeks, February 13, March 12
Vaginal Approach to Pelvic Surgery, one week, February 6, March 5

OBSTETRICS—General and Surgical Obstetrics, two weeks, February 27, March 26

MEDICINE—Internal Medicine, two weeks, May 7
Electrocardiography and Heart Disease, two-week basic course, March 12
Gastroscopy, forty-hour basic course, March 19
Dermatology, two weeks, May 7

RADIOLOGY—Diagnostic X-ray, two weeks, February 6
Clinical Use of Radioactive Iodine, one week, April 2
Clinical Uses of Radioisotopes, two weeks, May 7

PEDIATRICS—Intensive Review Course, two weeks, May 14
Neurological Diseases: Cerebral Palsy, two weeks, June 18

UROLOGY—Two-week Course, April 16
Cystoscopy, ten days, by appointment

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Say you saw it in the Journal of the Michigan State Medical Society

(Continued from Page 1530)

the liquid might either be evaporated for more convenient storage, or stored directly in tanks.

5. Solids contaminated by radiation might be burned, the ashes stored until activity subsides, and then dumped into streams.

Studies are under way to make the discarded radioactive material suitable for secondary uses, in a manner similar to the gardener's use of garbage for compost.

He suggested that radioactive material, no longer suitable for science, might be used as fuel in heating homes; that low-level material might sterilize foods and drugs; and activated materials could be a replacement for the x-ray in treating diseases.

"I caution against an emotional approach to this whole problem of radioactive wastes."

He concluded that every precaution is being taken by the AEC in outlining complete specifications for protection against radiation, and that sanitary engineers and public health officials are studying ways of handling the atomic age's pollution problem.

* * *

Survey of Ophthalmology.—Drs. Harold F. Falls and John W. Henderson, of Ann Arbor, and H. Saul Sugar, of Detroit, have been named section editors for the *Survey of Ophthalmology*, a new bimonthly journal which makes its debut in February, 1956.

The journal, which will survey the world's current ophthalmologic literature with critical appraisals by the section editors, is under the editorial direction of Dr. Frank W. Newell, Chairman, Section of Ophthalmology, University of Chicago. It is to be published by The Williams & Wilkins Company of Baltimore.

* * *

Lahey Medical Education Award.—Former President Herbert Hoover has been given the Frank H. Lahey Award for outstanding leadership in medical education. President Eisenhower was the recipient of the first award last year. Mr. Hoover has served as honorary chairman of the National Fund for Medical Education since its formation. The award is sponsored by the American Medical Association, the Association of American Medical Colleges and the Fund. In accepting the award, Mr. Hoover reminded laymen and industry that it was up to them to find the funds to accommodate more pre-medical students in medical schools.

* * *

Guarding the Worker's Health.—Ways of keeping the American worker healthy and on the job will be considered by representatives of labor, management, government and the medical profession at the sixteenth annual Congress on Industrial Health, Monday and Tuesday, January 23-24, 1956, at the Sheraton-Cadillac Hotel, Detroit. Sponsored by the AMA's Council on Industrial Health, the sessions on Monday will be devoted to "The

(Continued on Page 1534)

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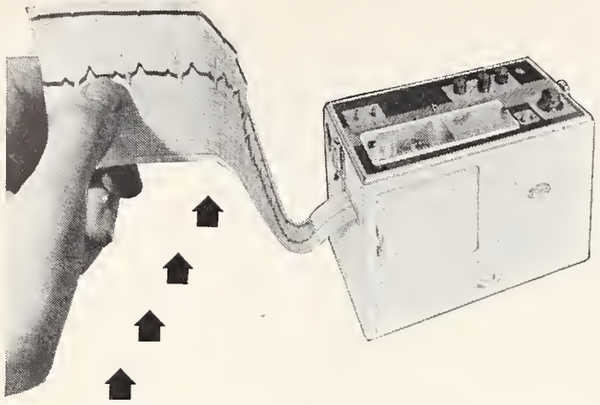
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Queries and minor notes, J.A.M.A. March 28, 1953, page 1155.

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(Continued from Page 1532)

Role of Medicine in Industrial Relations" and "Medicine's Responsibilities in the Automotive Age."

A special all-day program on Tuesday will be built around the subject, "Absence from Work Due to Non-Occupational Illness and Injury," with particular reference to integration between industrial and private physicians. This program—arranged by the AMA's Committee on Medical Care for Industrial Workers—will cover such aspects as the nature and extent of the problem, efforts of management, labor and the community to reduce job absence, the role of various persons (for example, the worker, personnel director, nurse, doctor) in this field, and a discussion of the Ontario System of recording absence data.—*AMA News Notes.*

* * *

The March of Dimes.—The National Foundation for Infantile Paralysis is asking for $47,600,000 to continue its programs for 1956. Care and medication are needed in addition to further work on the Salk vaccine. Further research, iron lungs, and long continued nursing and medical care are still uprovided. The campaign will extend from January 3, 1956, to January 31, 1956.



The Future of Pharmacy.—Ten years from now the ethical pharmaceutical market in the United States should total around $1,650,000,000 annually, representing an increase of more than $650,000,000 over the present market, Eugene N. Beasley, the president of Eli Lilly and Company predicted, addressing the convention of the National Wholesale Druggists Association in White Sulphur Springs, West Virginia.

(Continued on Page 1536)

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We know that today's physician recognizes the many-sided nature of the disease—Alcoholism. Beyond the physical, which requires expert treatment in itself, the alcoholic's physician is plagued, we know, with the equally vital aspects, which make demands on his time and attention, of the emotional, spiritual and mental sickness he notes in his patient.

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BRIGHTON HOSPITAL is NOT interested in the patient who merely wishes to be dried out in order to resume drinking. We ARE interested in those patients who really, fervently, seek complete rehabilitation and a way of life FREED from alcohol.

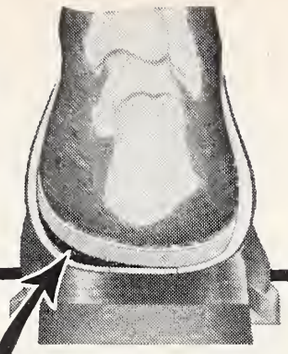
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The pathologist in direction is recognized by the Council on Medical Education and Hospitals of the A.M.A.

(Continued from Page 1534)

He said his prediction is based on an expected 27,000,000 increase in United States population in the next decade and on the prediction of economists that total disposable income (income after taxes) will go up $113,000,000,000 in the same period to a total of $380,000,000,000.

Although medical research in the last fifteen years has brought new and lifesaving drugs and medicinal preparations, Beesley said, the American people now are spending one-fourth less of their total disposable income for medication than they did in 1939. The 1954 figure was 0.64 per cent of disposable income as compared to 0.87 per cent in 1939.

Beesley brought out that the antibiotics and "other so-called high-priced 'miracle' drugs" not only have helped prolong life and improve health but in some instances have conferred important economic benefits.

As an example, he cited a hospital statement that the average duration of treatment for tuberculosis in that institution was reduced from 733 days in 1951 to 170 days in 1953 following the advent of three new drugs—dihydrostreptomycin, PAS, and INH.

"It is not unusual now to hear of the closing of a tuberculosis hospital because of the decrease in the number of patients. Obviously, there has been substantial progress made in the treatment of tuberculosis, and this is merely one of the many examples that could be cited."

* * *

A Genealogical Chart of Dr. William Beaumont has been presented by Wyeth Laboratories of Radnor, Pennsylvania, to the Michigan State Medical Society for a place in the Beaumont Memorial at Mackinac Island. The chart was forwarded to Beaumont Memorial Committee Chairman Otto O. Beck, M.D., of Birmingham, by D. J. Withington, Director of Promotion of Wyeth.

Thanks were extended to Wyeth and Mr. Withington for their generous actions in continually sending important historical objects for inclusion in the Beaumont Memorial.

* * *

The diagnosis of active pulmonary tuberculosis is not a simple decision and may be equally troublesome for the family physician and for the medical specialist. This is true when tuberculosis is the only disease to be considered. How much more perplexing is the problem when the disease occurs in the course of other long-term illnesses.—Abraham Gelperin, M.D., Dr. P.H., Leon J. Galinsky, M.D., and Albert P. Iskrant, M.D., Public Health Reports, August, 1955.

* * *

Thomas H. Alphin, M.D. became Director of the AMA Washington Office on November 1, succeeding Frank E. Wilson, M.D., who resigned to become Executive Vice President and Secretary of the newly created Joint Blood Council, 1832 M. Street, N.W., Washington, D. C.



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MEDICAL TELEVISION SHOWS

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DATE	*STATION*	*SUBJECT*	*GUESTS*
October 2, 1955	WJBK-TV, Detroit	Artificial Respiration	A Film
October 6, 1955	*WKAR-TV, East Lansing*	Michigan's Hospitals	Allan Barth, Lansing
October 9, 1955	WJBK-TV, Detroit	Arteriosclerosis	A Film
October 13, 1955	*WKAR-TV, East Lansing*	Sanitation	Philip Shirley, Lansing
October 16, 1955	WJBK-TV, Detroit	Dieting	A.E. Schiller, M.D., Detroit
October 20, 1955	*WKAR-TV, East Lansing*	Michigan's Men of Medicine	L. Fernald Foster, M.D., Bay City
October 23, 1955	WJBK-TV, Detroit	Infant Care	Ruth M. Kraft, M.D., Detroit
October 27, 1955	*WKAR-TV, East Lansing*	The Picture of Health	M. H. C. Film
October 30, 1955	WJBK-TV, Detroit	Peptic Ulcers	Glenn E. Millard, M.D., Detroit

* * *

Charles P. Doyle, M.D., of Lansing, was honored at the October meeting of the Ingham County Medical Society for his nearly sixty years of continuous private practice and service to his community. Dr. Doyle still maintains an active practice.

A graduate of the University of Michigan Medical School in 1896, Dr. Doyle has practiced in Lansing since his discharge from the Army in 1918, following World War I. Before his army service he was in Remus and Frankfort, Michigan. Both of his sons are professional men, Maurice J., a dentist in Lansing, and Charles R., a surgeon in St. Louis, Missouri.

Dr. Doyle is an emeritus member of MSMS, and a charter member of the MSMS "Fifty-Year Club."

* * *

Carl M. Peterson.—MSMS members and colleagues throughout the nation, were shocked by news of the death of Carl M. Peterson, M.D., fifty-five-year-old secretary of the AMA Council on Industrial Medicine, from injuries suffered in the flaming crash of a private airplane at Asheville, N. C., September 26. Dr. Peterson was widely known among MSMS members practicing in the field of industrial medicine. Many of his close friends left remembrances to the "Carl M. Peterson Memorial Fund" which is to be used for graduate scholarships in industrial medicine.

* * *

C. Paul Hodgkinson, M.D., Detroit, **John G. Rukavina, M.D.**, Ann Arbor, and **Claire L. Straith, M.D.**, Detroit were guest speakers at the 106th Annual Convention of the Indiana State Medical Association, French Lick, October 16-19.



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January 25, 1956

Morning Session—9:00 a.m.

L. Emmett Holt, Jr., M.D.
Professor of Pediatrics, New York University College of Medicine, New York, N. Y.
"Observations on Intestinal Intolerance"

Frank Glenn, M.D.
Professor of Surgery, Cornell University, Ithaca, N. Y.
"Recent Advances in Diagnosis and Treatment of Biliary Tract Disease"

Richard B. Cattell, M.D.
Lahey Clinic, Boston, Mass.
"Improvements in the Management of Cancer of the Large Intestine"

Shields Warren, M.D.
Professor of Pathology, Harvard Medical School, Boston, Mass.
"Medical Aspect of Radiation Fallout"

Luncheon—12:30 p.m.
Compliments of the Sisters of Mercy

Afternoon Session—1:45 p.m.

Walter L. Palmer, M.D.
Professor of Medicine, University of Chicago, Chicago, Ill.
"Physiologic Considerations in the Problem of Peptic Ulcer"

Garfield G. Duncan, M.D.
Professor of Medicine, Jefferson Medical College, Philadelphia, Penn.
"Highlights in the Management of Diabetes"

Vincent J. O'Conor, M.D.
Professor of Urology, Northwestern University, Chicago, Ill.
"Present Status of Radioactive Isotopes in the Treatment of Carcinoma of the Prostate and Bladder"

Clyde L. Randall, M.D.
Professor of Obstetrics and Gynecology, University of Buffalo School of Medicine, Buffalo, N. Y.
"The Early Detection of Gynecologic Malignancies"

Scientific Exhibits

"Primary Carcinoma of the Gallbladder"

Lawrence Wm. Gardner, M.D., Director of Laboratories, takes pleasure in presenting an exhibit on Primary Carcinoma of the Gallbladder, consisting of 36 Kodachrome Transparencies, illustrating the salient features of this disease, based upon 42 cases studied at our Institution, and a complete review of the literature.

"Congenital Leukemia"

James G. Wolter, M.D., Associate Director of Laboratories, will present a review of literature on Congenital Leukemia, with presentation of an additional case. Kodachrome Transparencies illustrate the gross and microscopic pathology, with hematological studies.

"New Approach to Treatment of Common and Refractory Gingivitis"

Leon Herschfus, D.D.S. This exhibit is based upon a personal study of 26 cases of Gingivitis treated by Pfizer's Cortril, with Terramycin Dental Ointment.

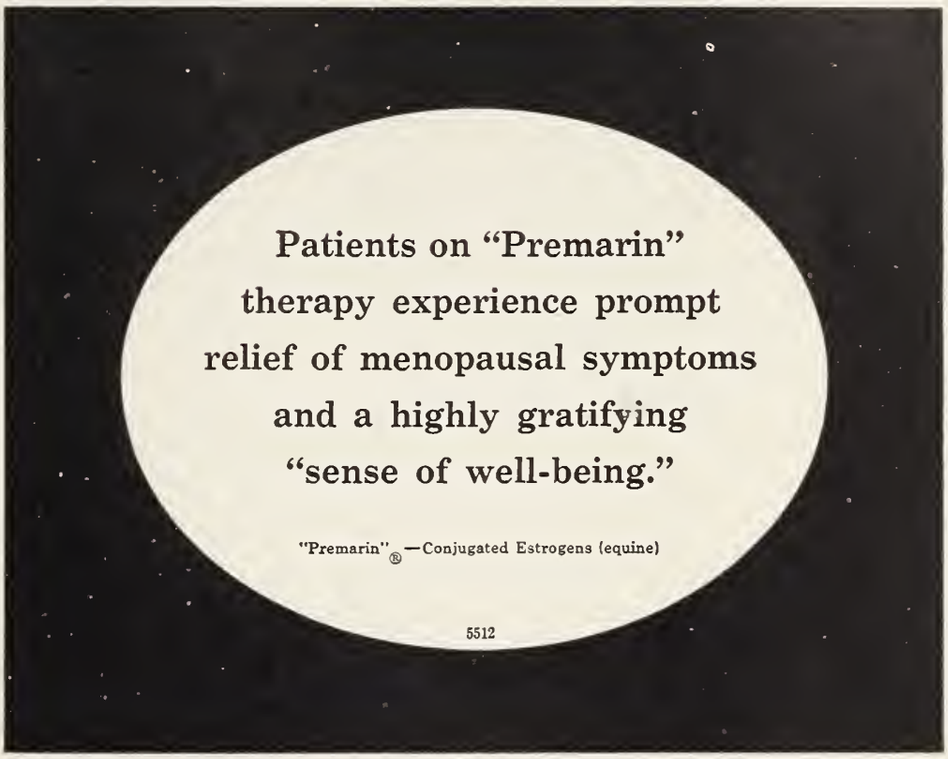
"Research Committee Exhibit"

James J. Fryfogle, M.D., will present the following phases of work:

1. Continuation studies on surgery of coronary heart disease.
2. Replacement of aortic segments, using homographs and plastic prosthesis.
3. Resection of the aortic arch, with replacement and physiologic experimental data.

Notation: The above project sponsored by the Michigan Heart Association.

Conducted tours of the Physiologic Laboratory and Experimental Surgical Laboratories will be held.



16th ANNUAL CONGRESS ON INDUSTRIAL HEALTH

Sheraton-Cadillac Hotel, Detroit

January 23-24, 1956

Principal Speakers: Elmer Hess, M.D., President, American Medical Association
Benson Ford, Vice President, Ford Motor Company

Jan. 23

9:30 a.m. "Occupational Medicine in Industrial Relations"

The contributions and failures of occupational medicine in industrial relations will be discussed by a physician, an industrial nurse, a labor referee, and representatives of employes and management.

2:00 p.m. "Medicine's Responsibilities in the Automotive Age"

An epidemiological approach to one of the greatest problems of our time—automobile accidents and injuries. Dr. Elmer Hess and other national authorities will discuss design deficiencies in modern passenger autos and trucks, driver licensing, physical examination of drivers and possible disqualifying disabilities.

7:00 p.m. ANNUAL DINNER

Mr. Benson Ford will address the banquet. The Annual Award will be made to a physician who has made an outstanding contribution to the Welfare and Employment of the Nation's Physically Handicapped.

Jan. 24

"Absence from Work Due to Nonoccupational Illness and Injury"

Four panel discussions on a problem of concern to labor, management, the community and medicine. Sponsored by the Committee on Medical Care for Industrial Workers. William A. Sawyer, M.D., Chairman.

Entire conference co-sponsored by: Council on Industrial Health, AMA, Wayne County Medical Society, Michigan State Medical Society, Michigan Industrial Medical Association, Detroit Industrial Physician's Club, Detroit Society for Surgery of Trauma.

Not only did the judge find no conspiracy, but he pointed out that the Spears' Institution is being operated illegally—based on evidence that chiropractors are on salary there, even Spears himself. According to George F. Lull, M.D., Secretary and General Manager of the American Medical Association, there is indication that this ruling, while it is appealable, may have significance in medicolegal circles in view of the current question of the practice of medicine by hospital corporations having radiologists and pathologists on their payroll.

The current case was the second legal setback suffered by chiropractor Spears in 1955; in March, Spears' suit against the Crowell-Collier Publishing Company, New York, was heard in Federal Court as a result of Spears' being named in a *Collier's* article entitled "Cancer Quacks"—May, 1951.

* * *

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(Continued from Page 1467)

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DIGEST OF PROCEEDINGS NINETIETH ANNUAL MEETING

(Continued from Page 1518)

XIV—10. VICE SPEAKER

Nominations are now in order for Vice Speaker of the House of Delegates.

E. A. Osius, M.D.: I would like to place in nomination a man who does not need any introduction to you. In fact, he has had a trial run on several occasions, and has acquitted himself very credibly. I would like to nominate, to succeed himself, Dr. Kenneth Johnson of Lansing.

THE SPEAKER: I would like to second the nomination. It was seconded by several. Are there further nominations?

J. R. RODGER, M.D.: I move that nominations be closed and that the Secretary be instructed to cast the unanimous ballot for Dr. Johnson.

(The motion was severally seconded, was put to a vote, and was carried unanimously.)

K. H. JOHNSON, M.D.: When I looked over this agenda for tonight, I noticed that the last thing before adjournment was the election of a Vice Speaker of the House of Delegates. I think I shall use the next half hour giving a little speech. Maybe I can be prevailed upon to leave it for another time.

Thank you very much, gentlemen, for your vote of approval of what I have attempted to do. I will try to do my very best next year.

THE SPEAKER: It is quite hard each year to give proper credit for all the effort that goes into the proper functioning of the House of Delegates. First of all, I want to again thank Dr. Johnson for his great help behind the scenes, as well as at the microphone this year in helping the Speaker with the business of the House of Delegates.

Also, a lot of credit goes to our Secretary, Dr. Foster, and to the staff in Lansing, Mr. Burns, Mr. Brennaman and their associates, and the secretaries, all of whom have put a lot of effort into organizing this House of Delegates beforehand.

To the many committees, and especially their chairmen who put in a lot of extra work making the smooth functioning of the House possible, my thanks.

Thank you all.

This concludes the 90th session of the House of Delegates of the Michigan State Medical Society. We stand adjourned.

(The meeting adjourned sine die at 10:15 p.m.)

Say you saw it in the Journal of the Michigan State Medical Society

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

TEA. A Symposium on the Pharmacology and the Physiologic and Psychologic Effects of Tea. Henry J. Klaunberg, Ph.D., Editor: Executive Director, The Biological Sciences Foundation, Ltd.; Founder Member of the United States Committee of the World Medical Association; Member, The American Association for the Advancement of Science, The New York Academy of Sciences, The Biometric Society, American Medical Writer's Association, et cetera. Washington, D. C.: The Biological Sciences Foundation, Ltd., 1955. Price, $1.00.

This pamphlet consists of the papers presented at a conference of the New York Academy of Sciences, May 15, 1955. They were selected to organize research and clinical data on tea for use by dietitians, nutritionists and the medical profession. There are eight papers in this volume covering the pharmacology, the psychological and the psychophysiological effects as well as the medical and dietary aspects.

It is said that the beginning of tea as a beverage dates to 2700 B.C. A Chinese philosopher, Chin-nung, built a fire from the branches of the tea plant and some of the leaves accidentally fell into the boiling water. Whether this was the real beginning of tea drinking or not, one cannot deny that it has been a popular beverage for many centuries and that it has had considerable importance even in the Western World. Though not as popular a beverage in this country as coffee, the per capita consumption in 1954 was 0.69 pound as compared with 14.7 pounds for coffee. However, where one pound of coffee makes 40 cups, a pound of tea produces 200 cups. This would make consumption of tea about one third as great as the more popular coffee.

A matter of some interest in view of certain prejudices occasionally expressed, is the actual difference between green and black tea. This difference is the result of methods of preparation. Green tea results when the leaves after being dried for a short time in the sun are heated in open pans with constant agitation. For black tea, the dried leaves are rolled either between the hands or between two flat surfaces. This gives them their characteristic twisted shape and presses out some of the extractive material. While standing exposed to the air at 35 to 40 degrees Centigrade for about twelve hours, fermentation takes place and the leaf changes color. The result is that some of the aromatic property of the leaf is volatilized and a portion of the tannic acid is destroyed. This gives black tea a somewhat less fragrant odor and a less astringent taste.

The pharmacological effects of tea are those produced mainly by caffeine, though the tannins may contribute

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an astringency to the gastrointestinal tract. When used as a beverage its values and effects seem more closely related to personal prejudices and habits. Some of these are discussed from a scientific viewpoint. On the whole, the book does provide a source of information of value to dietitians, nutritionists and other interested persons.

F. O. M.

TALKING WITH PATIENTS. By Brian Bird, M.D., Associate Professor of Psychiatry, Western Reserve University. Philadelphia and Montreal: J. B. Lippincott Company, 1955. Price $3.00.

Psychiatric and psychotherapeutic problems are noted with increasing frequency. They are found most commonly in the practices of the family physician, but are also noted in even the most restricted of specialties, and frequently are hidden by even very simple problems. The ability to talk with his patient will enable the doctor to evaluate the importance of the emotional aspects and will enable him to aid in the solution of many problems before they become serious.

The experienced and successful practitioner will find the counterparts of many of his patients in this little volume. He may also recall that with a little such help as this book provides, he might have avoided some of the distress he suffered in learning "The Art of Medicine."

The book is well written, easy to read, and has many short chapters. The first section deals with adults and has chapters entitled "The Angry Patient," "The Patient Who Cries" and "The Anxious Doctor." The second section deals with children and their fears of doctors, injections, anesthesia and the child's reaction to injury.

F. O. M.

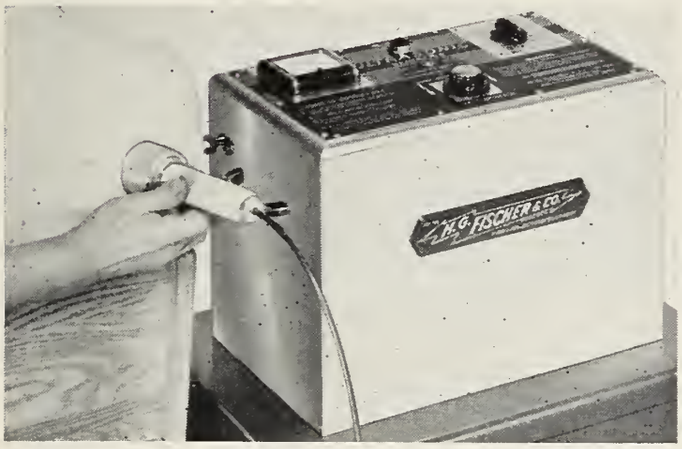
INDUCED ABORTION ON PSYCHIATRIC GROUNDS. A Follow-up Study of 479 Women. By Martin Ekblad. Copenhagen: Ejnar Munksgaard, 1955.

This clinical and statistical study was undertaken in 1949 following a marked increase in the total number of legal abortions in Sweden. This increase followed a revision in the law, enacted in 1946, which permitted the granting of abortion for indications not previously included as medical. These indications, classed as "medical-social and social-medical" made up 60 per cent of the 5,889 abortions in 1950. As the indications in these categories had to do with the preservation of mental health and with the prevention of unfavorable mental sequalae, this psychiatric study and the follow-up was begun.

The work was carried out at the Psychiatric Clinic of Karolinska Institute and the clinical material was obtained from the Gynecological Department of the Sabbatsberg Hospital in Stockholm. The women included were all personally examined by the author prior to the operation. A follow-up study two and a half to three years later included an intelligence test as well as social, medical and psychiatric evaluation. The material was then classified with respect to civil status, age, heredity, childhood environment, schooling, history of sexual misdemeanours, occupation, the male partner, number of children, previous abortions, intellectual level and the presence of deviated personality, psychoneuroses

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or psychoses. All of the 479 women in this particular study had been granted abortion on psychiatric. mixed psychiatric and social indication. In connection with the unwanted pregnancy, these women had developed a psychiatric reaction which, together with the previously manifested signs of mental illness. provided the basis for the legal abortion.

The results of the study are presented under a number of categories, such as: "Civil status and the woman's relation to the male partner"; "Relation of the legal-abortion clientele to the illegal-abortion clientele and the risk of suicide"; "Occurrence of new pregnancy after the abortion"; "Mental sequelae and self-reproaches on account of the abortion," and a number of others.

Among the conclusions arrived at, some are of sufficient interest to be presented here. The intellectual level of the women studied was approximately that calculated for the general population. However, 58 per cent of these women had manifested symptoms of chronic neurosis or abnormal personality even before the pregnancy in question, compared to a calculated frequency of about 15 per cent in the normal population. The risk of illegal abortion or suicide in the event of refusal of legal abortion is greater for the women who have been deserted by the male partner. Whereas 25 per cent had felt mild to serious self-reproaches following the abortion, 65 per cent had had no untoward reaction. Even in those instances when the subjective symptoms were severe, the psychiatric evaluation would class the disorder as mild. As might be expected the stress of a legal abortion was found to be greater in women who had suffered from pre-existing psychiatric disorder. The risk of unfavorable sequelae was also greater when the woman was influenced by others to submit to legal abortion.

The study is well supported by statistical tables and case histories. The table of contents is complete and detailed, permitting reference to any section or subsection without difficulty.

F.O.M.

THE PLASMA PROTEINS IN PREGNANCY. A Clinical Interpretation. By Harold C. Mack, M.D., Chief, Department of Obstetrics and Gynecology, Harper Hospital; Associate Clinical Professor, Obstetrics and Gynecology, College of Medicine, Wayne University; Senior Consultant in Obstetrics and Gynecology, Herman Kiefer Hospital; Associate in Gynecology, Detroit Receiving Hospital, Detroit, Michigan. Foreword by Nicholson J. Eastman, M.D. Springfield, Illinois; Charles C Thomas, 1955. Price, $3.75.

This 110-page monograph concerns the source, structure, function and amounts of the various albumins and globulins in the blood of pregnant women. Although the field is, as yet, not completely understood and is also rather complicated, the book is well written and understandable to the semi-scientific practitioner.

The author attempts to take the knowledge we already have gained about the plasma proteins in normal and in complicated pregnancies through the use of electro-

phoretic determinations and apply it to the physiologic and the pathologic processes that take place.

It seems apparent that the changes in plasma proteins which accompany the physiologic processes of reproduction are largely quantitative. Also, in "toxemias of pregnancy" this quantitative change seems exaggerated with no appreciable qualitative change. This would be added evidence against the "new toxin" theory in "toxemias of pregnancy."

The book is one which cannot be read through rapidly but must be carefully studied in order to apply its principles to the daily obstetric case. S.T.L.

Membership of MSMS as of October 1, 1954 was 5,107 paying dues, 29 retired, 194 life and emeritus, 158 military, 131 associate and 2 honorary.

The same date in 1955 showed: 5,266 paying dues, 49 retired, 177 life and emeritus, 136 military, 299 associate, and 7 honorary.

The total in 1954 was 5,623 and in 1955, 5,934.

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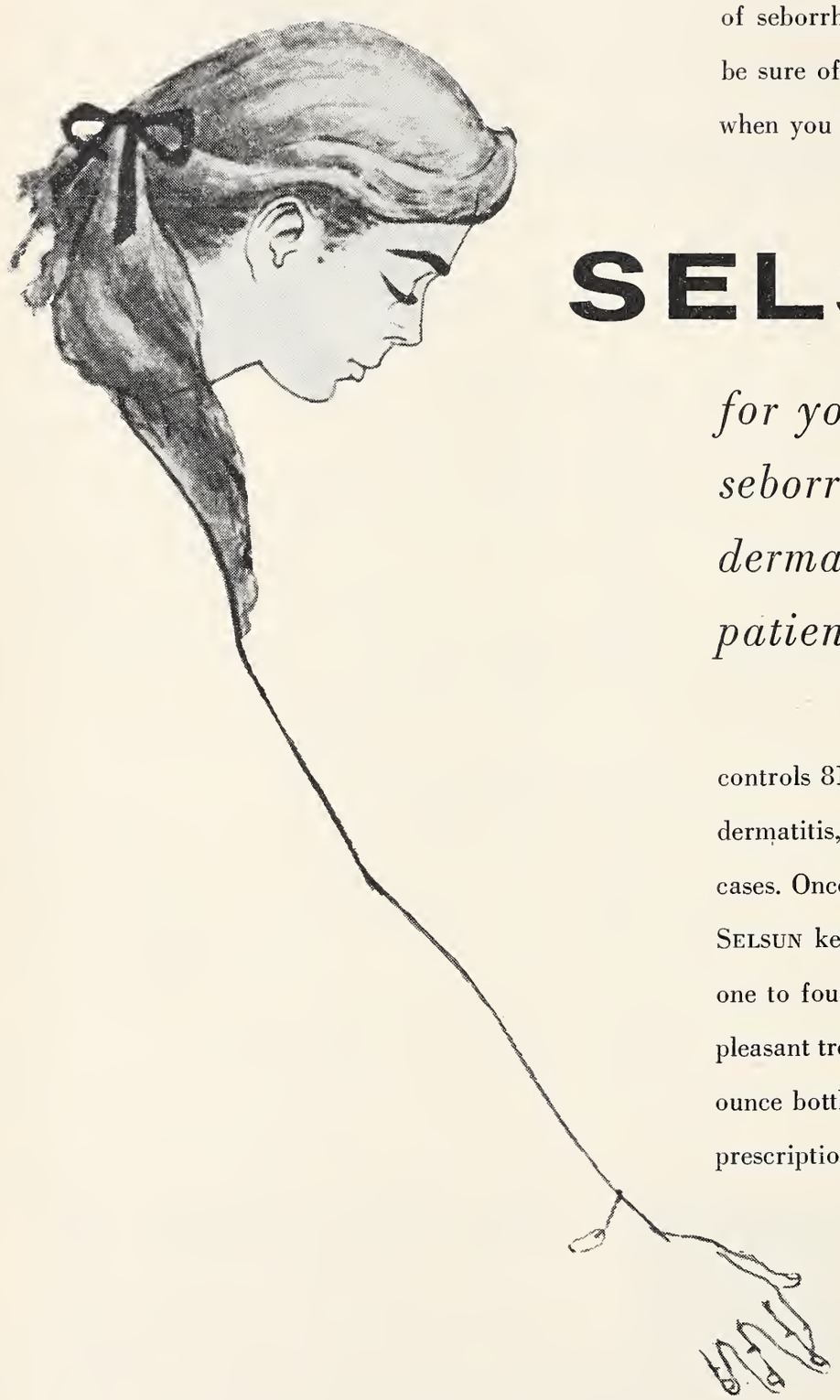
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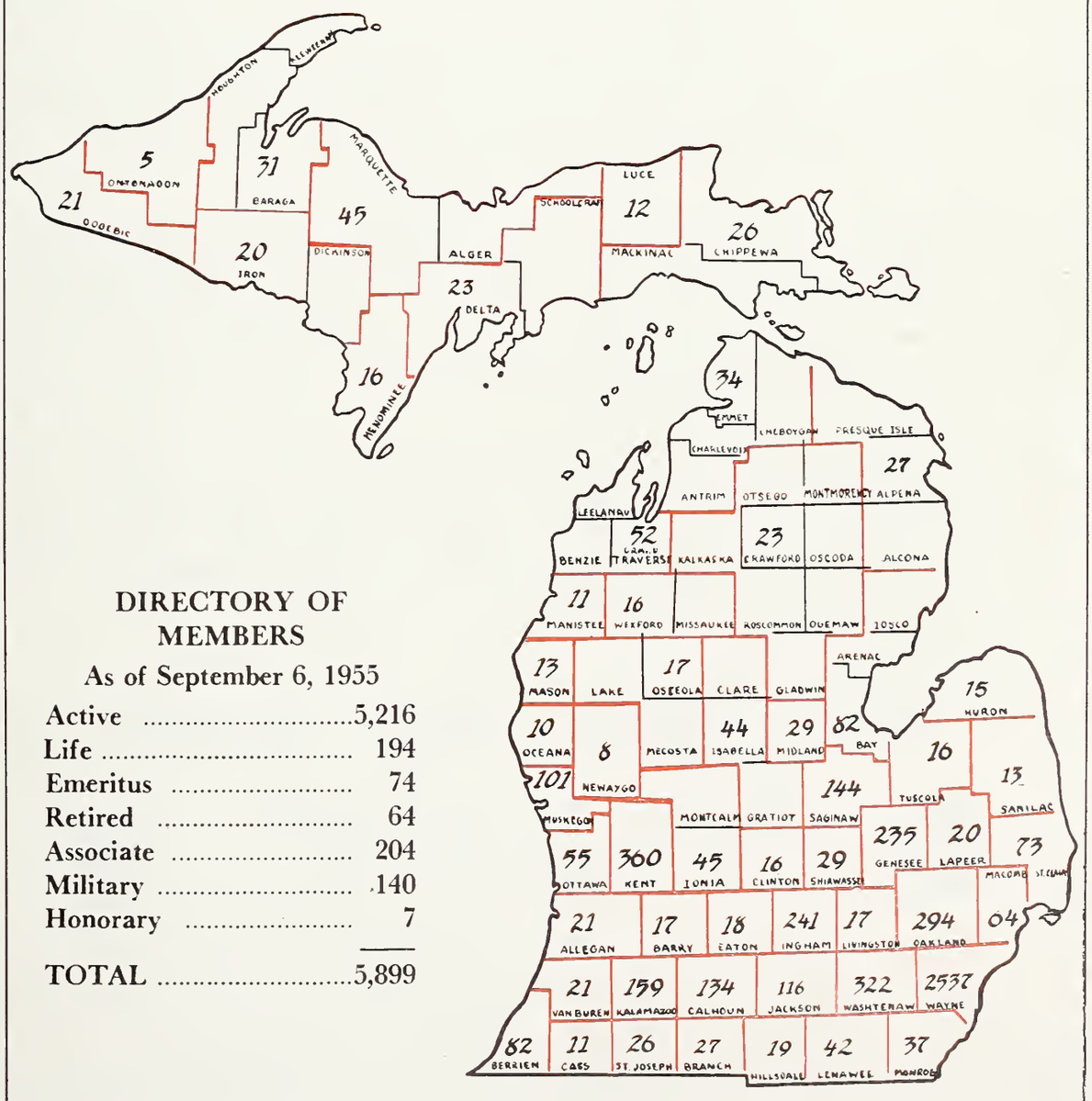
(This number is composed of two sections, of which this is Section 2)

The Journal

of the Michigan State Medical Society

Volume 54 | September, 1955 | Number 9

Roster Section—1955



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Kutsche, W. F.....416 First Street, Oscoda
Leopard, Jack M. (M).....21721 McCoy Ave., Riverside, Calif.
Miller, J. R.....Doctor's Clinic, Hillman
Nesbitt, W. E.....740 State St., Alpena
O'Donnell, Francis J.....Box 54, Alpena
Parmenter, E. S.....140 E. Washington St., Alpena
Purdy, John W. (L)....333 W. Washington Ave., Alpena
Ramsey, Jac A.....312 E. Chisholm St., Alpena
Ries, Robert C.....Rogers City
Riker, John L.....Peoples State Bank Building, Alpena
Rowell, Wilfred J.....Alpena General Hospital, Alpena
Spens, James E.....Professional Building, Alpena
Wagoner, Darwin E.....Lincoln
Wienczewski, Theophile W.....811 Chisholm, Alpena

BARRY COUNTY

Birk, Wilbur R. .....146 E. State, Hastings
Castleman, D. H.....146 E. State St., Hastings
Clarke, Daniel M.....304 S. Jefferson, Hastings
Finnie, R. G.....118 E. Walnut St., Hastings
France, L. C.....Middleville
Gwinn, Alexander B.....City Bank Building, Hastings
Harkness, Robert B. (L).....305 N. Broad Street, Kennett Square, Pa.
Heaslip, J. D.....c/o Pennock Hospital, Hastings
Lofdahl, Stewart.....Nashville
Logan, Wesley G.....City Bank Building, Hastings
Millard, J. A.....Middleville
Morris, Edgar T. (E).....26 S. Main Street, Nashville
Myers, T. W.....Nashville
Phelps, Everett L.....118 E. Walnut St., Hastings
Pryor, R. B.....234½ E. State Street, Hastings
Slee, Vergil N.....912 N. Broadway, Hastings
Wedel, Herbert S.....134 E. State Street, Hastings

BAY-ARENAC-IOSCO COUNTIES

Alcorn, Kent A.....1420 Center St., Bay City
Alcorn, Marshall W.....1420 Center St., Bay City
Allen, Arthur D.....101 W. John St., Bay City
Asline, J. Norris.....207 Walnut St. N., Bay City
Austin, Justus J.....513 W. Bay, Tawas City
Bowman, D. A.....101 W. John St., Bay City
Brown, George M.....207 N. Walnut, Bay City
Campbell, J. S.....704 N. Jackson St., Bay City
Chapin, F. J.....101 W. John, Bay City
Connelly, C. James.....1104 S. Madison, Bay City
Cook, Hugh K.....101 W. John, Bay City
Cosens, Stanley A.....101 W. John St., Bay City
Crissey, Robert R.....101 W. John St., Bay City
Criswell, Robert H.....407 Phoenix Bldg., Bay City
Dardas, M. J.....1415 Center Ave., Bay City
De Waele, Paul L.....1106 N. Johnson St., Bay City
Dolbee, Malcolm K.....Sanford Bldg., Standish
Drummond, Fred H.....Kawkawlin
Ellison, Alfred.....101 W. John, Bay City
Fisher, Robert E.....158 Capital Ave., Battle Creek
Follis, W. M.....101 W. John St., Bay City
Foster, L. Fernald.....919 Washington, Bay City
Freel, John A.....207½ Center Ave., Bay City
Gamble, William G., Jr.....2010 Fifth Ave., Bay City
Gehman, J. R. (M).....USA Hospital, Ft. Jackson, S. C.
Grosjean, J. C. (L).....1214 McKinley Ave., Bay City

Gunn, R. P.....200 Lafayette Ave., Bay City
Hagelshaw, G. L.....101 W. John, Bay City
Hess, C. L. (R)....1233 East Thomas Rd., Phoenix, Ariz.
Heuser, Harold H.....207 Davidson Bldg., Bay City
Horowitz, S. F.....1415 Center Ave., Bay City
Howland, Walter L.....Pinconning
Huckins, Edward S.....436 Cass Ave., Bay City
Huckins, Rodger S.....1802 Broadway, Bay City
Hughes, E. C. (L).....505 N. Madison, Bay City
Husted, F. Pitkin.....812 N. Grant, Bay City
Jacoby, A. H.....2202 Ninth St., Bay City
Jens, Otto F.....1106 Prairie, Essexville
Johnson, Orlen J.....207 N. Walnut, Bay City
Jones, Culver.....900 Jackson Ave., Bay City
Kershul, V. W.....304 W. Lincoln, East Tawas
Kessler, Mana.....201 Shearer Bldg., Bay City
Kessler, Saba.....201 Shearer Bldg., Bay City
Knobloch, Howard T.....1102 Columbus Ave., Bay City
Kulinski, Eugene J.....207 N. Walnut St., Bay City
Lambert, Leslie A.....East Tawas
Langin, J. L.....Mercy Hospital, Bay City
LaPorte, Lawrence A.....308 Newman, East Tawas
MacRae, L. Douglas.....813 Sherman St., Bay City
McDonnell, Walter R.....Pinconning
McEwan, John H.....307 Davidson Bldg., Bay City
McGee, Harry B.....1705½ Third St., Bay City
Medvezky, M. J.....1104 S. Madison, Bay City
Miller, Edwin C.....101 W. John St., Bay City
Miller, M. C.....3380 Midland Road, Bay City
Moore, George W. (L).....200 N. Barclay, Bay City
Moore, Neal R.....704 N. Jackson, Bay City
Mosier, Dwight J.....101 W. John St., Bay City
Payea, Norman.....217 Newman St., East Tawas
Pearson, Stanley M.....101 W. John St., Bay City
Pelczar, W. E.....321 N. Johnson St., Bay City
Reddick, C. E.....Court House, Bay City
Reed, Wm. S.....1705½ Third St., Bay City
Reuter, Clarence W.....101 W. John St., Bay City
Shafer, Harold C.....101 W. John St., Bay City
Sherman, R. N. (R).....Bradenton Beach, Fla.
Smith, J. Campbell.....R.R. No. 2, Tekonsha
Staley, Hugh O.....Omer
Stinson, W. S.....101 W. John St., Bay City
Switzer, Lars W.....Chevrolet Motor Co., Bay City
Taheri, Z. E.....511 Center Ave., Bay City
Tarter, Clyde S.....1712 Center Ave., Bay City
Taylor, R. S.....900 N. Jackson, Bay City
Tompkins, Dana A.....Pinconning
Urmston, Paul R.....303 Davidson Bldg., Bay City
Warren, E. C. (E).....407 Main St., Vanderbilt
Wilcox, James W.....1115 Fifth Ave., Bay City
Wilson, Thomas G.....900 N. Jackson, Bay City
Woodburne, H. L.....308 Davidson Bldg., Bay City
Wright, T. B. (M).....USN, Great Lakes Station, Chicago, Ill.
Zaremba, Aloysius J.....108 S. Madison Ave., Bay City
Ziliak, A. Lawrence, Jr.....707 N. Lincoln, Bay City

BERRIEN COUNTY

Anderson, Bertha M. G...262 Pleasant St., Benton Harbor
Bailey, John H.....204 Fidelity Building, Benton Harbor
Beal, G. N.....Sheperd & Benning Bldg., St. Joseph
Benner, Wm. H.....700 Empire, Benton Harbor
Bliesmer, A. F.....505 Pleasant St., St. Joseph
Bronfenbrenner, Jack..316 Fidelity Bldg., Benton Harbor
Burrell, H. J. (R).....983 Ogden, Benton Harbor
Bush, C. W.....County Hospital, Berrien Center
Butler, W. J.....519 Ship St., St. Joseph
Cawthorne, H. J.....239 Pipestone, Benton Harbor
Chickering, Wm. A.....205 E. Delaware, St. Joseph
Conway, Joseph.....Watervliet
Conybeare, R. C.....416 Fidelity Bldg., Benton Harbor
Cooper, W. L.....275 Paw Paw St., Coloma
Cowdery, K. H.....1600 Niles, St. Joseph
Crowell, Richard C.....519 Ship St., St. Joseph
Dalgleish, A. J.....460 N. Main St., Watervliet
Dunnington, Ruel N.....143 Pipestone, Benton Harbor
Eidson, Hazel D.....Berrien Springs
Elghammer, R. M.....190 Michigan St., Benton Harbor
Elliott, J. Colin.....207½ E. Front St., Buchanan
Emery, C. S.....1020 Niles St., St. Joseph
Faber, Michael.....209 State Bank Bldg., Benton Harbor
Fattic, G. R., Jr.....61 N. St. Joseph St., Niles
Feeley, M. J.....612 Elm St., St. Joseph
Feldmann, Robert J.....P.O. Box 124, Bridgman
Foucek, B. C.....4 Maple St., Three Oaks
Friedman, M. E.....Box 87, New Buffalo
Galles, James O.....275 Paw Paw St., Coloma
Garrett, Evan L.....61 N. St. Joseph, Niles
Gillette, Clarence.....Niles
Green, Barbara.....2600 Morton Ave., St. Joseph
Green, R. L.....2600 Morton St., St. Joseph
Gustin, R. D.....100½ Ferry St., Berrien Springs
Harrison, L. L.....304 Main St., Niles
Hart, Russell T.....7 South Seventh St., Niles
Hassan, D. K. (M).....115½ E. Front, Buchanan
Hayes, Thomas P.....922 Main St., St. Joseph
Helkie, William L. (E).....203 S. Ironwood Drive, South Bend, Ind.
Henderson, Fred C.....107 N. Second, Niles
Hershey, N. J.....1648 Broadway, Niles
Holt, Robert E., Jr.....107 North Second, Niles
Howard, F. W.....131 East Main St., Benton Harbor
Huff, H. D.....126 E. Main St., Niles
Irgens, Edwin R.....11 Peoples State Bank, St. Joseph
Johnston, William H.....505 Pleasant St., St. Joseph
Kelsall, H. I.....1600 Niles, St. Joseph
Kennedy, Francis A.....239 Pipestone St., Benton Harbor
King, B. B.....210 Fidelity Bldg., Benton Harbor
King, Frank A., Jr.....610 Fidelity Bldg., Benton Harbor
Klos, Henry J.....2121 Niles, St. Joseph
Landgraf, R. L.....107 N. Second St., Niles
Leva, John B.....312 Fidelity Bldg., Benton Harbor
Lindenfeld, Frederick H.....8 N. St. Joseph, Niles
Lininger, R. E.....Mercy Hospital, 700 Empire Ave., Benton Harbor
Manning, John T.....922 Main St., St. Joseph
McNabb, Arthur A.....469 Main St., Watervliet
Miller, E. A.....State Bank Bldg., Berrien Springs
Moore, T. Scott.....107 N. Second St., Niles
Ozeran, Charles J.....98 Water St., Benton Harbor
Padelford, Wm. J.....922 Main St., St. Joseph
Peshka, D. K.....61 N. St. Joseph, Niles
Polansky, Sanford.....84 West Main St., Benton Harbor
Porter, C. B.....170 Wall St., Benton Harbor
Pritchard, Harold M.....1 South Fifth St., Niles
Rague, P. O.....1287 Senica Road, Benton Harbor
Ray, Dean K.....617 Elm St., St. Joseph
Reagen, Robert E.....190 Michigan St., Benton Harbor
Rice, Franklyn A., Sr.....324 No. Fourth St., Niles
Rice, Franklyn G.....324 N. Fourth St., Niles
Richmond, D. M.....314½ State St., St. Joseph
Ruth, J. G.....190 Michigan Ave., Benton Harbor
Sowers, Bouton F.....210 Fidelity Bldg., Benton Harbor
Strayer, John W.....107 N. Second St., Niles
Strick, Marvin H.....311 Fidelity Bldg., Benton Harbor
Swingle, Alvin J.....84 W. Main, Benton Harbor
Thorup, D. W.....610 Fidelity Bldg., Benton Harbor
Urist, Maurice D.....454 Pipestone, Benton Harbor
Vastine, Russell J., Jr.....113 N. Portage, Buchanan
Westervelt, H. O.....539 Pearl St., Benton Harbor
Winegar, A. C.....190 Michigan Ave., Benton Harbor
Woodford, Hackley E.....191 Michigan, Benton Harbor
Zick, L. H.....190 Michigan, Benton Harbor

BRANCH COUNTY

Aldrich, Napier S.....15 E. Pierce St., Coldwater
Andrews, Frank A.....State Home & Trg. School, Coldwater
Bailey, James E., Jr.....292 E. Chicago St., Coldwater
Beck, Perry C.....235 N. Walker St., Bronson
Bien, Walter J.....Coldwater
Coates, C. A.....105 E. Chicago St., Quincy
Culver, Bert W. (L).....78 Division, Coldwater
Culver, Dean T.....78 Division, Coldwater
Fraser, R. J.....22 W. Pearl St., Coldwater
Gomley, Henry C.....108 E. Chicago, Bronson
Harris, D. M.....35 S. Sprague St., Coldwater
Heffelfinger, J. C.....292 E. Chicago St., Coldwater
Leitch, R. M.....304 N. Broadway, Union City
McLain, R. W. (L).....37 Janoah Ave., Battle Creek
Meier, H. J.....87 W. Pearl St., Coldwater
Mitchell, H. C.....State Home & Trg. School, Coldwater
Mooi, H. R.....292 E. Chicago St., Coldwater
Moss, H. L.....292 E. Chicago St., Coldwater
Nettleman, W. E.....87 W. Pearl St., Coldwater
Rees, Kendall B.....State Home & Trg. School Coldwater
Rennell, E. J.....Box 148, Coldwater
Rick, J. J.....50 Division St., Coldwater
Smith, R. E.....304 N. Broadway, Union City
Thomas, J. A.....18 N. Monroe St., Coldwater
Wade, R. L. (L).....116 E. Chicago St., Coldwater
Walton, N. J.....61 E. Chicago St., Quincy
Weidner, H. R.....50 Division St., Coldwater

CALHOUN COUNTY

Albright, A. A.....401 Security Bank Bldg., Battle Creek
Amos, Norman H.....1704 Wolverine Tower, Battle Creek
Anderson, F. O. (A).....Jefferson & Pershing, Springfield, Mo.
Anderson, Harold E.....501 Post Bldg., Battle Creek
Barden, Stuart P.....Leila Y. Post Montgomery Hosp., Battle Creek
Baribeau, Roy H.....531 Post Bldg., Battle Creek
Becker, Harry F.....Route 3, Box 303A, Battle Creek
Berghorst, John (A).....VA Hospital, Battle Creek
Beuker, Herman.....120 E. Mich. Ave., Marshall
Bodine, Harold R.....716 Michigan National Bank Bldg., Battle Creek
Bolen, J. G. (A).....3830 W. Michigan, Battle Creek
Bonifer, Philip P.....1008 Wolverine Tower, Battle Creek
Brainard, C. W...1002 Security Bank Bldg., Battle Creek
Brown, Robert W.....140 Capitol Ave., N.E. Battle Creek
Campbell, Alice F.....103 E. Mulberry St., Albion
Campbell, Jack.....611 Michigan National Bank, Battle Creek
Campbell, Richard J.....140 Capital Ave., N.E., Battle Creek
Capron, Manley J.....618 Post Bldg., Battle Creek
Chandler, Edward M.....1407 Security Bank Bldg., Battle Creek
Chynoweth, W. R.....207 Post Bldg., Battle Creek
Coakes, J. E.....112 W. Mansion, Marshall
Colquhoun, Graham F.....401 Security Tower, Battle Creek
Cooper, J. E. (L).....298 W. Van Buren, Battle Creek
Curry, Robert K.....Homer
Diamante, Paul J.....1704 Wolverine Tower, Battle Creek
Dickson, A. R.....1002 Security Bank Bldg., Battle Creek
Dietrich, A. M., Jr.....American Legion Hosp., Battle Creek
Dodge, Warren M., Jr.....1207 Wolverine Tower, Battle Creek
Fairbanks, Stephen..306 S. Superior, P.O. Box 67, Albion
Ferazzi, Patrick S., Lt., MC (M)....Quarters S.A., NAS, San Diego, Calif.
Finch, D. L.....719 S.W. Capital Ave., Battle Creek
Forsyth, J. E.....217½ S. Superior St., Albion
Fraser, Robert H.....1112 Security Bank Bldg., Battle Creek
Funk, L. D.....133 W. Burr Oak, Athens
Gething, Joseph W. (L).....803 Security Bank Bldg., Battle Creek
Giddings, A. M. (L).....Battle Creek San., Battle Creek
Gilfillan, Margery J. (L).....Battle Creek San., Battle Creek
Gorsline, C. S. (L).....85 Orchard Place, Battle Creek
Graubner, F. L.....Bogar Theatre Bldg., Marshall
Hamady, Alfred.....140 Capitol Ave., N.E., Battle Creek
Hanan, Robert (A)....Leila Y. Post Montgomery Hosp., Battle Creek
Hansen, E. L.....216 North Avenue, Battle Creek
Hansen, Harvey C.....417 Post Bldg., Battle Creek
Haughey, Wilfrid (L).....610 Post Bldg., Battle Creek
Heald, C. W. (L).....67 Oaklawn, Battle Creek
Henderson, Philip M.....109 West Erie St., Albion
Herman, Louis (A).....VA Hospital, Battle Creek
Herzer, Henry A. (L).....208 Irwin Ave., Albion
Hibbs, Donald K.....622 Post Bldg., Battle Creek
Hill, W. C.....914 Zwelka Bldg., Appleton, Wisc.
Holtom, B. G.....815 Security Bank Bldg., Battle Creek
Hoyt, A. A. (L).....141 N. Merwood Drive, Battle Creek
Hubly, J. W...1407 Security Nat. Bank Bldg., Battle Creek
Humphrey, Arthur A.....914 Security Bank Bldg., Battle Creek
Humphrey, A. E.....122 N. Madison, Marshall
Jeffrey, J. R.....Battle Creek San., Battle Creek
Jones, Aubrey H. (A).....Veterans Hospital, Fort Custer
Jones, E. F. (A).....VA Hospital, Battle Creek
Jones, T. K.....118 W. Green St., Marshall
Keagle, Leland R.....196 North Ave., Battle Creek
Keeler, K. B.....205½ S. Superior St., Albion
Kelleher, George T.....613 Post Bldg., Battle Creek
Kimball, A. S., Jr.....196 Capitol Ave., N.E., Battle Creek
Kinde, M. R.....48 Merwood Drive, Battle Creek
Kingsley, Paul C.....191 College, Battle Creek
Kolvoord, Theodore.....47 Minges Rd., Battle Creek
La France, N. Francis (A).....Veterans Hospital, Fort Custer
Lam, Francis L.....408½ Capital Ave., S.W., Battle Creek
Lancaster, Vance B.....1206 Security Tower, Battle Creek
Lentz, C. S. (A)....258 Capitol Ave., N.E., Battle Creek
Levine, S. L. (A).....VA Hospital, Battle Creek
Levy, Joseph, Jr.....1208 Wolverine Tower, Battle Creek
Lewis, W. B. (L)....110 Irving Park Drive, Battle Creek
Lowe, Kenneth H.....401 Security Bank Bldg., Battle Creek
Lowe, Stanley T...1009 Security Bank Bldg., Battle Creek
Lynk, S. M. (A).....VA Hospital, Battle Creek
MacGregor, Archibald E. (L)..1510 Security Bank Bldg., Battle Creek
Marino, S. G. (A).....VA Hospital, Battle Creek
McCuaig, A. G.....719 S.W. Capital Ave., Battle Creek
McNair, L. N.....205½ S. Superior, Albion
Meister, F. O.....806 Security Tower, Battle Creek
Melges, Fred J.....1506 Security Bank Bldg., Battle Creek
Mercer, C. M.....512 Michigan Nat. Bank Bldg., Battle Creek
Mitton, O. W.....Battle Creek Sanitarium, Battle Creek
Morrison, Donald B.....719 S.W. Capital Ave., Battle Creek
Mullenmeister, Hugh F...275 Capital, N.E., Battle Creek
Mustard, Russell L.....1407 Security Bank Bldg., Battle Creek
Norgan, Anne (A).....VA Hospital, Battle Creek
Olsen, A. L. (A).....VA Hospital, Battle Creek
Orr, Eli H. (A).....VA Hospital, Battle Creek

Parkinson, C. E.....Leila Y. Post Hospital, Battle Creek
Patrick, Gilbert T.....505 Security Bank Bldg., Battle Creek
Pearson, Donald J.....255 North Avenue, Battle Creek
Pier, C. T. (A).....VA Hospital, Battle Creek
Power, J. R.....140 N.E. Capital, Battle Creek

Robbert, John.....191 College, Battle Creek
Robins, Hugh B.....237 Fremont, Battle Creek
Rorich, Wilma Weeks.....166 Capital Ave. N.E., Battle Creek
Rosenfeld, J. E.....158 Capitol, N.E., Battle Creek
Royer, Clark W.....1508 Wolverine Tower, Battle Creek
Rowan, Russell C.....205½ S. Superior, Albion

Sandy, W. A. (A).....VA Hospital, Battle Creek
Schwarz, Frank W.....31 Orchard Place, Battle Creek
Sharp, A. D.....308 S. Superior, Albion
Sharp, W. T. (A).....VA Hospital, Battle Creek
Shellenberger, Herbert M...108½ W. Michigan, Marshall
Shipp, Leland P...1414 Security Bank Bldg., Battle Creek
Simpson, Robert S...1507 Wolverine Tower, Battle Creek
Slagle, George W.....140 N.E. Capitol, Battle Creek
Sleight, James D...401 Security Bank Bldg., Battle Creek
Smith, J. S. (A).....VA Hospital, Battle Creek
Smith, R. L. (A)....681 Capital Ave., S.W., Battle Creek
Stadle, Wendell H. (R).....607 Jennings Landing, Goguac Lake, Battle Creek
Stiefel, Richard A.....1407 Security Bank Bldg., Battle Creek
Strohmenger, Frank J.....400½ S. Superior St., Albion
Tannenholz, Harold S.....1614 Security Bank Bldg., Battle Creek
Taylor, Clifford B.....308½ S. Superior St., Albion
Tazelaar, M. A.....219 N. Madison, Marshall
Vander Kamp, Harry (A).....VA Hospital, Battle Creek
VanderVoort, Wm. V. (L).....Battle Creek San., Battle Creek
Verity, Lloyd E.....806 Security Tower, Battle Creek
Waid, Margaret E.....230 N. Dancer Rd., RFD No. 1, Dexter
Walker, Charles S.....709 W. Van Buren, Battle Creek
Walters, John F.....41 North Washington, Battle Creek
Way, Kenneth E.....111 N. Jefferson St., Marshall
Wemmer, K. S.....1501 W. Michigan Ave., Battle Creek
Wencke, Carl G...1015 Security Bank Bldg., Battle Creek
Whitney, J. M. (A)..622 W. Michigan Ave., Battle Creek
Williams, E. S. (A).....271 Chestnut St., Battle Creek
Winslow, Sherwood B.....1509 Security Nat. Bank Bldg., Battle Creek
Worgess, Duane R.....45 Territorial Road, West, Battle Creek
Yannitelli, S. A.....132 W. Hamilton Lane, Battle Creek
Zheutlin, Bertram.....50 Adams St., Battle Creek
Zindler, George A.....1206 Security Tower, Battle Creek

CASS COUNTY

Adams, Uriah M.....Marcellus
Clary, Rudolph I.....Dowagiac
Comstock, L. D., Jr.....216½ S. Front St., Dowagiac
Everett, D. W.....Edwardsburg
Hickman, J. K.....212½ S. Front, Dowagiac
Loupee, George E.....Dowagiac
Loupee, S. L. (L).....Dowagiac
Pierce, Frank L. (L).....Dowagiac
Pierce, K. C.....140½ S. Front, Dowagiac
Rutz, L. M.....Marcellus
Zwergel, E. H.....Cassopolis

CHIPPEWA-MACKINAC COUNTIES

Allott, H. R.....300 Court St., Sault Ste. Marie
Bandy, Festus C. (R)....14880 Grandville Blvd., Detroit
Blair, Herbert M.....300 Court St., Sault Ste. Marie
Clausen, C. H.....300 Court St., Sault Ste. Marie
Conrad, G. A. (E).....521 Ashmun, Sault Ste. Marie
DuVall, Dorothy V.....520 Division St., Sault Ste. Marie
Finlayson, D. D.....301 E. Spruce St., Sault Ste. Marie
Goddard, G. B.....309 Ashmun St., Sault Ste. Marie
Goldberg, A. H.....301 Ashmun St., Sault Ste. Marie
Hagele, Marie A.....300 Court St., Sault Ste. Marie
Hamel, Herbert E.....St. Ignace
Harrington, H. M.....519 Ashmun, Sault Ste. Marie
Howe, Donnell C., Jr.....300 Court St., Sault Ste. Marie
Howe, Gertrude E.....300 Court St., Sault Ste. Marie
Mackie, T. B.....300 Court St., Sault Ste. Marie
McBryde, L. M.....Masonic Bldg., Sault Ste. Marie
Mertaugh, W. F.....Central Savings Bank Bldg., Sault Ste. Marie
Montgomery, B. T.....301 E. Spruce St., Sault Ste. Marie
Rhind, E. S.....300 Court St., Sault Ste. Marie
Scott, D. F.....300 Court Street, Sault Ste. Marie
Taylor, R. M.....300-306 Court St., Sault Ste. Marie
Trapasso, T. J.....300 Court St., Sault Ste. Marie
Venier, A. G.....519 Ashmun St., Sault Ste. Marie
Wallen, L. J.....409 Ashmun St., Sault Ste. Marie
Willison, Clayton (E).....Central Savings Bank Bldg., Sault Ste. Marie
Yale, I. V. (L).....200 Ashmun St., Sault Ste. Marie

CLINTON COUNTY

Bennett, George W.....Elsie
Cook, Bruno C.....Westphalia
Elliott, Bruce R.....Ovid
Fillinger, Wells B.....Ovid
Foo, Charles T.....St. Johns
Grost, James M.....210 E. Walker St., St. Johns
Henthorn, A. C.....RFD No. 3, St. Johns
Kirker, J. G.....Fowler
Luton, F. E. (E).....St. Johns
McWilliams, W. B.....Maple Rapids
Russell, Sherwood R.....St. Johns
Sheline, V. L.....Ashley
Slagh, Earl M.....Elsie
Smith, F. W.....St. Johns
Stephenson, W. F.....510 E. Walker St., St. Johns
Stoller, Paul F.....308 N. Mead St., St. Johns

DELTA-SCHOOLCRAFT COUNTIES

Anderson, F. C.....212 S. Tenth Ave., Escanaba
Benson, G. W. (A).....Ludington St., Escanaba
Bernier, A. B.....200 S. Cedar St., Manistique
Boyce, D. H.....1007 Ludington, Escanaba
Carlton, A. J. (L).....502 S. Seventh St., Escanaba
Dehlin, J. R.....1102 Wisconsin Ave., Gladstone
Fyvie, James H.....202 S. Cedar, Manistique
Groos, H. Q.....1015 S. First, Escanaba
Groos, L. P.....1015 S. First, Escanaba
Harrison, William C.....403 S. Seventh St., Escanaba
Hult, O. S.....1005 Delta Ave., Gladstone
Jensen, Carroll.....Manistique
Kee, C. E.....1102 Wisconsin Ave., Gladstone
Le Mire, D. F.....1104 S. First, Escanaba

Lemire, W. A.....1106 S. First, Escanaba
Lindquist, N. L.....205 S. 10th St., Escanaba
McInerney, T. A.....1221 Ludington, Escanaba
Miller, A. H. (L).....904 Wisconsin, Gladstone
Olson, C. J.....621 Michigan Ave., Gladstone
Ryde, R. E.....Lake Shore Drive, Escanaba
Walch, J. J.....Lake Shore Drive, Escanaba
Waters, Duane.....200 S. Cedar St., Manistique
Wehner, Merle E.....Manistique

DICKINSON-IRON COUNTIES

Addison, E. R.....412 Superior, Crystal Falls
Alexander, W. H.....Commercial National Bank Bldg., Iron Mountain
Anderson, Donald T.....400 Woodward Avenue, Iron Mountain
Boyce, G. H.....First National Bank Bldg., Iron Mountain
Browning, J. L.....212 East B Street, Iron Mountain
Carlson, R. E.....Commercial Bank Bldg., Iron Mountain
Cooper, C. A.....230 Washington Ave., Stambaugh
Frederickson, Geron (R).....826 East "A" St., Iron Mountain
Gladstone, W.....804 Main Street. Norway
Hayes, Willard N.....716 Main Street, Norway
Huron, W. H.....107 East "A" Street, Iron Mountain
Irvine, L. E.....326 W. Genesee, Iron River
Kofmehl, Wm. J.....Stambaugh
McEachran, H. D.....Commercial Bank Bldg., Iron Mountain
Palm, E. T.....412 Superior Street, Crystal Falls
Retallack, R. C.....326 W. Genesee, Iron River
Schmutzler, W. A.....373 Woodward, Iron Mountain
Schroeder, J. M.....1115 Stockbridge, Iron Mountain
Smith, Donald R.....105 East A Street, Iron Mountain
Steinke, C. G.....517 Stephenson, Iron Mountain

EATON COUNTY

Arner, Fred L.....231½ N. Main Street, Bellevue
Brown, B. P.....116 Pearl Street, Charlotte
Carothers, Daniel J.....315 S. Cochran, Charlotte
Cook, J. M.....Eaton Co. Health Dept., Charlotte
DeLand, C. L.....121 S. Main Street, Olivet
Engle, P. H.....121 S. Main Street, Olivet
Garlock, F. C.....Grand Ledge
Hannah, Harry W.....326 S. Cochran Street, Charlotte
Harrod, Gordon R.....Grand Ledge
Hoffer, W. E.....115 S. Washington St., Charlotte
Imthun, E. F.....113 E. Jefferson, Grand Ledge
Johnson, Robert C. (M).....Charlotte
Knecht, E. E. (M).....Charlotte
Landick, R. E.....111 S. Cochran, Charlotte
Meinke, A. H., Jr.....101 W. Plain Street, Eaton Rapids
Meinke, R. K. (A).....Morley
Myers, Albert W.....Potterville
Sevener, Lester G.....236 S. Cochran St., Charlotte
Shockley, B. F. (M).....111 S. Cochran St., Charlotte
Van Ark, Bert.....101 West Plain, Eaton Rapids
Van Ark, H. F.....101 W. Plain St., Eaton Rapids
Whitlock, Stanley C.....Dimondale
Willits, C. O.....201 W. Seminary, Charlotte

GENESEE COUNTY

Adams, Burnell H.....2002 E. Court St., Flint
Adams, Chester H.....1114 Beach St., Flint
Allen, Robert B.....Hurley Hospital, Flint
Anderson, H. H.....11280 N. Saginaw, Mt. Morris
Anderson, J. L.....220 Genesee Bank Bldg., Flint
Anderson, Robert E.....Hurley Hospital, Flint
Andrews, Nelson A. C.....310 E. Main St., Flushing
Anthony, George E. R.....1015 Detroit St., Flint
Backus, Glenn R.....633 Mott Foundation Bldg., Flint
Baird, W. C.....504 National Bldg., Flint
Bald, Frederick W.....610 Mott Foundation Bldg., Flint
Barbour, Fleming A...1439 Mott Foundation Bldg., Flint
Bardwell, Stanley.....McLaren General Hospital, Flint
Bareis, Reuben J.....Hurley Hospital, Flint
Baske, Franklin W.....923 Maxine Street, Flint
Batdorf, John.....Goodrich Gen. Hosp., Goodrich
Bateman, L. G.....1928 Lewis, Flint
Benson, J. C., Sr. (L).....727 Clifford St., Flint
Benson, John C. Jr.....709 Genesee Bank Bldg., Flint
Berman, Harry G.....3309 Fenton Rd., Flint 7
Bernstein, Eli N.....409 Kresge Bldg., Flint
Beyer, George D.....145 Vienna Street, Clio
Bishop, D. L.....2226 Detroit St., Flint 5
Blakeley, A. C.....310 E. Jefferson, Detroit
Blethen, Harry S., Jr.....St. Joseph Hospital, Flint
Bogart, Leon M.....1008 Genesee Bank Bldg., Flint
Boles, William P.....714 Beach St., Flint
Bradley, Robert M.....420 Genesee Bank Bldg., Flint
Bradley, Wm. J., III.....St. Joseph Hospital, Flint
Brain, R. Gordon.....509 First Nat. Bank Bldg., Flint
Branch, Hira E.....821 Mott Fd. Bldg., Flint
Brasie, Donald R.....907 Citizens Bank Bldg., Flint
Briggs, Guy D.....225 Genesee Bank Bldg., Flint
Bruce, William W.....5045 Morrish Road, Swartz Creek
Bryant, D. R.....621 Mott Foundation Bldg., Flint
Buchanan, Wm. F.....104 W. Caroline St., Fenton
Burkett, L. V.....411 County Court House, Flint
Burnell, Max R.....3301 Westwood Parkway, Flint
Bush, Raymond C.....Hurley Hospital, Flint
Cammack, Kirk V.....Hurley Hospital, Flint
Canlas, A. G.....St. Joseph Hospital, Flint
Canlas, A. L.....St. Joseph Hospital, Flint
Caster, E. Wilbur (L).....24711 Ridgedale, Oak Park 37
Chambers, Myrton S. .....839 Mott Fdtn. Bldg., Flint
Chapin, Maurice H.....Hurley Hospital, Flint
Charters, John H. (E).....Fenton
Chase, W. D.....702 Ballenger Hwy., Flint
Clark, Clifford P. (R).....515 Villa Bella Ave., Coral Gables, Fla.
Clark, R. L.....1004 Genesse Bank Bldg., Flint
Collins, James I.....902 Stockdale, Flint
Colwell, C. W.....706 Citizens Bk Bldg., Flint
Connell, John T.....305 Dryden Bldg., Flint
Conover, George V.....420 Genesee Bank Bldg., Flint
Conover, McClellan B.....312 Paterson Bldg., Flint
Conover, T. Sidney.....420 Genesee Bank Bldg., Flint
Cook, Henry.....326 Genesee Bank Bldg., Flint
Cook, Roger H.....St. Joseph Hospital, Flint
Cookingham, Cory E.....Hurley Hospital, Flint
Corbett, John J.....McLaren General Hospital, Flint
Coriasso, Louis B.....Hurley Hospital, Flint
Covert, Floyd L. (L).....116 Lord Street, Gaines
Coyne, Kenneth M.....Hurley Hospital, Flint
Coyouette, Paul.....McLaren General Hospital, Flint
Craig, William G. (M).....G 3176 W. Court St., Flint
Credille, Barney A.....813 Genesee Bank Bldg., Flint
Culver, John R.....St. Joseph Hospital, Flint
Curry, George J.....402 Genesee Bank Bldg., Flint
Curtin, John H.....A.C. Spark Plug Plant, Flint
Cutler, G. Campbell (M).....609 Sonny Way, La Jolla, Calif.
Davis, R. C.....3029 Flushing Rd., Flint
Dawson, Ralph E.....1021 Mott Foundation Bldg., Flint
DelZingro, Nicholas.....Davison
Denholm, Nan H.....811 Mott Foundation Bldg., Flint
Dickstein, Bernard.....605 National Bldg., Flint
Dimond, E. G.....209 Genesee Bk. Bldg., Flint
Dock, Norton.....Hurley Hospital, Flint

Dodds, Frederick E.....1336 Lewis St., Flint
Dodds, Max.....608 First National Bldg., Flint
Dooley, James J.....St. Joseph Hospital, Flint
Dorsey, Philip W.....220 Genesee Bank Bldg., Flint
Drewyer, Glenn E.....907 Welch Blvd., Flint
Dupuis, Jean Paul.....McLaren General Hospital, Flint
Dwyer, William.....McLaren General Hospital, Flint
Eichhorn, Ernest M.....1112 Mott Fdtn. Bldg., Flint
Eickhorst, Thomas N.....409 Dryden Building, Flint
Elliott, Hardie B.....1634 Mott Fdtn. Bldg, Flint
Engelman, R. M. .....717 Mott Fdtn. Bldg., Flint
Erhardt, John.....St. Joseph Hospital, Flint
Ettinger, Ralph D.....111 S. Walnut St., Fenton
Farah, Ben S.....5001 N. Saginaw St., Flint
Farhat, Maynard M.....620½ W. Court St., Flint
Fee, Manson G.....311 Kresge Bldg., Flint
Ferris, J. W.....426 N. State Street, Davison
Findorff, William G.....Hurley Hospital, Flint
Finkelstein, Theodore.....1415 Broadway, Flint
Firlotte, Robert W.....Hurley Hospital, Flint
Flowers, Neal S.....Hurley Hospital, Flint
Flynn, Southard T.....1121 Mott Fdtn. Bldg., Flint
Foley, Sydney I.....2217 Mason St., Flint
Fuller, Harvey T.....820 Genesee, Mt. Morris
Gebhart, Ralph.....Hurley Hospital, Flint
Gelenger, S. M.....Genesee County TB Sanatorium 702 Ballenger Hwy., Flint
Gleason, N. A.....1310 Mott Fdtn. Bldg., Flint
Goering, George R. (L).....519 Dryden Bldg., Flint
Goetz, Rudolf.....Hurley Hospital, Flint
Golden, H. Maxwell.....218 E. Court St., Flint
Goodfellow, B. T. (L).....506 Page Street, Flint
Gorne, Saul S.....619 Clifford St., Flint 3
Grady, Donald R.....1515 Woodslea Drive, Flint
Griffin, Ernest P., Jr.....621 Mott Fdtn. Bldg., Flint
Grover, H. F.....310 Dryden Bldg., Flint
Guile, Gurdon S.....1621 Dupont St., Flint
Gundry, G. L.....11736 Saginaw, Grand Blanc
Gutov, Isadore H.....607 Citizens Bank Bldg., Flint
Gutov, J. J.....607 Citizens Bank Bldg., Flint
Guyon, J. L.....302 W. Pierson Rd., Flint
Guyon, Mary Ann.....302 W. Pierson Road, Flint
Hackley, Richard D. (M).....4453rd USAF Hosp., Shaw AFB, S. C.
Hague, Robert F.....210 E. Court St., Flint 3
Halligan, Raymond S. (L).....405 East First St., Flint
Hallitt, John W.....Hurley Hospital, Flint
Hamady, Ruth B.....228 Welch Blvd., Flint
Hamilton, A. J.....Fisher Body Co. No. 2 3100 Van Syke Road, Flint
Hamilton, James G.....Hurley Hospital, Flint
Hardy, Allen T.....McLaren General Hospital, Flint
Harper, Homer.....Buick Motor Co., Flint
Harris, Donald R.....Hurley Hospital, Flint
Hauser, Frederick V.....1012 Mott Fdt. Bldg., Flint
Hawkins, James E.....1226 Leith St., Flint
Heinemann, Herman J.....St. Joseph Hospital, Flint
Heiny, Robert J.....Hurley Hospital, Flint
Hennessey, Charles (M).....33 Sta. Hosp., APO 69, New York, N. Y.
Hennessy, John P.....McLaren General Hospital, Flint
Hicks, William K.....St. Joseph Hospital, Flint
Hing, Wm. N. G.....326 Stockdale, Flint
Hiscock, Harold H.....1315 Mott Fdtn. Bldg., Flint
Hooper, Kendall.....714 Beach St., Flint
Houk, Joseph T.....Hurley Hospital, Flint
Hubbard, Wm. B.....302 Patterson Bldg., Flint
Hufton, W. L.....721 W. Sixth Avenue, Flint
Hunter, Thomas V.....Hurley Hospital, Flint
Hurd, Clayton E.....300 Roberts St., Fenton
Irish, Laurence R.....Hurley Hospital, Flint
Jaarsma, R. A.....1604 Mott Fdtn. Bldg., Flint
Johnson, Arthur H.....3219 North Street, Flint
Johnson, Frank D.....312 Paterson Bldg., Flint
Johnson, Raymond E.....907 Welch Blvd., Flint 4
Jones, David G.....Hurley Hospital, Flint
Jones, Lafon.....1004 Genesee Bank Bldg., Flint
Jordan, P. H.....302 W. Second Avenue, Flint
Judd, A. E.....2315 Davison Road, Flint
Kaufman, L. D.....4002 N. Saginaw, Flint
Kimbrough, C. B.....1402 S. Saginaw St., Flint
Kline, O. Foster, Jr.....Hurley Hospital, Flint
Knapp, William D.....1621 Mott Fdtn. Bldg., Flint
Koepke, Benjamin F.....Hurley Hospital, Flint
Koop, Chester S.....2503 Detroit St., Flint
Kretchmar, Arthur H.....608 First Nat'l Bldg., Flint
Kurtz, John J.....421 Dryden Bldg., Flint
Kwak, John.....St. Joseph Hospital, Flint
Laird, James I.....10114 Main Street, Goodrich
Leach, J. Leonidas.....3007 Industrial Avenue, Flint
Lewis, T. E. (M).....4047 Mitchell Dr., Flint
Limbach, David R.....Hurley Hospital, X-Ray Dept., Flint
Livesay, Jackson E.....621 Mott Fdtn. Bldg., Flint
Logan, George W. (L).....Flushing
Lukens, T. John .....1103 Mott Fdtn. Bldg., Flint
Lundeen, Richard M.....McLaren General Hospital, Flint
Lyttle, Sidney N.....615 Mott Fdtn. Bldg., Flint
MacGregor, Delbert M.....701 Dayton, W., Flint
Macksood, Joseph A.....2501 N. Saginaw St., Flint
Macksood, William E.....Hurley Hospital, Flint
Macon, Edward M.....McLaren General Hospital, Flint
Maixner, Reynold R.....McLaren General Hospital, Flint
Manwaring, John T.....1303 Mott Fdtn. Bldg., Flint
Markunas, Paul J.....Hurley Hospital, Flint
Marjerrison, Gordon L.....McLaren Gen. Hosp., Flint
McCabe, Margaret M.....420 Genesee Bank Bldg., Flint
McClellen, Junius W.....Chevrolet Flint Assembly Div., Van Slyke at Atherton Rd., Flint 3
McCubbrey, David, Ist Lt. MC (M)....194 Med. Det., APO 227, New York, New York
McGarry, Burton G. (L).....202 E. Caroline St., Fenton
McGarry, Roy A.....418 Dryden Bldg., Flint
McKenna, Oscar W. (E).....325 Stevens Street, Flint
McLeod, K. W. A.....2801 N. Saginaw, Flint 5
McTaggart, David, Capt. MC (M)....388 TAC Hospital, APO 87, New York, New York
Mendrek, Henry H.....McLaren General Hospital, Flint
Michael, Stanley L.....Hurley Hospital, Flint
Michael, S. R.....907 Welch Blvd., Flint
Michels, Robert M.....409 N. Saginaw St., Flushing
Michelson, R. B.....5001 N. Saginaw St., Flint
Miller, Loren Eugene.....2645 Corunna Road, Flint 3
Miltich, Anthony J.....415 Dryden Bldg., Flint
Moody, Fred J.....St. Joseph Hospital, Flint
Moore, Kenneth B.....1613 Mott Fdtn. Bldg., Flint
Moore, Wesley P.....3101½ Industrial Ave., Flint
Morrish, Ray S.....1715 Crescent Drive, Flint
Morrison, William H.....205 Perry Road, Grand Blanc
Morrissey, V. H.....101 Stockdale St., Flint
Morton, Joseph.....X-Ray Dept., Hurley Hosp., Flint
Mosier, Edward C.....115 Lake St., Otisville
Murphy, E. Grant.....7316 Calkins Road, Flint
Myers, Robert D.....McLaren General Hospital, Flint
Neiswander, Paul L.....Fisher Body Truck Plant Grand Blanc
Nicholls, W. W.....Mott Clinic, Hurley Hosp., Flint
Nishioka, George.....Hurley Hospital, Flint
Odle, Ira D.....201 Welch Blvd., Flint
Olson, Walter R.....McLaren General Hospital, Flint
Orr, J. Walter (L).....Orrs Point, Lake Fenton, Fenton
Osher, Seymour L.....218 E. Court Street, Flint
Parliament, Bert.....Hurley Hospital, Flint
Parsons, James L.....Hurley Hospital, Flint
Petropoulos, Gust C.....McLaren General Hospital, Flint
Pfeifer, Archibald C.....11610 N. Saginaw St., Mt. Morris
Phelps, Lynn.....Goodrich Gen. Hospital, Goodrich
Phillips, Robert L.....Nokomis, Fla.
Phillips, R. W.....829 Stockdale, Flint
Pickering, W. H.....1602 Ballenger Hwy., Flint
Pike, Wallace W.....Hurley Hospital, Flint
Pine, Donald K.....Hurley Hospital, Flint
Portney, Jack.....2415 Detroit St., Flint
Pougnet, W. D.....McLaren General Hospital, Flint
Pratz, Oliver C.....1303 Detroit St., Flint
Preston, Otto J.....300 N. Chevrolet Avenue, Flint

Purcell, F. L., Jr.....Ternstedt Plant, Coldwater Rd., Flint
Quarry, J. Gregory.....St. Joseph Hospital, Flint
Ragan, Russell M.....3602 Beecher, Flint 3
Ragusa, Robert P.....Hurley Hospital, Flint
Rahn, J. Paul.....Hurley Hospital, Flint
Rapport, Richard L.....715 Mott Foundation Bldg., Flint
Rawling, J. C.....1121 Mott Fdtn. Bldg., Flint
Rawlings, J. Mott.....1601 Neome Drive, Flint
Ready, Norris H.....Hurley Hospital, Flint
Reed, William L.....St. Joseph Hospital, Flint
Reichard, Orill (L).....1507 Detroit St., Flint
Reid, John H.....Hurley Hospital, Flint
Reid, Wells C.....Goodrich General Hospital, Goodrich
Reynolds, Arthur J. (L).....910 E. Kearsley St., Flint
Richardson, Josephine W.....2610 Davison Road, Flint
Rieth, George F.....1402 Davison Road, Flint
Ringrose, Douglas.....McLaren General Hospital, Flint
Roberts, Floyd A. (L).....428 Thompson Street, Flint
Rowe, John B.....202 Paterson Building, Flint
Rulney, Max.....1128½ Chevrolet Ave., Flint
Rundles, Walter Z.....304 First Nat. Bldg., Flint
Rundles, Walter Z., Jr.....304 First Nat. Bldg., Flint
Sallis, Douglas A.....St. Joseph Hospital, Flint
Sandberg, Russell G...1315 Mott Foundation Bldg., Flint
Sandy, Kenneth R.....2701 Detroit St., Flint
Sanocki, Fred F.....St. Joseph Hospital, Flint
Scavarda, Charles J.....304 First Nat. Bldg., Flint
Schiff, B. A.....323 W. Second Street, Flint
Schreiber, E. Oskar.....421 Kresge Building, Flint
Schroeder, Paul E.....Hurley Hospital, Flint
Schultz, J. Stanley.....3327 Fleming Road, Flint
Schumacker, Donald R.....St. Joseph Hospital, Flint
Schwartz, J. M.....4300 S. Saginaw St., Fisher Body Plant No. 1, Flint
Scott, Robert D.....1215 Detroit Street, Flint
Searles, Karl F.....2932 Corunna Road, Flint
Seymour, G. D.....Prof. Bldg., Clio
Shantz, Leighton O.....1239 Mott Fdtn. Bldg., Flint
Sheeran, Daniel H.....809 Genesee Bank Bldg., Flint
Sherman, Arthur G.....Hurley Hospital, Flint
Shipman, Charles W.....325 E. First St., Flint
Shore, Roy H.....McLaren General Hospital, Flint
Simoni, Lewis E.....3210 S. Dort Highway, Flint
Sirna, Anthony R.....Chevrolet Motor Co., 300 N. Chevrolet Ave., Flint
Smith, Eugene C.....814 Mott Fdtn. Bldg., Flint
Smith, H. O.....821 Mott Foundation Bldg., Flint
Smith, Maurice J.....2801 N. Saginaw, Flint
Sniderman, Benjamin F.....727 Beach Street, Flint
Snyder, Charles E.....8042 Miller Road, Swartz Creek
Sorkin, Morris L.....718 Beach St., Flint
Sorkin, Samuel S.....718 Beach St., Flint
Sparks, Harvey V.....603 First National Bldg., Flint
Steffe, Ralph S.....610 Mott Fdtn. Bldg., Flint
Steinman, Floyd H.....734 Mott Fdtn. Bldg., Flint
Stevens, P. K.....201 Michigan Theatre Bldg., Flint
Stevenson, Basil M., Jr.....Hurley Hospital, Flint
Stevenson, William W.....416 Kresge Bldg., Flint
Streat, Rudolph W.....218 East 8th St., Flint
Strong, K. H. (M)....110 Young Dr., Lakeview Subdiv., Fairfield, Ill.
Stroup, Clayton K.....2002 E. Court Street, Flint
Sullivan, McDermott.....Hurley Hospital, Flint
Sutherland, James K.....402 E. Third St., Flint
Teague, Robert C.....McLaren General Hospital, Flint
Theverle, W. I.....3101½ N. Saginaw, Flint
Thompson, Charles A.....Hurley Hospital, Flint
Thompson, Jack W.....507 Citizens Bank Bldg., Flint
Thorburn, Grant.....702 Ballenger Hwy., Flint
Thornbury, John R.....Hurley Hospital, Flint
Tofteland, Elmer H.....302 W. Third Ave., Flint
Tower, Rita B.....Genesee Co. San., 702 Ballenger Hwy., Flint
Treat, David L. (L).....1110 S. Drive, Flint
Turner, Merald G.....316 Dryden Building, Flint
Tuuri, Arthur L. (M)....Mott Clinic, Hurley Hosp., Flint
Van Harn, R. S.....5009 N. Saginaw St., Flint
Varney, Howard L.....1415 Broadway, Flint
Vary, Edwin P.....608 First National Bldg., Flint
Vaughan, Edgar J.....Linden
Vaughan, William R.....Hurley Hospital, Flint
Walcott, Carver G.....201 E. Caroline, Fenton
Ward, Nellie M.....1139 Mott Fdtn. Bldg., Flint
Ware, Frank A.....514 Genesee Bank Bldg., Flint 3
Wark, David R.....1315 Detroit, Flint
Wells, Richard D.....Hurley Hospital, Flint
Wentworth, John E.....1651 Chevrolet Ave., Flint
Weresh, John Jr.....Hurley Hospital, Flint
Werness, Inga W.....304 First Nat'l Bank Bldg., Flint
White, C. H.....106 River Street, Fenton
White, Frank T.....Hurley Hospital, Flint
White, Herbert T. (L).....1620 Mason Street, Flint
Williams, Calvin.....Hurley Hospital, Flint
Williams, W. S.....G-3398 S. Saginaw St., Flint
Willoughby, Gordon L.....5009 N. Saginaw St., Flint
Willoughby, Leslie L. (L).....1402 Davison Rd., Flint
Wills, Thomas N.....706 W. Court St., Flint
Winchester, Walter H. (L).....515 Genesee Bank Bldg., Flint
Wingert, John G.....Hurley Hospital, Flint
Woughter, Harold W.....1312 Mott Fdtn. Bldg., Flint
Wright, Donald R.....403 W. Court St., Flint
Wyatt, W. W.....1317 Riverdale Rd., Flint
Wysocki, Donald J.....Hurley Hospital, Flint
Zeis, M. G. (M).....718 Beach Street, Flint

GOGEBIC COUNTY

Albert, Samuel G.....119 Suffolk St., Ironwood
Anderson, Charles E.....Anvil Location, Bessemer
Ashe, H. S.....210 S. Suffolk St., Ironwood
Davidson, Donald L.....200 So. Sophie St., Bessemer
Eisele, D. C.....2nd Fl., 109 E Aurora St., Ironwood
Franck, John R., Jr.....401 Sunday Lake, Wakefield
Gertz, M. A.....109 E. Aurora Street, Ironwood
Gingrich, W. A.....2nd Fl., 109 E. Aurora St., Ironwood
Gorilla, A. C.....2nd Fl., 210 S. Suffolk St., Ironwood
Harrington, R. R., Jr.....103 S. Suffolk St., 2nd Floor Ironwood
Keskey, T. J.....207 E. Aurora St., Ironwood
Lieberthal, M. J.....104 S. Suffolk, Ironwood
Lieberthal, Paul R.....104 S. Suffolk, Ironwood
McEnroe, J. E.....Newport Hospital, Ironwood
O'Brien, A. J. (L).....Gogebic Clinic, 216 E. Aurora St., Ironwood
Pinkerton, H. A.....Newport Hospital, Ironwood
Santini, F. J.....109 E. Aurora St., Ironwood
Stevens, Charles E.....Gogebic Clinic, 216 E. Aurora St., Ironwood
Tashiro, Kiyo.....Grand View Hospital, Ironwood
Tressel, Henry A.....Wakefield
Wacek, W. H.....Grand View Hospital, Ironwood

GRAND TRAVERSE-LEELANAU-BENZIE COUNTIES

Beall, J. G.....118½ E. Front, Traverse City
Benjamin, M. B.....Traverse City State Hosp., Traverse City
Bolan, Ellis J.....Suttons Bay
Brownson, K. M.....116 Cass St., Traverse City
Brunk, C. F.....Route No. 1, Traverse City
Bushong, B. B.....116 Cass St., Traverse City
Campbell, T. D.....Kingsley

Dunn, C. W.....State Hospital, Traverse City
Ellis, Claude I.....Suttons Bay
Ferguson, J. T.....Traverse City State Hosp., Traverse City
Garneau, R. R.....515 State Street, Traverse City
Godfroy, B. M. P.....400-2nd ASV-VSA Hosp., Camp Chaffee, Ark.
Goodrich, Dwight (R)....601 W. Front St., Traverse City
Haberlein, Charles R.....438 W. Front St., Traverse City
Hall, J. W.....212½ E. Front, Traverse City
Hamilton, E. E.....530 S. Union St., Traverse City
Herkner, Mildred L.....119 Barlow St., Traverse City
Huene, Nevin.....112 E. Front, Traverse City
Huston, Russell R.....Elk Rapids
Jerome, J. T.....217 S. Madison, Traverse City
Lemen, C. E.....216½ E. Front, Traverse City
Lossman, Robert T.....Munson Hospital, Traverse City
McClay, A. C.....6330 Peninsula Dr., Traverse City
Merritt, H. E.....112½ E. Front St., Traverse City
Miller, Charles Scott.....Traverse City State Hospital Traverse City
Milliken, John G.....215 S. Madison Traverse City
Nickels, M. M.....Traverse City State Hospital Traverse City
Osterhagen, H. F.....MR-11, Box 38, Traverse City
Osterlin, Mark F.....Central Michigan Childrens Clinic Traverse City
Pike, D. G.....876 E. Front, Traverse City
Power, Frank H.....116 Cass St., Traverse City
Salon, Dayton D.....108½ E. Front Street Traverse City
Sheets, R. P.....Traverse City State Hospital Traverse City
Sheffer, M. B.....Traverse City State Hosp., Traverse City
Sladek, E. F.....123 E. Front St., Traverse City
Smith, Cody (M) .....(No Address)
Stokes, G. E.....State Bank Bldg., Traverse City
Stone, Fordyce H.....Beulah
Swartz, F. G.....301 State Bank Bldg., Traverse City
Sweeney, Bernard.....227½ Grandview Pkwy., Traverse City
Thacker, Fred R.....Frankfort
Thirlby, E. L. (L).....116 Cass, Traverse City
Thirlby, Richard L.....711 Second Street, Traverse City
Trautman, Frederick D.....Frankfort
Van Leuven, B. H. (R).....Empire
Way, L. R. (R).....436 E. State, Traverse City
Weitz, H. L.....529 Monroe, Traverse City
Wieh, J. E.....118½ E. Front, Traverse City
Wilcox, P. H.....526 W. 10th Street, Traverse City
Wiley, P. K.....Elk Rapids
Zielke, I. H.....212 E. Front, Traverse City
Zimmerman, J. G.....306 State Bank Bldg., Traverse City

GRATIOT - ISABELLA - CLARE COUNTIES

Aldrich, Alfred L.....Ithaca
Barstow, D. K.....215 W. Saginaw St., St. Louis
Barstow, W. E. (L).....215 W. Saginaw St., St. Louis
Becker, M. G.....Edmore
Bedo, A. V.....906 S. Franklin, Mt. Pleasant
Bergin, Joseph H.....1437 Michigan, Alma
Budge, M. J.....1035 Jefferson, Ithaca
Burch, L. J. (E).....314 E. Broadway, Mt. Pleasant
Burt, C. E.....110 S. Pine River, Ithaca
Burt, Loren G.....Alma
Chamberlain, R. W.....608 E. Chippewa, Mt. Pleasant
Chamichian, S. L.....Mt. Pleasant
Davis, L. L.....314 S. Brown St., Mt. Pleasant
Drake, Wilkie M. (E).....Breckenridge
Dubois, C. F.....706 State Street, Alma
Graham, B. J.....226 N. State St., Alma
Hall, R. F.....805 Douglas St., Mt. Pleasant
Hammerberg, Kuno.....622 McEwan, Clare
Harrigan, W. L.....408 E. Broadway, Mt. Pleasant
Hedges, Frank W.....General Delivery, Edmore
Hersee, W. E.....306 S. College, Mt. Pleasant
Hobbs, A. D.....120 W. Center Street, St. Louis
Hoogerland, C. L.....236 N. State Street, Alma
Hyslop, L. F.....612 S. Kinney St., Mt. Pleasant
Johnson, P. R.....206 S. College Ave., Mt. Pleasant
Juhnke, L. W.....1050 E. Maple St., Mt. Pleasant
Kilborn, H. F.....Ithaca
McArthur, Stewart C.....Clare
Oldham, E. S.....Breckenridge
Palmer, F. W.....P. O. Box 32, Mt. Pleasant
Putzig, L. W.....Blanchard
Ringer, P. H.....314 S. Brown St., Mt. Pleasant
Rottschafer, J. L.....715 Center St., Alma
Silvert, Pasche P.....Vestaburg
Strange, R. H.....630 S. College, Mt. Pleasant
Waggoner, R. L.....120 W. Center St., St. Louis
Wallman, C. H.....901 State Street, Alma
Wickert, L. R.....203 N. Fancher, Mt. Pleasant
Wilcox, R. A.....203 W. End Street, Alma
Wilson, Earl C.....Harrison
Wolfe, K. P.....427 W. Superior, Alma
Wood, C. B.....R. F. D. No. 2, Mt. Pleasant
Wood, J. M.....815 E. Maple, Mt. Pleasant

HILLSDALE COUNTY

Bates, M. P.....108 S. Manning, Hillsdale
Davis, L. A.....Camden
Davis, W. B.....Camden
Day, Luther W.....112 E. Chicago St. Jonesville
Hanke, George R. (L).....R.F.D., Osseo
Hodge, C. L.....Reading
Hughes. Henry F. (L).....Hillsdale
Kline, Fred.....Litchfield
MacNeal, John A.....76 Manning Street, Hillsdale
Martindale, E. A. (L).....Hillsdale
Mattson, H. F.....32 S. Broad St., Hillsdale
McFarland, O. G. (L).....North Adams
Michel, William O.....407 Kirk St., Ann Arbor
Miller, Harry C. (L).....4760 Panorama Drive, San Diego 3, Calif.
Peterson, C. A. (M).....32 Broad Street, Hillsdale
Sawyer, W. W.....61 N. Howell St., Hillsdale
Stein, Arthur J.....144 Budlong Street, Hillsdale
Strom, Arthur W.....32 S. Broad Street, Hillsdale
Trapp, Donald G.....32 S. Broad St., Hillsdale
Wiggins, Ira W.....230 E. Chicago St., Jonesville

HOUGHTON - BARAGA - KEWEENAW COUNTIES

Aldrich, A. B.....503 Sheldon Avenue, Houghton
Aldrich, L. C.....1609 E. Houghton, Houghton
Bourland, P. D. (L)....134½ Calumet Avenue, Calumet
Bourland, P. E. M., Lt. Col., MC.....Med. Sec. Hqs., USARAL, APO 949, Seattle, Wash.
Brewington, G. F. (E).....1805 Walnut Ave., Las Vegas, Nev.
Burke, John J.....10 Duncan Avenue, Hubbell
Gregg, W. T. S. (E).....Eagle Harbor
Hillmer, Raymond E.....1 Algomah, Painesdale
Hosking, F. S.....328 Florida Street, Laurium
Janis, Anton J.....East Hancock, Hancock
King, Sidney.....St. Joseph Hospital, Hancock

King, William T. (E).....Ahmeek
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Kolb, F. E.....128 Calumet, Calumet
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Larson, Forrest W.....1400 E. Houghton, Houghton
Lepisto, V. E.....414 Hecla Street, Laurium
Levin, Simon (E).....1209 College Avenue, Houghton
Lund, C. A. E.....1205 Calumet St., Lake Linden
Murphy, P. J.....130 Calumet, Calumet
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Repola, Kenneth L.....338 Iroquois St., Laurium
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Roche, Andrew M.....240 Pewabic St., Laurium
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Stroube, J. A.....Baraga County Memorial Hosp., L'Anse
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Wickliffe, J. T. P. .....1167 Calumet Avenue, Calumet
Winkler, Henry J.....L'Anse

HURON COUNTY

Bash, T. L.....Kinde
Dixon, Ralph C.....Pigeon
Elliott, C. S.....Pigeon
Gettel, Roy R.....Bad Axe
Herrington, Charles I.....Bad Axe
Herrington, Willet J.....Bad Axe
Monroe, Duncan J. (L).....Elkton
Oakes, C. W., Jr.....Harbor Beach
Ritsema, John.....Sebewaing
Scheurer, Clare A.....Pigeon
Sorenson, M. G.....P. O. Box, Elkton
Steinhardt, Edward E.....Elkton
Thompson, J. E.....Caseville
Turner, Phillip R.....Harbor Beach
Wible, Charles F.....Sebewaing

INGHAM COUNTY

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Alexander, Reuben G.....301 Seymour, Lansing
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Behen, William C.....535 S. Capitol, Lansing
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Berens, B. M.....110 N. Rosemary, Lansing
Berge, R. E. (A).....Edward W. Sparrow Hosp., Lansing
Bevez, Frank L.....Med. Co. 87th Reg. APO 162, c/o P.M., New York
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Black, Gertrude C. K...529 W. Grand River, Williamston
Borden, Eleanor A. (A).....Edward W. Sparrow Hosp., Lansing
Bowersox, R. J.....108 Division, East Lansing
Bradford, C. W.....419 S. Walnut, Lansing
Breakey, Robert S.....1211 Bank of Lansing Bldg., Lansing
Breitenecker, Ruediger (A)....Edward W. Sparrow Hosp., Lansing
Brown, Fred W., Jr.....536 Tussing Bldg., Lansing
Brubaker, Earl W.....1406 Bank of Lansing Bldg., Lansing
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Calomeni, Anthony D.....309 Seymour, Lansing
Carlson, R. G.....1136 Hapeman Street, Lansing
Carr, Earl I.....300 W. Ottawa, Lansing
Chaskes, Marion Iddings.....226 S. Capitol Avenue Lansing
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Christian, L. G.....108 E. St. Joseph, Lansing
Clark, W. E.....136 W. Ash St., Mason
Clinton, George R.....136 W. Ash Street, Mason
Combs, R. G.....300 W. Ottawa, Lansing
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Cope, H. E.....Michigan Dept. of Health, Lansing
Cordes, J. F.....512 Michigan Nat'l Tower, Lansing
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Cowan, J. A.....825 Touraine, East Lansing
Cummings, G. D.....Mich. Dept. of Health, Lansing
Darling, L. H.....115 W. Hillsdale, Lansing
Dart, Dorothy.....300 W. Ottawa St., Lansing
Dawe, C. D.....521 N. Capitol Ave., Lansing
Dean, Carleton.....252 Hollister Bldg., Lansing
De Kleine, William.....301 Seymour St., Lansing
DeVries, C. L. F.....320 Townsend, Lansing
Dexter, Mary J.....129 E. Maple, Mason
Doyle, C. P. (E)....1408 Bank of Lansing Bldg., Lansing
Drolett, Alfred J.....900 Prudden Bldg., Lansing
Drolett, Donald J.....609 N. Washington Ave., Lansing
Drolett, Lawrence A.....903 Prudden Bldg., Lansing
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Garlinghouse, A. John (M).....408 N. Capitol, Lansing
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Govons, S. R.....215 N. Walnut St., Lansing
Harris, Herbert W.....609 N. Washington, Lansing
Harrison, W. H.....834 W. St. Joseph, Lansing
Harrold, J. F.....326 W. Ionia St., Lansing
Hart, L. C.....119 W. Lenawee, Lansing
Hautau, Emily R.....308 Highland Ave., East Lansing
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Hayford, William D.....609 N. Washington Avenue, Lansing
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Stanley, Arthur L.....401 W. Greenlawn, Lansing
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Stimson, Paul R.....517 S. Grand Ave., Lansing
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Stow, Robert M.....512 Michigan Nat'l Tower, Lansing
Strauss, P. C.....408 Am. State Bank Bldg., Lansing
Stringer, C. J.....401 W. Greenlawn, Lansing
Sundell, Edwin C.....122 W. Hillsdale St., Lansing
Swartz, F. C.....215 N. Walnut St., Lansing
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Tamblyn, F. W.....335 Seymour, Lansing
Talanda, Edward (A).....St. Lawrence Hosp., Lansing
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Tooze, F. M.....215 N. Walnut St., Lansing
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IONIA-MONTCALM COUNTIES

Anderson, Donald H.....Portland
Bird, Wm. L.....Greenville
Bracey, L. E. (L).....Sheridan
Buck, Jack .....Ionia
Bunce, E. P.....Trufant
Bunce, Leo W.....Trufant
Campbell, R. E.....106 N. Depot St., Ionia
Dunkin, Lloyd S.....Greenville
Fleming, J. W. C.....Pewamo
Foust, Joseph C.....Ionia
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Hansen, M. M.....Greenville
Haskell, Robert H.....Wayne Co. Training School, Northville
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House, G. W., Jr.....810 Macomber St., Greenville
Kazmers, Nikolas.....Lakeview
Kelsey, L. E.....Lakeview
Kopchick, Joseph.....Muir
Lilly, Isaac S.....Stanton
Lincoln, Norman.....Lake Odessa
Marston, L. L.....Lakeview
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Pates, Donald C.....Belding
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Robertson, P. C.....Ionia State Hosp., Ionia
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Socha, Edmund S.....Ionia
Stevens, C. E.....Stanton
Swift, E. R. (L).....Lakeview
Tannheimer, J. F.....Ionia
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Adams, Ellis W.....517 Wildwood, Jackson
Ahronheim, J. H.....1410 Greenwood, Jackson
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Baker, George M.....Parma
Bartholic, Frank W.....Rives Junction
Beckwith, Sidney A.....Stockbridge
Bentley, Mary M.....404 McNeal St., Jackson
Bentley, J. P.....404 McNeal St., Jackson
Brashares, Z. A.....Brooklyn
Bullen, G. Rex.....418 Third, Jackson
Clarke, Corwin S.....605 Dwight Bldg., Jackson
Cochrane, Wayne A. (L).....409 McBride St., Jackson
Cooley, Charles W.....Mercy Hosp., Jackson
Cooley, Randall M.....141 East Robinson, Jackson
Corley, Cecil.....204 Homecrest Road, Jackson
Corley, E. H. .....1211 W. Franklin St., Jackson
Corley, Robert.....204 Homecrest Rd., Jackson
Cox, Ferdinand (L).....434 Wildwood Ave., Jackson
Culver, Guy D. L. (A).....Stockbridge
DeMay, Cuthbert E.....403 E. Michigan, Jackson
DeMay, John D.....403 E. Michigan, Jackson
Deming, Richard C.....517 Wildwood, Jackson
Dengler, Charles R.....504 Third St., Jackson
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McLaughlin, J. M.....710 S. Brown St., Jackson
McLaughlin, M. J.....710 S. Brown St., Jackson
McLauthlin, Herbert B.....439 Wildwood Ave., Jackson
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Munro, Colin D. (E)....740 W. Michigan Ave., Jackson
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Stewart, L. L., Jr.....901 Reynolds Bldg., Jackson
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Stonehouse, G. G.....26 Sheldon Ave., S. E., Grand Rapids
Stoneman, Fernley.....11 South Wilson, Grandville
Stover, Virgil E.....1719 Madison, S.E., Grand Rapids
Stuart, Gerhardus J. (L).....Metz Bldg., Grand Rapids
Sugg, Cullen E.....303 E. Fulton, Grand Rapids
Sugiyama, Tetsuo....124 E. Fulton Street, Grand Rapids
Summers, John E.....700 Fuller, N.E., Grand Rapids
Swanson, A. B.....1810 Wealthy St., S. E., Grand Rapids
Swenson, H. C.....124 East Fulton Street, Grand Rapids
Ten Have, John.....806 Leonard, N.W., Grand Rapids
Tesseine, Arthur J.....242 Jefferson Ave., S.E., Grand Rapids
Teusink, J. H.....Cedar Springs

Thompson, A. B.....1810 Wealthy Street, S.E., Grand Rapids
Thompson, Edward C.....26 Sheldon Avenue, S.E., Grand Rapids
Thompson, F. D.....33 Gladstone, S.E., East Grand Rapids
Tidey, Marcus B.....456 Cherry, S.E., Grand Rapids
Tiffany, Joseph C.....110 E. Fulton St., Grand Rapids
Truog, C. Peter.....110 E. Fulton St., Grand Rapids
Uthoff, Carl W.....68 Ransom Ave., N.E., Grand Rapids
Valdmanis, Ferdinands (A).....333 Fuller Ave., S.E., Grand Rapids
VanBree, R. S.....124 E. Fulton St., Grand Rapids
VandenBerg, Allison R.....26 Sheldon Avenue, S. E., Grand Rapids
VandenBerg, Henry J. (L).....Blodgett Medical Bldg., Grand Rapids
Vanden Berg, W. O. (M)..U.S. Naval Ord. Testing Sta., Inyokern, China Lake, Calif.
Vander Kolk, Kenneth J. (A).....Zeeland
VanderMeer, Raymond.....26 Sheldon Avenue, S.E., Grand Rapids
Vander Molen, John.....1123 Walker Ave., N.W., Grand Rapids
Vander Ploeg, W. H.....980 Hall St., S.E., Grand Rapids
Van Der Veer, C. G.....68 Ransom St., N.E., Grand Rapids
VanDuine, Henry J.....26 Sheldon Avenue, S. E., Grand Rapids
VanGoor, Kornelius.....2547 Willard Avenue, Grand Rapids
VanNoord, Gelmer A.....6850 Division, S., Grand Rapids
Van Portfliet, Paul.....26 Sheldon Avenue, S. E., Grand Rapids
Van Solkema, Andrew A.....953 E. Fulton, Grand Rapids
Van Solkema, Arthur.....64 State, W., Grandville
Van't Hof, Albert.....110 E. Fulton Street, Grand Rapids
VanWoerkom, Daniel.....750 W. Leonard, Grand Rapids
Van Zwalenburg, Benjamin R.....833 Lake Drive, S.E., Grand Rapids
Vecchio, T. J.....26 Sheldon Ave., S. E., Grand Rapids
Veldman, Harold E.....26 Sheldon, S.E., Grand Rapids
Venema, Jay R.....26 Sheldon Ave., S. E., Grand Rapids
Ver Meulen, John..2400 Wyoming, S. W., Grand Rapids
Ver Meulen, Peter (A).....105 Baynton, N.E., Grand Rapids
Verwys, A. L. Hubert....815 Alger, S. E., Grand Rapids
Vining, Keats K. Jr.....833 Lake Drive, S. E., Grand Rapids
Vis. William R.....26 Sheldon Ave., S. E., Grand Rapids
Voss, J. A.....2060 Alpine Avenue, N. W., Grand Rapids
Vyn, Jay D.....3329 Coit, N. E., Grand Rapids
Wahby, Elmer F. (M).....300 Bostwick, N.E., Grand Rapids
Waterman, Donald F.....833 Lake Drive, S.E., Grand Rapids
Webb, Clarence F.....833 Lake Drive, S.E., Grand Rapids
Webber, Jerome E.....310 East Fulton St., Grand Rapids
Weller, Keith E.....1200 Lake Drive, S.E., Grand Rapids
Wells, S. M., Jr.....110 E. Fulton St., Grand Rapids
Wenger, Aaron V. (E).....132 Grand Avenue, N.E., Grand Rapids
Wenger, John N.....Coopersville
Whalen, J. M. (M).....USN, Marine Barracks, Camp Pendleton, 1403 Green Cove Rd., Oceanside, Calif.
Whinery, J. B. (E).....1403 Green Cove Road. Winter Park, Fla.
Whinery, Joseph F.....16 Monroe Ave., Grand Rapids
Whittenberger, Robert N.....833 Lake Drive, S.E., Grand Rapids
Wiarda, Roy J...1539 Plainfield, N. E., Grand Rapids 5
Wiese, John L.....310 E. Fulton Street, Grand Rapids
Wilkes, John B...1328 Madison Ave., S.E., Grand Rapids
Williams; John R.....833 Lake Drive, S.E., Grand Rapids
Wilson, William E. (R).....37 Prospect Ave., N.E., Grand Rapids
Winfield, Emory D.....457 Burton, S. E., Grand Rapids
Winter, Garrett E.....1967 Godfrey, S. W., Grand Rapids
Wright, Thomas B.....1571 Wealthy, S.E., Grand Rapids
Wurz, John F.....26 Sheldon, S. E., Grand Rapids
Yared, Jerome A.....1974 S. Division, Grand Rapids
Yegge, J. P.....Kent City

LAPEER COUNTY

Bishop, G. Clare.....Almont
Boruch, Leon R. (M).....Drawer "A", Lapeer
Buchanan, Thomas.....Imlay City
Burley, David H. (E).....Almont
Chapin, Clarence D. (L).....Columbiaville
Conaway, Charles.....Lapeer
Dorland, Clarke D.....Lincoln Street, Lapeer
Doty, James R.....Clay Street, Lapeer
Greaver, Cornell.....North Branch
Lebedovyich, Emil.....Drawer A, Lapeer State Home, Lapeer
Leith, Dorothy L.....Imlay City
McBride, John R.....915 Liberty St., Lapeer
Merz, Henry G. (E).....Lapeer
O'Brien, Daniel J.....Nepessing St., Lapeer
Rehn, Adolph T.....Medical Supt., Lapeer State Home, Lapeer
Smith, Ellen B.....Lapeer State Home & Trg. School, Lapeer
Smith., G. L.....1113 E. Third Street, Imlay City
Thomas, J. Orville (E).....North Branch
Zemmer, Harry B.....Clay Street, Lapeer
Zolliker, C. R.....P. O. Drawer A, Lapeer

LENAWEE COUNTY

Benz, Carl A.....308 N. Broad St., Adrian
Blanchard, L. E.....301½ W. Main St., Hudson
Blanden, Merwin R.....Ford Building, Tecumseh
Claxton, W. T.....136 Chicago Street, Britton
Cook, C. L.....Ford Building, Tecumseh
Dustin, Richard E.....103 W. Brown Street, Tecumseh
Eddy, H. R. C.....Adrian Professional Bldg., Adrian
Fitzsimmons, F. J.....128 E. Butler, Adrian
Hamilton, J. D. (M)....Adrian Professional Bldg., Adrian
Hammel, Richard T.....401 E. Chicago St., Tecumseh
Harrison, Robert E. .....418 W. Adrian Street, Blissfield
Heffron, Charles H.....909 E. Butler, Adrian
Heffron, Howard H.....231 N. Main St., Adrian
Heffron, Harold.....231 N. Main Street, Adrian
Helzerman, Ralph F.....112 S. Ottawa Street, Tecumseh
Hewes, A. B. (L).....Mill Road, Adrian
Hewes, William H.....146 E. Maume St., Adrian
Hinshaw, Warren V.....139½ N. Main Street, Adrian
Huebner, R. J.....421 Steer Street, Addison
Hunter, T. B.....201 National Bank Bldg., Adrian
Isley, Homer E.....115 W. Adrian Street, Blissfield
Loveland, H. H. (E).....515 S. Second Ave., Escanaba
Marsh, R. G. B.....610 W. Logan Street, Tecumsseh
Mast, W. H. (R).....106 N. Democrat St., Tecumseh
Miller, Perry L.....310 E. Maumee, Adrian
O'Connor, A. R.....122 Locust St., Clinton
Parker, D. A.....454 S. Main Street, Adrian
Pasternacki, A. S.....206 E. Front St., Adrian
Patmos, Bernard.....127½E. Maumee Street, Adrian
Phelan, Alvin.....102 S. Pearl Street, Tecumseh
Platt, Charles A.....10150 Briggs Hwy., Addison
Raabe, E. C.....124 North Street, Morenci
Rawson, A. P.....(Non Resident) No Address
Rogers, John D.....146 Toledo Street, Adrian
Sayre, P. P.....121 N. Main Street, Onsted
Stark, Emily S.....513 E. Front St., Adrian

Thompson, J. R., Jr.....114 Nat'l Bank Bldg., Adrian
Tubbs, R. V.....120 E. Adrian St., Blissfield
VanDusen, Chad A.....R. F. D. No. 2, Blissfield
Whitehouse, Keith H.....118 W. Main Street, Morenci
Wilson, George C.....108 Jackson St., Clinton
Wynn, G. H.....310 N. Broad St., Adrian

LIVINGSTON COUNTY

Barton, T. A.....112 E. Grand River Ave., Howell
Clarke, Niles A.....723 Spencer Road, Brighton
Cookinham, F. T.....Howell
Duffy, Ray M.....250 E. Main, Pinckney
Gentles, Ernest.....Howell
Glenn, Bernard H.....Fowlerville
Hauer, R. Fred.....Fowlerville
Hendren, J. J.....Fowlerville
Hill, H. C.....116 N. Michigan, Howell
McGregor, A. J.....300 E. Grand River, Brighton
Nicholas, Mildred V.....Michigan Sanatorium, Howell
Perry, Florence J. C...17640 San Rosa, R. 3, Birmingham
Scheafer, Joseph C...Michigan State Sanatorium, Howell
Schenden, A. J.....6335 W. M36, Pinckney
Sigler, Hollis L.....110 N. Michigan, Howell
Walker, Enos G.....4485 Cordley Lake Road, Lakeland
Woodworth, E. S.....422 E. Lake, Howell

LUCE COUNTY

Adams, D. C.....Newberry
Banach, Alexius.....Newberry State Hospital, Newberry
Camp, D. E.....Newberry State Hosp., Newberry
Campbell, Earl H. (E).....Newberry
Gibson, Robert E. L.....Newberry
Grennan, L. E.....210 W. John St., Newberry
Hicks, R. P.....210 W. John St., Newberry
Purmort, William R., Jr.....Newberry
Streitwieser, Robert J...Newberry State Hosp., Newberry
Surrell, Matthew A.....Newberry
Swanson, George F.....VA Hospital, Univ. & Woodland Ave., Philadelphia 4
Thompson, T. W.....Newberry State Hospital, Newberry

MACOMB COUNTY

Adler, M. W.....19188 Appoline Ave., Detroit
Barker, J. G.....8050 Warren, Centerline
Bower, A. B.....Armada
Brady, Milo J.....21509 Eleven Mile Road St. Clair Shores
Bryce, James W.....25020 Van Dyke, Centerline
Buckley, Daniel J.....160 S. Walnut, Mt. Clemens
Charbeneau, H. P...Monitor Leader Bldg., Mt. Clemens
Croman, Joseph M., Jr.....117 Cass Ave., Mt. Clemens
Curlett, James E. (L).....26765 Gratiot, Roseville
Deal, Harold R.....11584 Somerset. Detroit
Dudzinski, E. J...51034 Washington St., New Baltimore
Ellias, Elmer P.....4330 Fullerton, Detroit 6
Engels, John A.....Richmond
Goldman, B. J...406 Monitor Leader Bldg., Mt. Clemens
Hartmann, W. B.....1416 S. Gratiot, Mt. Clemens
Jewell, James H.....18215 Utica Road, Roseville
Juliar, Joseph F.....302 Monitor Leader Bldg., Mt. Clemens
Kane, Peter.....711 Monitor Leader Bldg., Mt. Clemens
Kane, W. J.....171 North Avenue, Mt. Clemens
Klein, Alfred A.....19785 Cheyenne, Detroit 35
Lynch, Russell E.....25020 Van Dyke, Centerline
Maguire, A. J.....4875 Van Dyke Avenue, Utica
Martin, Wm. L.....117½ S. Main St., Romeo
Mattes, Max W.....18600 Griggs, Detroit
Miller, Sydney S.....22048 Gratiot Ave., East Detroit
Moore, George F.....410 Monitor Leader Bldg., Mt. Clemens
Mulligan, Philip T.....91 Cass St., Mt. Clemens
Niekamp, H. H.....45157 Van Dyke, Utica
Parker, B. M. (R).....Utica
Pollina, C. J.....21503 Harper, St. Clair Shores
Reichman, Joseph J.....312 Monitor Leader Bldg., Mt. Clemens
Reitzel, Rufus H.....199 S. Gratiot, Mt. Clemens
Reizen, Maurice S.....10564 Ludlow, Huntington Woods
Revere, J. O.....192 S. Gratiot, Mt. Clemens
Rickman, L. D.....10 Howard Street, Mt. Clemens
Rivard, Charles L. 20825 Mack Ave., Grosse Pte. Woods
Rivkin, Joseph.....44 S. Gratiot Ave., Mt. Clemens
Roth, G. E.....19136 Mendota, Detroit
Rothman, Arthur M.....22552 Gratiot, East Detroit
Rourke, Ronald....21503 Harper Ave., St. Claire Shores
Rousseau, D. L.....St. Joseph Hospital, Mt. Clemens
Ruedisueli, Clarence A.....18215 Utica Road, Roseville
Salot, Russell F.....713 Monitor Leader Bldg., Mt. Clemens
Scher, Joseph N.....130 Cass Avenue, Mt. Clemens
Scher, Sydney.....132 Cass Avenue, Mt. Clemens
Siegfried, Edward G.....30781 Division St., New Haven
Singer, Nelson.....22100 Gratiot, East Detroit
Smith, Milton C.....50 S. Gratiot, Mt. Clemens
Stone, Elizabeth A.....Romeo
Strempek, W. F.....209 W. St. Clair St., Romeo
Stryker, Oscar D.....Macomb Co. Health Dept., Mt. Clemens
Sturm, Fred A.....29405 Jefferson, St. Clair Shores
Suksta, A. W.....18215 Utica Rd., Roseville
Suzuki, M.....295 Beaumont, Wichita Falls, Texas
Test, Frederick C., II.....91 Cass Ave., Mt. Clemens
Thompson, Alfred A.....126 Cass Avenue, Mt. Clemens
Ullrich, Russell W.....91 Cass Ave., Mt. Clemens
Weiss, Jack I.....13301 Ludlow, Huntington Woods
Wellard, Henry C.....New Baltimore
Whitley, Alec.....30233 Jefferson, St. Clair Shores
Wiley, D. Bruce.....45310 Van Dyke, Utica
Wyte, William C.....99 S. Gratiot Ave., Mt. Clemens
Zavela, Daniel.....22614 Gratiot Ave., Detroit

MANISTEE COUNTY

Hansen, E. C.....78 Maple, Manistee
Konopa, John F.....57 Poplar St., Manistee
Lalime, Ruth E.....Bear Lake
Lewis, Lee A. (E).....467 Second St., Manistee
Loughrin, J. J.....90 Maple Street, Manistee
Miller, Ernest B.....425 River Street, Manistee
Oakes, Ellery A.....401 River St., Manistee
Ogilvie, Gordon D.....210 Savings Bank Bldg., Manistee
Ramsdell, Homer A.....Engelman Bldg., Manistee
Schwarz, Marlowe L.....Onekama
Schwing, D. N.....336 First St., Manistee

MARQUETTE - ALGER COUNTIES

Acocks, J. R.....Morgan Heights San, Marquette
Amolsch, Arthur L.....321 Pine Street, Marquette
Baron, Benzoin C.....Munising
Bennett, Arthur K. (L).....Box 436, Mt. Dora, Fla.
Bennett, M. C.....Union National Bank Bldg., Marquette
Berry, Robert F.....Bacon Bldg., Marquette
Bertucci, Joseph P.....114 S. First St., Ishpeming
Bolitho, T. B.....425 E. Michigan Ave., Marquette
Boog, Janet M.....Huetter Bldg., Marquette
Casler, W. L.....131 E. Ridge, Marquette
Cooperstock, Moses.....105 S. Front St., Marquette
Corcoran, W. A.....112 Cleveland Ave., Ishpeming
D'Adesky, R. G. (A).....St. Luke's Hospital, Marquette
Drury, Charles P. (R).....414 E. Hewitt, Marquette
Elzinga, Eugene R.....315 N. Front St., Marquette
Erickson, Arvid W.....114 Front Street, Ishpeming
Fennig, F. A.....315 N. Front St., Marquette
Hettle, P. J.....Savings Bank Bldg., Marquette
Hirwas, C. L.....Huetter Building, Marquette
Hornbogen, D. P.....Hornbogen Building, Marquette
Howe, Lloyd W.....Savings Bank Bldg., Marquette
Jaedecke, R. G.....829 Croix Street, Negaunee
Knutson, George O.....829 Croix Street, Negaunee
Kronschnabel, E. F.....Gwinn
Lambert, W. C.....Huetter Building, Marquette
LeGolvan, Celestin.....221 W. Washington, Marquette
LeGolvan, Paul C.....Brooke Army Hosp., San Antonio, Tex.
Lyons, James W., Jr.....First National Bldg., Marquette
Matthews, Norman L.....St. Luke's Hospital, Marquette
Moore, B. E.....Ishpeming Hospital, Ishpeming
Mudge, William A.....314 Teal Lake Ave., Negaunee
Narotzky, Archie S.....200 S. Main Street, Ishpeming
Paine, R. L.....416 Teal Lake, Negaunee
Paull, Frank O. (R).....816 Pine Street, Marquette
Rosenbaum, Louis II.....524 Mather, Ishpeming
Schweinsberg, Sara D.....Savings Bank Bldg., Marquette
Sicotte, Isaiah (L).....Michigamme
Stewart, L. C.....Savings Bank Bldg., Marquette
Swinton, A. L. (E).....Savings Bank Bldg., Marquette
Tearnan, Raymond A.....Munising
Van Riper, Paul (L).....Champion
Waldie, George M.....Ishpeming Hospital, Ishpeming
Wickstrom, George B.....Madigan Building, Munising
Williams, R. G.....524 Mather Street, Ishpeming

MASON COUNTY

Bacon, Herbert G. Jr.....Scottville
Boldyreff, Ephriam B.....Custer
Boon, A. F.....702 W. Court Street, Ludington
Carney, John R.....202 N. Park, Ludington
Carney, Ruth V. C.....202 N. Park, Ludington
Goulet, Leo J.....222 S. James St., Ludington
Hoffman, Howard B.....201 N. Washington Ave., Ludington
Kleinschmidt, Gladys.....Court House Bldg., Ludington
Martin, William S.....107 W. Ludington Ave., Ludington
Morrow, W. J. (M).....23 King Phillip Dr., E. Greenwich, R. I.
Ostrander, Robert A.....121 Ludington Ave., Ludington
Paukstis, Charles A.....111 Court St., Ludington
Slaybaugh, James C.....101 W. Loomis St., Ludington

MECOSTA-OSCEOLA-LAKE COUNTIES

Bruggema, Jacob.....Evart
Chess, Leo F.....232 Chestnut Street, Reed City
Franklin, Benjamin L. (E).....Remus
Haldeman, J. .....126 Maple, Big Rapids
Hickox, L. A.....211 Rose Street, Big Rapids
Ivkovich, Paul.....111 S. Chestnut Street, Reed City
Kilmer, David N.....102½ Upton, Reed City
Kilmer, Paul B. .....102½ Upton, Reed City
Kowaleski, Edward H.....Remus
Merlo, Frank A.....206 S. Michigan Ave., Big Rapids
Nelson, Lorenzo R.....Baldwin
Peck, Louis K. (E).....Barryton
Treynor, Thomas P.....126 Maple Street, Big Rapids
Tyson, J. L.....324 Mecosta Avenue, Big Rapids
VanAuken, Edward W.....126 Maple Street, Big Rapids
Walters, J. E.....126 Maple, Big Rapids
White, John A.....121 S. Michigan Ave., Big Rapids

MENOMINEE COUNTY

Agneberg, Nils O.....531 First Street, Menominee
Brukardt, Herman R...Electric Square Bldg., Menominee
Clay, J. W.....1146 Tenth Avenue, Menominee
DeWane, Francis J.....413 Tenth Ave., Menominee
Flanagan, Clarence B.....534 First St., Menominee
Glickman, L. Grant.....958 First St., Menominee
Gonty, Arthur.....St. Joseph's Hospital, Menominee
Heidenreich, John R.....Daggett
Jones, William S.....1146 10th Avenue, Menominee
Jones, W. S., Jr.....1146 10th Avenue, Menominee
Kaye, John T.....1005 10th Avenue, Menominee
Kerwell, Karm C.....Stephenson
Peterson, Allen R.....Daggett
Sethney, Henry T.....Electric Square Bldg., Menominee
Sweany, S. K.....Pinecrest San., Powers
Towey, John W.....Pinecrest San., Powers

MIDLAND COUNTY

Ballmer, Robert S.....2715 Ashman St., Midland
Bernier, J. A.....Sanford
Blackhurst, R. T.....Blackhurst Building, Midland
Bowsher, Robert E.....2719 Ashman Street, Midland
Bridge, R. G.....2715 Ashman, Midland
Bulmer, Dan J.....402 E. Ellsworth, Midland
Buskirk, Maurice D.....110 W. Sugnet Street, Midland
Gay, Harold H.....Dow Chemical Co., Midland
Gordon, Harold L.....Dow Chemical Co., Midland
Grewe, Norman C.....347½ E. Main Street, Midland
Gronemeyer, William H.....110 W. Sugnet, Midland
Holder, Benjamin.....Dow Medical Dept., Midland
Howe, Irvin M.....110 W. Sugnet Street, Midland
Howell, R. H.....124 Townsend Street, Midland
Ittner, Martin J.....217 N. Saginaw Rd., Midland
Kaasa, Laurin J.....2011 Ashman Street, Midland
Linsenmann, Karl W.....312 E. Main St., Midland
MacCallum, Charles L.....224 E. Larkin, Midland
Maynard, W. A.....Coleman
Meisel, Edward H. Jr.....413 Lingle Lane, Midland
Moench, Fred.....401 W. Main St., Midland
Murphy, John E.....119 Gordon St., Midland
O'Hora, Bernard.....110 W. Sugnet, Midland
Pike, Melvin H.....224 E. Larkin St., Midland
Poznak, Leonard A.....1411 Crane Court, Midland
Randolph, Stephen H.....17 Gordon St., Midland
Sherk, Joseph H.....Masonic Bldg., Midland
Towsley, W. D.....Blackhurst Bldg., Midland
Willison, Charles H.....122 Townsend, Midland

MONROE COUNTY

Ames, Florence D.....2 W. Noble Ave., Monroe
Barrett, C. D.....218 E. First Street, Monroe
Blakey, L. C.....222 N. Monroe St., Monroe
Bond, W. W.....4 East Front St., Monroe
Cigany, Zoltan B.....1402 Monroe, Carleton
Ewing, R. T.....130 Maple Blvd., Monroe
Flanders, J. P.....31 Washington, Monroe
Frary, R. A.....423 E. Elm Avenue, Monroe
Freud, John W.....222 N. Monroe, Monroe
Gelhaus, Wm. J.....4 East Front St., Monroe
Hensel, Hilda M. E.....12 East Fourth, Monroe
Hunter, M. A.....35 East Front St., Monroe
Johnson, A. Esther.....31 Washington Ave., Monroe
Kelso, S. Newton, Jr.....127 E. Front Street, Monroe
Laboe, Edward W.....725 N. Monroe, Monroe
Lammers, Gerald P.....Ida
Landon, Herbert W. (E).....512 Washington, Monroe
Lapp, C. J.....Luna Pier
Loan, S. B.....31 Washington Street, Monroe
Long, Edgar C.....1310 N. Macomb St., Monroe
McDonald, T. A.....17 E. Elm Avenue, Monroe
McGeoch, R. W.....718 N. Macomb, Monroe
McMillin, J. H.....423 E. Elm Street, Monroe
Meier, Walter A.....106 E. Front Street, Monroe
Middleton, S. W.....219 W. Front Street, Monroe
Newcomer, Sheldon R.....31 Washington, Monroe
Parmelee, O. E. (L).....Lambertville
Pinkus, Hermann, K. B.....12 E. Fourth St., Monroe
Reisig, Albert H.....9 S. Monroe St., Monroe
Sanger, Emerson J.....530 S. Monroe St., Monroe
Sisman, B. J.....325 N. Monroe Street, Monroe
Streicher, R. G.....729 N. Monroe St., Monroe
Tomlinson, Ledyard H.....Newport
Wagar, Spencer H.....31 Washington St., Monroe
Weeks, V. L.....1 E. Front St., Monroe
Williams, Robert J.....31 Washington St., Monroe
Williamson, George W.....284 Tecumseh Street, Dundee

MUSKEGON COUNTY

Allen, R. T.....1891 Lake Shore Dr., Muskegon
Anderson, A. J.....1371 Peck Street, Muskegon
Anderson, Axel W.....Lakewood Club, Twin Lake
Atkinson, Annie L.....2024 Seventh St., Muskegon Hts.
August, R. V.....72 E. Broadway, Muskegon Hts.
Barnard, Helen S.....Nedeau Building, Muskegon
Barnes, J. W.....102 Professional Bldg., Montague
Benedict, Arthur L.....22 W. Southern Ave., Muskegon
Bloom, C. J. (L).....59 E. Larch St., Muskegon
Bolthouse, Robert E.....2416 Peck St., Muskegon Hts.
Bond, W. H.....1377 Peck Street, Muskegon
Boyd, D. R.....1735 Peck Street, Muskegon
Bradshaw, Park S.....1014 Jefferson, Muskegon
Busard, J. Max.....503 Muskegon Bldg., Muskegon
Chapin, William S. (A)..638 Sanford St., Muskegon Hts.
Christophersen, James W.....1276 Lake Shore Drive, Muskegon
Clapp, Henry W.....83 Strong Ave., Muskegon
Clark, Harry L.....Hackley Hospital Lab., Muskegon
Closz, Harold F.....809 Hackley Union Bank Bldg., Muskegon
Cohan, Sol G.....1114 Second Street, Muskegon
Cronick, Anne B.....1067 Pine Street, Muskegon
Dasler, A. F.....1507 Peck Street, Muskegon
DeLeeuw, Henry.....2144 Peck St., Muskegon Hts.
Diskin, Frank.....410 Jackson Ave., Muskegon
Dykhuizen, Harold D.....710 Hackley Union Bank Bldg., Muskegon
Ellis, Nicholas J.....1883 Lake Shore Drive, Muskegon
Emerick, Robert W.....878 N. Second Street, Muskegon
Engstrom, Albert O.....Whitehall
Fillingham, Enid.....870 N. Second St., Muskegon
Fleischmann, C. B.....250 W. Webster, Muskegon
Fleishman, Norman A.....1094 Jefferson, Muskegon
Fles, R. J.....1715 Peck Street, Muskegon
Folsom, J. D.....1706 Peck Street, Muskegon
Gaikema, Everett W.....Muskegon Co. Sanatorium North Muskegon
Garber, Frank W. Jr.....1178 Third St., Muskegon
Giese, D. H.....Lyman Building, Muskegon
Goltz, Martha H.....Montague
Greene, Henry P.....764 Pine St., Muskegon
Griffith, Robert M.....1217 Fifth Street, Muskegon
Hankamp, LaMar.....878 N. Second St., Muskegon
Hanley, W. J.....405 Hackley Union Bldg., Muskegon
Harryman, James E.....1129 Peck Street, Muskegon
Hartwell, Shattuck W...452 W. Western Ave., Muskegon
Hennessy, Mary E.....503 Muskegon Bldg., Muskegon
Heneveld, Edward H.....1603 Peck St., Muskegon
Heneveld, John (R).....4238 Harbor Pointe Road, Muskegon
Heneveld, R. G.....1458 Montague Ave., Muskegon
Hill, J. K.....203 Panyard Bldg., Muskegon
Holly, Leland E.....876 Second St., Muskegon
Hornbeck, W. J.....Michigan Theater Bldg., Muskegon
Joistad, Arthur H. Jr.....878 N. Second St., Muskegon
Kane, Thomas J.....179 Strong Ave., Muskegon
Kay, Cecelia S.....1533 Peck Street, Muskegon
Keilin, Marie.....403 Michigan Theater Bldg., Muskegon
Kerr, Howard J.....1441 Lakeshore Drive, Muskegon
Kleaveland, I. J.....1624 Peck Street, Muskegon
Lapham, Landon M.....Whitehall
Lange, Eugene W.....Mercy Hosp., 1520 Fifth St., Muskegon
Lauretti, Emil J.....815 Hackley Bank Building Muskegon
Laurin, Vilda S.....804 Hackley Bank Bldg., Muskegon
LeFevre, Louis L.....450 W. Western Ave., Muskegon
LeFevre, William M.....289 W. Western, Muskegon
Loder, Leonel L.....Hackley Union Bldg., Muskegon
Loomis, John L. (R).....Ward C-1, Veterans Hosp., Long Beach, Calif.
Maire, L. E.....506 Liberty Life Bldg., Muskegon
Mandeville, C. B.....515 Hackley Union Bank Bldg., Muskegon
Maples, Douglas E.....402 Center Street, N., Muskegon
McNair, John N.....967 Second St., Muskegon
Medema, Paul E.....1017 Sanford, Muskegon
Meengs, Marvin B.....1725 Peck St., Muskegon
Miller, Phillip L.....1755 Peck St., Muskegon
Mulder, Lambertus.....Hackley Union Bldg., Muskegon
Mulligan, A. W.....1260 Jefferson Street, Muskegon
Oden, Constantine L. A...804 Hackley Union Bank Bldg., Muskegon
Paterson, L. C.....203 Panyard Bldg., Muskegon
Pettinga, F. L.....1603 Pack Street, Muskegon
Powers, Lunette I. (E).....337 Morris Ave., Muskegon
Prentice, Edwin W.....1017 Sanford St., Muskegon
Price, Leonard.....1282 Arthur St., Muskegon
Risk, Robert D.....1160 Ransom St., Muskegon
Scholle, Norbert W.....2500 Peck Street, Muskegon Hts.
Sears, Richard.....Court House, Muskegon
Shebasta, Emil M.....1075 Jefferson, Muskegon
Smith, M. Luther.....840 Pine Street, Muskegon
Swartout, W. C. (L)....514 Hackley Union Bank Bldg., Muskegon
Swenson, Leland L.....1706 Peck St., Muskegon
Teifer, Charles A.....407 Muskegon Building, Muskegon
Tellman, H. Clay.....706 Hackley Union Bank Bldg., Muskegon
Thieme, S. W. (L).....Ravenna
Thornton, Eugene S.....802 Hackley Union Bank Bldg., Muskegon
Toy, Charles M.....1067 Pine St., Muskegon
Tyler, William H.....1435 Peck Street, Muskegon
Vanderlaan, John E.....1624 Peck Street, Muskegon

Vandervelde, C. A.....703 Hackley Union Bank Bldg., Muskegon
VanGelder, W. E.....Hackley Union Bank Bldg., Muskegon
Wagenaar, Edward H.....404 Muskegon Building Muskegon
White, W. G., Jr.....204 Michigan Theater Bldg., Muskegon
Wiersma, Silas C.....Hackley Union Bldg., Muskegon
Wildgen, Bernard C.....416 Hackley Bank Bldg., Muskegon
Wilke, Carl A.....Montague
Williams, Edward V.....935 Jarman Street Muskegon Heights

NEWAYGO COUNTY

Carter, Laura J.....Grant
Deur, Theodore R.....Grant
Geerlings, Lambert J.....20 N. Division St., Fremont
Klein, J. Paul.....16 W. Sheridan, Fremont
Masters, Brooker L.....111 W. Dayton St., Fremont
Moore, Hugh R.....38 State St., Newaygo
O'Neill, John W.....White Cloud
VandenBerg, Tunis.....20 N. Division Ave., Fremont

NORTH CENTRAL COUNTIES

Backe, John C.....Box 434, Gaylord
Balice, Francis W. (M).....(No Address)
Barstow, Richard G.....429 N. Center St., Gaylord
Boehm, John D. (R).....West Branch
Clippert, Clarence G.....308 Michigan Ave., Grayling
Coulter, Keith D.....Gladwin
Crandell, Clare H.....420 E. Houghton, West Branch
Egle, Joseph L.....Northern Michigan TB San., Gaylord
Forney, F. A. (L).....544 North Fairlane, Midland
Hasty, Earl A.....115 Burgess, West Branch
Hayes, Louis F. (M).....300 McClellan, Grayling
Henig, B. Elmore.....308 Michigan Ave., Grayling
Hornbeck, R. J.....Box 187, Lewiston
Jardine, Hugh M.....109 S. Third St., West Branch
Kitti, Wm. H.....Kalkaska
Libke, Robert S.....Gaylord
Martzowka, M. A.....Roscommon
McKillop, G. L.....Gaylord
Mikan, V. R.....Houghton Lake
Oppy, Charles L.....Roscommon
Peckham, Richard C.....Gaylord
Rodda, E. H.....Grayling
Schaiberger, George L.....707 W. Hought St., West Branch
Stealy, Stanley A.....Box 485, Grayling
Timreck, Harold A.....Gladwin
VanOstan, O. A.....115 Burgess, West Branch

NORTHERN MICHIGAN COUNTIES

Allen, Robert .....Petoskey
Alm, B. T.....Petoskey
Blum, Benjamin B.....Petoskey
Burns, Dean C.....314½ Howard St., Petoskey
Conkle, Guy C. (E).....Boyne City
Conklin, F. L.....Burt Lake
Conti, Joseph B.....Petoskey
Conway, William S.....Burns Clinic, Petoskey
Crippen, Edward F.....126½ State St., Mancelona
Drake, Gerald, Capt., MC (M).....6407th USAF Hosp., APO 323, San Francisco, Calif.
Duffie, Don H. (L).....Central Lake
Grate, Lawrence E.....112 Clinton St., Charlevoix
Hegener, A. J.....Petoskey
Kirk, T. R., Maj., M.C.....2355th Per. Pro. Sq., Pier 91, Seattle, Wash.
Larson, Walter E.....320 N. Huron St., Cheboygan
Lawrie, G. K.....816 Spruce St., Petoskey
Lentini, Nicholas .....Cheboygan
Litzenburger, Albert F.....Bovne City
Martin, R. G.....103 Clinton St., Charlevoix
Mateskon, V. S.....Burns Clinic, Petoskey
Mayne, Frederick C.....Cheboygan
McKnight, Robert .....Petoskey
Palmer, Russell E.....Charlevoix
Pearson, R. E.....Boyne City
Reus, Leonard W.....Petoskey
Rodger, John R.....Bellaire
Saltonstall, Gilbert B.....112 Clinton St., Charlevoix
Savory, John H.....East Jordan
Stringham, James R.....225 Backus St., Cheboygan
Taylor, R. M.....1109 E. Mitchell, Petoskey
Terr, Isaac .....Charlevoix
Vail, Harry F.....St. James
Van Dellen, Jerrian.....East Jordan
Weburg, Kathryn D.....Petoskey
Wood, George H.....Onaway

OAKLAND COUNTY

Abbott, James A.....Pontiac State Hosp., Pontiac
Abbott, Vernon C.....1405 Pontiac State Bldg., Pontiac
Adair, Robin.....602 N. Woodward, Birmingham
Adams, Frederick M.....600 N. Woodward Ave., Birmingham
Albrecht, R. W.....2925 Orchard Lake Rd., Keego Harbor
Arnkoff, Harry.....305 First Nat. Bank Bldg., Pontiac
Aulie, H. G.....500 S. Washington, Royal Oak
Awes, Lorraine E.....1411 Pontiac State Bank Bldg., Pontiac
Baker, Frederick A. (R).....4775 Motorway Dr., Pontiac
Baker, Robert H.....1110 Pontiac State Bank Bldg., Pontiac
Bannow, Robert J.....704 Pontic State Bank Bldg., Pontiac
Barker, Charles P.....Pontiac State Hosp., Pontiac
Barker, Howard B.....1006 Riker Bldg., Pontiac
Bauer, Bruce.....23005 John R St., Hazel Park
Bauer, Edward G.....101½ N. Saginaw, Pontiac
Bauer, Ernest W.....23005 John R St., Hazel Park
Beattie, W. G.....Professional Bldg., Ferndale
Beck, Otto O.....280 W. Maple, Birmingham
Becker, Anne.....Pontiac State Hosp., Pontiac
Belknap, Warren F.....1809 S. Main St., Royal Oak
Berg, R. H.....2 S. Washington, Oxford
Berger, Charles J.....1413 S. Washington Ave., Royal Oak
Birmingham, J. R.....1809 S. Main St., Royal Oak
Blackwell, Leonard.....549½ N. Perry St., Pontiac
Blakeney, James R.....449 E. Pike St., Pontiac
Blue, Jane.....218 Riker Bldg., Pontiac
Bookmyer, R. M. (M).....390 E. Maple St., Birmingham
Boucher, R. E.....617 Washington Square Bldg., Royal Oak
Bowers, Charles L.....Riker Bldg., Pontiac
Brown, A. L.....711 Community Bank Bldg., Pontiac
Budd, A. S.....1999 E. 14 Mile Rd., Birmingham
Bullard, R. W., Jr.....20 S. Main St., Clarkson
Burgess, Charles M.....23235 Woodward Ave., Ferndale
Burke, C. G.....1022 Riker Bldg., Pontiac
Butler, Samuel A. (L).....Pontiac State Hosp., Pontiac
Byberg, Robert A.....500 S. Washington, Royal Oak
Calhoun, Ethel T.....30305 Grand River, Farmington
Campbell, Malcolm D.....216 Washington Square Bldg., Royal O

Carrow, Joyce M.....622 Riker Bldg., Pontiac
Cefai, A. F.....310 Pontiac State Bank Bldg., Pontiac
Chandler, Douglas.....391 Hamilton, Birmingham
Christensen, W. L.....109 W. 11 Mile Rd., Royal Oak
Christie, J. W.....711 Pontiac State Bank Bldg., Pontiac
Clarke, Harriett A.....Pontiac State Bank Bldg., Pontiac
Cline, A. L.....105 Pontiac State Bank Bldg., Pontiac
Cobb, Leon F.....75½ W. Huron, Pontiac
Cobb, Thomas H.....804 Riker Bldg., Pontiac
Collins, Edward F.....26½ Huron, West, Pontiac
Condon, F. J.....2401 E. Fourth St., Royal Oak
Conner, Edward D.....
3856 South Miller Way, Birmingham
Conrad, C. D.....3027 Woodward, Royal Oak
Cooley, Roy V., Jr.....189 Orchard Lake Ave., Pontiac
Cooper, Robert J.....622 Riker Bldg., Pontiac
Coucke, Henry O...1148 S. Woodward Ave., Royal Oak
Crissman, H. C.....22748 Woodward Ave., Ferndale
Crum, Roger E.....411 Pontiac State Bank Bldg., Pontiac
Cudney, Ethan B.....Pontiac Motor Division, Pontiac
Dahlgren, Carl W.....
301½ Orchard Lake Rd., Keego Harbor
Darling, C. G., Jr.....1025 Riker Bldg., Pontiac
Darmstaetter, A. A., Jr.....222 E. Maple, Birmingham
Delaney, M. M.....23603 Farmington Rd., Farmington
DeLawter, Hilbert H.....277 Pierce, Birmingham
Deutsch, William L.....600 W. First, Huntington Woods
Dobski, Edwin J.....236 Riker Bldg., Pontiac
Dougherty, E.....27243 Southfield, Birmingham
Dunlap, Gregg L.....
2925 Orchard Lake Ave., Keego Harbor
Dunn, Lewis E.....3924 Twelve Mile Rd., Berkley
Durak, Gerald G. (M).....
USAS Hosp., Westover, Chicopee Falls
Durocher, Normand E.....
605 Pontiac State Bank Bldg., Pontiac
Dustin, R. W.....640 N. Woodward, Birmingham
Edwards, J. W.....8400 West Eight Mile Rd., Ferndale
Ekelund, Clifford T.....906 Riker Bldg., Pontiac
Endress, Z. F. (M).....
410 Pontiac State Bank Bldg., Pontiac
Esslinger, J. O.....227 Briggs Bldg., Birmingham
Evseeff, George S.....2685 Amberly Rd., Birmingham
Farnham, Lucius A. (L).....538 Riker Bldg, Pontiac
Ferris, G. N.....25085 Coolidge, Oak Park
Ferris, Ralph G.....205 Hanna Bldg., Birmingham
Fink, L. Jerome.....
1411 Pontiac State Bank Bldg., Pontiac
Fitzpatrick, Francis J.....818 Peoples Bank Bldg., Pontiac
Flick, John R.....120 West Second, Royal Oak
Foust, Earl W.....1625 E. Fourth St., Royal Oak
Fox, Ralph M.....640 N. Woodward, Birmingham
Furlong, Harold A.....932 Riker Bldg., Pontiac
Gaba, H. B.....21721 Dequindre, Hazel Park
Gaber, Ben.....10851 W. Ten Mile Rd., Oak Park
Gadbaw, Joseph J.....23603 Farmington Rd., Farmington
Gaensbauer, Ferdinand.....932 Riker Bldg., Pontiac
Garber, M. J.....23606 Farmington, Farmington
Gariepy, Bernard F.....109 W. First St., Royal Oak
Gates, E. M.....206-10 Riker Bldg., Pontiac
Gatley, C. R.....97 N. Perry St., Pontiac
Gatley, L. Warren.....97 N. Perry St., Pontiac
Gaukler, R. J. (M).....USAH, Ft. Leonard Wood, Mo.
Gehringer, Norman F.....336 Riker Bldg., Pontiac
Geib, Ormond D.....Avon Bldg., Rochester
Geist, Edgar J.....413 Woodward Ave., Rochester
Gell, J. W.....940 Riker Bldg., Pontiac
Gerls, Frank B.....602 Peoples State Bank Bldg., Pontiac
Gibson, James C. (E).....206 E. Commerce, Milford
Gibson, Richard E.....1011 Hazel St., Birmingham
Gibson, Wellington C.....216 Commerce St., Milford
Gill, Matthew J.....324 Riker Bldg., Pontiac
Goerner, D.....390 E. Maple, Birmingham
Goldstein, Herbert....12701 W. Ten Mile Rd., Oak Park
Goode, Norman J., Jr.....109 E. Nine Mile, Ferndale
Gradolph, Paul L.....23338 Woodward Ave., Ferndale
Grant, William A. (L).....Milford
Green, J. D. (M).....
217 Briggs Bldg., 222 E. Maple, Birmingham
Green, R. S.....c/o The Haven Sanitarium, Rochester
Green, William M.....1402 Pontiac State Bldg., Pontiac
Gutterman, M. A.....25085 Coolidge Hwy., Oak Park 37
Haanes, M. A.....Pontiac State Bank Bldg., Pontiac
Hackett, Daniel J.....1205 People State Bldg., Pontiac
Haddock, D. A.....5800 Pontiac Trail, Pontiac
Hagman, George L.....Cranbrook School, Bloomfield Hills
Halsted, Lee H.....33311 Grand River, Farmington
Hammonds, E. E.....209 Wabeek Bldg., Birmingham
Han, Maolin.....3358 Auburn Rd., Auburn Heights
Hanna, Carl.....c/o Fisher Body Division, GMC, Pontiac
Hardy, George C. (L).....
240 Oak Dr., Box 135-G, R. R. #2 Rochester
Harvey, Campbell.....832 Riker Bldg., Pontiac
Hasner, Robert B. (L).....
617 Washington Square Bldg., Royal Oak
Hassberger, J. B.....620 N. Woodward, Birmingham
Hathaway, Clarence L. (L).....
33 S. Broadway, Lake Orion
Hathaway, William S.....433½ Main St., Rochester
Henderson, J. E.....4 Barbour Terrace, Bloomfield Hills
Hendren, Owen S.....
1408 Pontiac State Bank Bldg., Pontiac
Henry, Colonel R.....Professional Bldg., Ferndale
Hensley, C. B.....46 W. Flint St., Lake Orion
Hershey, Lynn N.....
Route 1, 31275 Franklin Blvd., Birmingham
Hirt, Harry....1800 Tuxedo, Metropolitan Hosp., Detroit
Hoekman, Aben.....1740 Hamilton Dr., R. 3, Pontiac
Howlett, E. V. (L).....538 Riker Bldg., Pontiac
Hoyt, Donald F.....
1203 Pontiac State Bank Bldg., Pontiac
Hubert, John R., Jr.....606 Riker Bldg., Pontiac
Hull, Robert P.....23625 Woodward Ave., Ferndale
Ignatius, A. A.....1915 E. 9 Mile Rd., Ferndale
Jacobi, R. C.....37 N. Washington, Oxford
Karow, Juliette Seelye.....
4274 N. Woodward Ave. Royal Oak
Keeffe, Eugene J.....St. Joseph Hosp., Pontiac
Kemp, Felix J.....1115 Peoples State Bank Bldg., Pontiac
Kemp, W. L.....525 Southfield Rd., Birmingham
Kendrick, H. F.....206 Riker Bldg., Pontiac
Klewicki, H. A.....125 W. Nine Mile, Ferndale
Koehler, William H.....
629 Washington Square Bldg., Royal Oak
Kozlow, C. S.....4274 Woodward Ave., Royal Oak
Kozlow, Louise E. Ange.....
4274 N. Woodward Ave., Royal Oak
Kozonis, M. C.....1301 Pontiac State Bank Bldg., Pontiac
Kuhn, Anna K.....4274 N. Woodward Ave., Royal Oak
Kuhn, Henry H.....817 E. Eight Mile Rd., Hazel Park
Kuhn, R. E.....4274 N. Woodward Ave., Royal Oak
LaCore, Ivan.....Pontiac State Hosp., Pontiac
Lahti, Paul T.....
325 Washington Square Bldg., Royal Oak
LaMarche, Norman O.....2827 Woodward, Berkley
Lambert, Alvin G...3027 N. Woodward Ave., Royal Oak
Lambie, John S. (L).....280 Aspen Rd., Birmingham
Landry, R. A.....5807½ Dixie Hwy., Waterford
Larson, Alvin R.....640 Riker Bldg., Pontiac
Laux, Philip J., Jr.....3027 N. Woodward, Royal Oak
Leaky, Etta Link.....600 11 Mile Rd., Berkley
Levine, Bernard.....25101 Coolidge, Oak Park
Lewis, S. M.....400 W. Nine Mile, Ferndale
Lichtwardt, H.....606 Woodward, Birmingham
Lilly, R. J.....Pontiac State Hosp., Pontiac
Ling, Theodore W.....23603 Farmington Rd., Farmington
Linn, H. J.....Wm. Beaumont Hosp., Royal Oak
Lockwood, C. E. (L).....107 Martha St., Holly
Lowery, A. J. .....1538 Union Lake Rd., Pontiac
Lyons, R. T.....Riker Bldg., Pontiac
Margrave, Edmund D.....306 W. Ten Mile Road, Royal Oak
Markle, John G.....
617 Washington Square Bldg., Royal Oak
Markley, John M.....849 W. Huron St., Pontiac

Marra, J. J.....Pontiac General Hosp., Pontiac
Marsa, P. S.....46 W. Flint St., Lake Orion
Mason, Robert J.....619 N. Woodward Ave., Birmingham
Maxim, E. S.....711 Pontiac State Bank Bldg., Pontiac
McCain, French H.....296 N. Hunter Blvd., Birmingham
McConkie, J. P.....311-2 Wabeek Bldg., Birmingham
McEvoy, F.....1715 Crooks Rd., Royal Oak
McHugh, James .....391 Hamilton, Birmingham
McInerney, T. S.....109 W. Eleven Mile Rd., Royal Oak
McIntyre, Kenneth .....
779 Grand Marais, Grosse Pointe Park
McNeill, H. H.....83½ S. Saginaw, Pontiac
Mehas, C. P.....1150 Dorchester, Birmingham
Meinke, Herman A.....817 E. 8 Mile Rd., Hazel Park
Meisner, Harry E.....
25622 Coolidge Highway, Huntington Woods
Mercer, Frank A.....
1401 Pontiac State Bank Bldg., Pontiac
Merrill, Lionel N.....
330 Washington Square Bldg., Royal Oak
Milgrom, Sidney.....1229 W. Washington, Royal Oak
Miller, Hazen L.....
617 Washington Square Bldg., Royal Oak
Miller, Sidney.....604 N. Woodward Ave., Birmingham
Moloney, J. Clark.....414 Arlington, Birmingham
Monroe, John D.....
Oakland County Health Dept., Pontiac
Morton, J. A. (M).....St. Joseph Hosp., Pontiac
Mumby, Clinton J.....Pontiac State Bank Bldg., Pontiac
Munson, H. L.....404 Pontiac Trail, Walled Lake

Nalepa, Eugene J.....704 Pontiac State Bank, Pontiac
Naz, John F.....20 S. Main St., Clarkston
Neafie, Charles A. (L).....
Pontiac City Health Dept., Pontiac
Nessel, J. H.....96 Barrington Rd., Pontiac
Newcomb, Arnold B.....P.O. Box 1036, Berkley
Nichamin, Samuel J.....25101 Coolidge, Oak Park
Norup, John.....2635 Coolidge Hwy., Berkley
Nosanchuk, Joseph I.....
1215 Pontiac State Bank Bldg., Pontiac

Olsen, Richard E.....St. Joseph Mercy Hospital, Pontiac

Palmer, Hayden D.....506 Riker Bldg., Pontiac
Patrick, C. I.....5807½ Dixie Hwy., Waterford
Pauli, Theodore H.....206 Riker Bldg., Pontiac
Payton, Charles F.....1719 Crooks Rd., Royal Oak
Pear, E. G.....3023 N. Woodward Ave., Royal Oak
Pearce, James F.....114 S. Washington, Royal Oak
Pelletier, Charles J.....1914 Dusetta, Royal Oak
Petroff, George N.....
1301 Pontiac State Bank Bldg., Pontiac
Pierce, W. H.....600 N. Woodward Ave., Birmingham
Porritt, Ross J.....304 Riker Bldg., Pontiac
Ports, Preston W.....33109 Grand River, Farmington
Prather, F. W.....347 N. Main St., Milford
Prevette, Isaac C.....
215 First National Bank Bldg., Pontiac
Prosser, M. G.....3803 Elizabeth Lake Rd., Pontiac

Quarton, Albert E., Jr...3027 N. Woodward, Royal Oak
Quinn, James R...511 Pontiac State Bank Bldg., Pontiac

Raynale, George P. (L)..302 Wabeek Bldg., Birmingham
Read, James Allen.....610 N. Woodward, Birmingham
Rech, W. R.....404 Pontiac Trail, Walled Lake
Reid, Fred T.....Clawson State Bank Bldg., Clawson
Riddle, John, Capt., M.C. (M).....
6407 USAF Hosp., GP, APO 323-2,
San Francisco, Calif.
Riggs, Harry L.....31 Orchard Lake, Pontiac
Riker, Aaron D.....1012 Riker Bldg., Pontiac
Roehm, Harold R.....322 Wabeek Bldg., Birmingham
Rowley, Laurie G.....4400 Dixie Hwy. Drayton Plains
Rupp, Edson C., Jr.....
Washington Square Bldg., Royal Oak
Rush, Alva D.....114 S. Woodward Ave., Birmingham
Russell, V. P...624 Washington Square Bldg., Royal Oak
Ruva, J. J.....4463 Dixie Hwy., Drayton Plains

St. John, Harold A.....718 Riker Bldg., Pontiac
Sansone, T. J.....413 Woodward St., Rochester
Saunders, Kenneth.....211 S. Saginaw, Holly
Schlecte, I. C.....120 Second St., Rochester
Schmitt, P. E.....Washington Square Bldg., Royal Oak
Scholes, D. R.....277 Pierce, Birmingham
Schuneman, H. A.....23760 Woodward, Pleasant Ridge
Seaborn, A. J.....1412 S. Washington St., Royal Oak
Segula, Robert L.....326 Riker Bldg., Pontiac
Selman, J. H.....3306 Auburn Ave., Auburn Heights
Sempere, C. R.....326 Riker Bldg., Pontiac
Sewell, G. R.....217 Wabeek Bldg., Birmingham
Shadley, Maxwell L.....94 Ottawa Dr., Pontiac
Sheffield, Loren C.....420 Riker Bldg., Pontiac
Sheridan, F. Michael.....
1307 S. Washington, Huntington Woods
Sibley, H. A. (L).....15 Mathews St., Pontiac
Simpson, E. K. (L).....804 Pontiac State Bank, Pontiac
Smith, Carleton A.....Guilford Rd., Bloomfield Hills
Smith, Donald S.....824 Riker Bldg., Pontiac
Smith, George E.....
629 Washington Square Bldg., Royal Oak
Somers, Donald C...2338 N. Woodward Ave., Royal Oak
Somerville, W. J.....
23760 Woodward Ave., Pleasant Ridge
Spencer, Lloyd H.....1219 S. Washington, Royal Oak
Spoehr, Eugene L.....22832 Woodward, Ferndale
Spohn, Earl W.....201 S. Center St., Royal Oak
Stageman,, J. C...1203 Pontiac State Bank Bldg.. Pontiac
Stahl, H. F.....850 Lapeer Rd., Oxford
Stanley, W. F.....1148 S. Woodward, Royal Oak
Starker, C. T. (L).....80 East Iroquis Rd., Pontiac
Steffes, Everette M.....3345 Coolidge Hwy., Berkley
Stein, Edward .....
25622 Coolidge Hwy., Huntington Woods
Steinberg, Norman N.....
211 Washington Square Bldg., Royal Oak
Stevens, John M., Jr.....Pontiac State Hosp., Pontiac
Stolpman, A. K.....640 N. Woodward Ave., Birmingham
Stone, Sanford.....115 W. Lake St., South Lyon
Stuecheli, Milton B.....Beaumont Hosp., Royal Oak
Sutton, Palmer E.....
629 Washington Square Bldg., Royal Oak
Swickle, Edward F.....17 S. Main, Clawson

Tauber, Abraham .....
1108 Peoples State Bank Bldg., Pontiac
Tolle, Charles B.....202 Riker Bldg., Pontiac

Uloth, Milton J. (L).....Ortonville

VandenBerg, Kenneth .....
711 Commercial Nat. Bank Bldg., Pontiac
Van Haltern, H. L.....Riker Bldg., Pontiac
Van Zoeren, Jay....c/o the Haven Sanitarium, Rochester
Virga, George M.....715 N. Main St., Royal Oak

Wagner, Ruth E.....201 First St., Royal Oak
Wake, Douglas L.....1307 S. Washington, Royal Oak
Watson, Thomas Y.....
640 N. Woodward Ave., Birmingham
Weisberg, William W...25201 Coolidge Hwy., Detroit 37
Wessels, Robert R.....302 Wabeek Bldg., Birmingham
Westfall, E. J.....
230 Washington Square Bldg., Royal Oak
White, Robert H.....379 Hamilton, Birmingham
Whitehouse, J. D.....The Haven Sanitarium, Rochester
Wigent, Ralph D.....
c/o Pontiac Motor Div., GMC, Pontiac
Williams, John P.....1102 People State Bldg., Pontiac
Willis, Maurice E.....
1411 Pontiac State Bank Bldg., Pontiac

Young, Arthur R.....906 Riker Bldg., Pontiac

Zimmerman, Walter J.....
258 Washington Square Bldg., Royal Oak
Zujko, Alphonse J.....
1402 Pontiac State Bank Bldg., Pontiac

OCEANA COUNTY

Diehl, Clarence .....Shelby
Flint, Charles H.....
718 Fifth St., 401 Hillside Apt., Rochester, Minn.
Hasty, Willis A.....405 State St., Shelby
Hayton, A. R. (L).....327 Michigan Ave., Shelby
Mullen, W. R.....Pentwater
Munger, L. P. (E).....Hart
Reetz, Fred A. (A).....Shelby
Robinson, Wm. G.....219 State St., Hart
Vrbanac, John J.....22 N. State St., Hart
Wood, Merle G.....19 Courtland St., Hart

ONTONAGON COUNTY

Bender, Jesse L. (L).....Mass
Hogue, H. B.....Ewen
Lahti, Carl R.....800 Zinc St., Otonagon
Olmstead, K. L.....141 Maple Ave., White Pine
Strong, William F.....800 Chippewa, Ontonagon

OTTAWA COUNTY

Arendshorst, Wm. (M).....Peoples Bank Bldg., Holland
Bazuin, C. H.....313 N. River Ave., Holland
Beernink, E. H.....408 Fulton St., Grand Haven
Bloemendaal, D. C.....47 E. Main St., Zeeland
Bloemendaal, W. B.....300 Franklin St., Grand Haven
Boersma, Vernon L.....97 East 30th St., Holland
Bonzelaar, Alvin.....788 Columbia, Holland
Boone, C. E.....101½ E. Main St., Zeeland
Bulthuis, Jerry E.....Jamestown
Clark, Nelson H.....11 West Eighth St., Holland
Cook, C. S.....2 East Eighth St., Holland
DeVries, H. G.....36 East Eighth St., Holland
DeVries, Peter J.....214 Washington, Grand Haven
DeYoung, F. W.....205 W. Savidge St., Spring Lake
Frieswyk, Melvin J.....241 E. Main, Zeeland
Groat, F. L.....631 Franklin St., Grand Haven
Hager, Ralph .....Hudsonville
Hamelink, M. H.....196 W. 32nd St., Holland
Harms, H. P.....2 East Eighth St., Holland
Heard, William.....414 Franklin St., Grand Haven
Kearney, Joseph B.....33 West Eighth St., Holland
Kemme, Gerrit J.....R. #3, Zeeland
Kitchel, John H.....414 Franklin St., Grand Haven
Kitchel, Mary S.....414 Franklin St., Grand Haven
Kools, William C.....14 W. 8th St., Holland
Kuipers, S. W.....431 Washington St., Holland
Leenhouts, Abraham (E).....1425 South Shore, Holland
Long, C. E. (L).....222 Franklin St., Grand Haven
McArthur, Peter.....414 Franklin St., Grand Haven
Michmerhuizen, R. E. (A).....
408 Fulton St., Grand Haven
Moerdyk, William J.....132 E. 12th St., Holland
Nichols, Rudolph H.....33 W. 8th St., Holland
Nykamp, Russell .....Zeeland
Post, J. J.....Allendale
Rottschaefer, William.....17 W. Tenth St., Holland
Rypkema, W. M.....228½ Washington St., Grand Haven
Schaftenaar, R. H.....210 River St., Holland
Stobbelaar, R. H.....107 S. 2nd St., Grand Haven
Ten Have, Ralph.....1016 Sheldon, Grand Haven
Ten Pas, Henry W.....Hamilton
Timmerman, E. C.....Coopersville
Van Appledorn, C. J.....99 West 23rd St., Holland
VanDerBerg, E. E.....17 West Tenth St., Holland
van der Velde, Otto.....35 W. 8th St., Holland
VandeWaa, Alfred J.....200 E. Main St., Zeeland
Van Kolken, P. J.....509 Franklin St., Grand Haven
VerDuin, J. W.....223 Washington, Grand Haven
Wells, K. N.....119 W. Savidge St., Spring Lake
Westrate, Warren K.....17 West Tenth St., Holland
Westrate, William.....17 West Tenth St., Holland
Westrate, William, Jr.....17 West Tenth St., Holland
Winter, John K.....10 E. Tenth Street, Holland
Winter, W. G., Jr.....10 East Tenth St., Holland
Yff, J. H.....511 E. Central Ave., Zeeland
Yonkman, Frederick F...58 Pomeroy Rd., Madison, N. J.

SAGINAW COUNTY

Ackerman, G. L.....124 S. Jefferson Ave., Saginaw
Albers, M. J.....218 Ardwasi, Saginaw
Alger, George David....1839 N. Michigan Ave., Saginaw
Anderson, William K.....404 S. Warren Ave., Saginaw
App, R. G.....520 W. Genessee Ave., Saginaw
Bagley, Ulysses S. (R).....1401½ N. Sixth St., Saginaw
Bass, V. V.....826 N. Michigan Ave., Saginaw
Berberovich, Thomas F.....
2005½ N. Michigan Ave., Saginaw
Bishop, H. M.....515 S. Jefferson, Saginaw
Brender, Fred P.....Frankenmuth
Brock, W. H. (L).....9 Merrill Bldg., Saginaw
Bruggers, Laurence.....1703 N. Michigan Ave., Saginaw
Bruton, Martin F.....420 N. Michigan Ave., Saginaw
Bucklin, Robert V.....1447 N. Harrison, Saginaw
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Busch, F. J.....1731 N. Michigan, Saginaw
Butler, Milton G.....502 S. Jefferson, Saginaw
Cady, Frederick J.....402 S. Jefferson Ave., Saginaw
Cady, F. J., Jr.....402 S. Jefferson St., Saginaw
Cambridge, V. W.....727 N. Jefferson, Saginaw
Cameron, A. K.....409 First Savings & Loan Bldg., Saginaw
Campbell, Lloyd A. (R)....335 Brockway Place, Saginaw
Catizone, R. J.....14415 Dunbar Place, Sherman Oaks, Calif.
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Chisena, Peter R.....6227 Dixie Highway, Bridgeport
Claytor, Archer A.....1000½ N. Third Ave., Saginaw
Comer, Walter H.....120 Alice St., Saginaw
Cortopassi, Andre J.....324 S. Washington, Saginaw
Cortopassi, Vital E.....324 S. Washington Ave., Saginaw
Cory, Charles W.....1227 N. Michigan, Saginaw
Curts, James H.....127 S. Washington, Saginaw
Durman, Donald C.....408 S. Jefferson Ave., Saginaw
Ely, Cecil W.....1820 Janes St., Saginaw
Ernst, Arthur R. (R).....443 S. Weadock, Saginaw
Farley, A. W., Jr.....1803 N. Michigan Ave., Saginaw
Fleschner, T. E.....7450 W. Birch Run Road, Birch Run
Friedrick, D. F. (M).....615 W. Tuscola, Frankenmuth
Gage, David P.....514 First Savings & Loan, Saginaw
Galsterer, Edwin C.....507-9 First Savings & Loan Bldg., Saginaw
Gamon, A. E., II.....514 First Savings & Loan, Saginaw
Gardner, J. H.....815 N. Michigan Ave., Saginaw
Gerard, Roy T.....1500 Gratiot Ave., Saginaw
Gomon, Louis D.....308 Eddy Bldg., Saginaw
Goodsell, J. O.....408 S. Jefferson, Saginaw
Grigg, Arthur P.....320 N. Michigan Ave., Saginaw
Hand, Eugene A.....211 Bearinger Bldg., Saginaw
Harvie, L. C.....405 Wiechmann Bldg., Saginaw
Heavenrich, Robert M.....529 W. Genesee, Saginaw
Helmkamp, Herbert O.....333 S. Jefferson, Saginaw
Hester, Eustace G.....2031 N. Michigan Ave., Saginaw
Hill, Victor L.....518 Janes St., Saginaw
Hohn, Fred J. (L).....407 Wiechmann Bldg., Saginaw
Howell, D. M.....506 Wiechmann Bldg., Saginaw
Hyslop, W. T.....1469 N. Harrison, Saginaw

Jaenichen, Robert F. T.....530 Hayden, Saginaw
James, J. W.....1021 W. Genesee, Saginaw
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Kickham, Edward F.....309 S. Jefferson Ave., Saginaw
Kleckamp, Herbert G.....1005 Gratiot Ave., Saginaw
Kleinschmidt, E. E.....3625 Webber St., Saginaw
Kolesar, R. C. (M).....1820 Stateville Ave., Charlotte, N. C.
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Kruger, Harold F.....703 W. Genesee St., Saginaw
Lassignal, J. C.....2125 Bay St., Saginaw
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Ling, Kenneth C.....Box 135, Hemlock
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Lohr, Thomas O.....1135 N. Michigan, Saginaw
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Markey, Francis L.....808 N. Michigan, Saginaw
Markey, J. P.....808 N. Michigan, Saginaw
Martzowka, William P.....415½ W. Genesee, Saginaw
Matthews, Harry C.....1227 N. Michigan, Saginaw
Maurer, John A. (R).....20 Hammond Road, Saginaw
Mayne, Harold E.....305 Graebner Bldg., Saginaw
McEwen, W. G.....305 Graebner Bldg., Saginaw
McKinney, Alexander R.....330 S. Washington, Saginaw
Meyer, Henry J. (E).....301 S. Jefferson, Saginaw
Miller, G. L.....1803½ N. Michigan, Saginaw
Moon, A. R.....305 Second National Bldg., Saginaw
Morgrette, Leonard J.....603 S. Jefferson, Saginaw
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Murray, Charles R.....1827 N. Michigan Ave., Saginaw
Murray, Morris J.....603 S. Jefferson, Saginaw
Nelson, Oscar A.....120 N. Michigan, Saginaw
Northway, R. O.....505 First Savings & Loan, Saginaw
Novy, Frank O.....420 S. Jefferson, Saginaw
Olson, Carl Porter.....405 First Savings & Loan Bldg., Saginaw
Ostrander, Frank W. (L).....Freeland
Phillips, H. A.....419 First Savings & Loan Bldg., Saginaw
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Ruskin, D. B.....301 Second Nat. Bank Bldg., Saginaw
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Ryan, Richard S.....633 S. Washington Ave., Saginaw
Sample, John T.....606 Rust St., Saginaw
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Schaiberger, Elmer G...1520 N. Michigan Ave., Saginaw
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Schultz, F. R.....Chesaning
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Sheldon, S. A.....124 S. Jefferson, Saginaw
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Stewart, George W.....1902 Janes, Saginaw
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Sullivan, F. M.....1213 N. Michigan Ave., Saginaw
Thompson, Arthur B.....Chev.-Saginaw Transmission, Saginaw
Tiedke, G. E.....309 Graebner Bldg., Saginaw
Toshach, Clarence E.....330 S. Jefferson Ave., Saginaw
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Weidner, Garland.....City Hall, Saginaw
Weiss, A. W.....308 Eddy Bldg., Saginaw
Westlund, Norman.....1501 N. Michigan, Saginaw
Wright, Edwin M.....404 S. Warren Ave., Saginaw
Yntema, Stuart.....3 East Hannum Blvd., Saginaw

ST. CLAIR COUNTY

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Banting, Kenneth C.....403 Peoples Bank Bldg., Port Huron
Barss, Joseph A. (M).....301 National Bank Bldg., Port Huron
Battley, J. C. S.....940 Military Ave., Port Huron
Beck, Frank K.....901 Lapeer, Port Huron
Beer, Joseph F.....104 N. Riverside, St. Clair
Benjamin, Clayton C. (L).....600 Park St., Port Huron
Biggar, R. J.....Bahrein Petroleum Co., c/o Calif. Tex. Oil Co., 380 Madison, New York 17, N. Y.
Borden, Charles L.....216 Sperry Bldg., Port Huron
Bottomley, Thomas H., Jr.....1102 Sixth St., Port Huron
Boughner, W. H.....325 Pleasant St., Algonac
Bovee, M. E.....2208 Stone St., Port Huron
Bowden, William S.....137 Water St., Marine City
Brush, Howard O.....612 Peoples Bank Bldg., Port Huron
Cantwell, John D.....612 Peoples Bank Bldg., Port Huron
Carey, L. W. (R).....604 Oakwood Ave., New Smyrna Beach, Fla.
Carney, F. V. (R).....1065 N. Riverside St., St. Clair
Carrie, R. G.....1201 St. Clair River Drive, Algonac
Cleland, William D., Jr.....208 Sperry Bldg., Port Huron
Clifford, Robert P.....506 S. Riverside, St. Clair
Clyne, B. C.....103 N. Main St., Yale
Coon, G. G.....902 Tenth Ave., Port Huron
Cooper, T. H.....911 Lapeer Ave., Port Huron
Coury, John J., Jr.....301 Michigan Bank Bldg., Port Huron
Cripps, J. R.....210 South Main St., Yale
Davison, William T.....312 Sperry Building, Port Huron
Dinnen, W. J., Jr.....804 Huron Ave., Port Huron
Douvas, Nicholas (A).....311 Pine St., Port Huron
Fitzgerald, E. W.....204 Fox Bldg., Port Huron
Gholz, A. C.....208 Sperry Bldg., Port Huron
Gilmore, John R.....317 Mich. National Bank Bldg., Port Huron
Hazledine, Herbert J. (M).....Mayo Clinic Rochester, Minn.
Holcomb, R. J.....141 S. Main St., Marine City
Hoyt, Charles N.....804 Huron St., Port Huron
Kahn, Oscar B. (M).....Capac
Kesl, George M.....316 Sperry Bldg., Port Huron
Kirban, H. N.....1209 Willow St., Port Huron
Kirker, F. O.....1601 N. Riverside Drive, St. Clair
Koch, Donald A.....310 E. Water St., Port Huron

Lauridsen, James.....1010 Pine Grove, Port Huron
LeGalley, K. B.....Bahrein Petroleum Co., c/o Calif., Tex. Oil Co., 380 Madison, New York 17, N. Y.
Licker, R. R.....525 Court St., Port Huron
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Ludwig, F. E.....916 Seventh St., Port Huron
MacPherson, Charlton A. (R).....Box 2002 Delray Beach, Fla.
Martin, Clyde S.....204 Sperry Bldg., Port Huron
McColl, D. J. (E).....312 Sperry Bldg., Port Huron
McCoy, Leslie F.....902 Tenth Ave., Port Huron
McFarland, William (M).....Armed Forces Exam. Sta., 450 Armory Place, Louisville, Ky.
Meredith, E. W.....1102 6th St., Port Huron
Mohney, G. E.....311 Pine St., Port Huron
Morris, A. N.....204 Sperry Bldg., Port Huron
Novak, Walter S.....310 E. Water St., Port Huron
Patterson, D. Webster.....622 Huron Ave., Port Huron
Pollock, D. A. (A)..1425 University Terrace, Ann Arbor
Rowe, R. E.....310 Water St., Port Huron
Sanderson, Joseph L.....515 Pine St., Port Huron
Sands, G. E.....3179 Armour St., Port Huron
Schaefer, W. A.....302 Michigan Nat'l Bank, Port Huron
Selby, C. D.....1916 Military, Port Huron
Serniak, J. A.....104 S. Main St., Yale
Sites, E. C.....Michigan National Bank Bldg., Port Huron
Tisdel, James H. (M).....310 E. Water St., Port Huron
Tomsu, G. F.....310 E. Water St., Port Huron
Townley, Charles O.....312 Sperry Bldg., Port Huron
Treadgold, Douglas.....1323 Military, Port Haven
Ulmer, Arthur H., Jr.....303 Sperry Bldg., Port Huron
VanRhee, George....323 Peoples Bank Bldg., Port Huron
Walker, S. C.....312 Sperry Bldg., Port Huron
Ware, John R.....3107 24th St., Port Huron
Wass, Henry C.....115 Adams St., St. Clair
Wetzel, J. O. (R).....Box No. 4516, Ft. Lauderdale, Fla.
Wilson, N. R.....361 S. Water St., Marine City

ST. JOSEPH COUNTY

Berg, Lawrence A.....106 E. Chicago, Sturgis
Braham, Wilbur G.....105 Lakeview, Sturgis
Brunson, Allen E.....206 E. West St., Sturgis
Evans, R. H.....111 S. Monroe, Sturgis
Fiegel, Samuel A.....111 S. Monroe St., Sturgis
Fortner, Roscoe J.....137 Portage, Three Rivers
Gillespie, Eleanor M.....103 S. Fourth St., Sturgis
Jacobowitz, John M.....49½ N. Main St., Three Rivers
Lamb, Harry.....110 Pleasant Ave., Sturgis
Lepard, Olin L.....104 S. Lakeview, Sturgis
Miller, Charles C.....106 W. Chicago Road, Sturgis
O'Dell, C. W.....117 Spring St., Three Rivers
O'Dell, J. H., Jr.....117 Spring St., Three Rivers
Olney, Harold E.....Leonidas
Pennington, Harry C.....118 S. Kalamazoo, White Pigeon
Penzotti, S. C.....117 S. Spring St., Three Rivers
Porter, C. G.....226 East St., Three Rivers
Shaw, G. D.....117 Spring St., Three Rivers
Sheldon, John P.....206 E. West St., Sturgis
Slote, Leal K. (E).....157 S. Washington, Constantine
Smith, R. D.....Colon
Springer, R. A. (R).....Centerville
Storer, W. R.....Co. Health Dept., Centerville
Tesar, Frank J.....104 W. Market, Centerville
Weisheit, H. R.....204 E. West St., Sturgis
Zimont, Raymond D.....100 S. Washington, Constantine

SANILAC COUNTY

Bennett, W. G. (M)..U. S. Public Health Service Hosp., Browning, Mont.
Blanchard, Ernest W.....Deckerville
Ford, Frances A.....Applegate
Gift, Weldon A.....Marlette
Hart, Robert K.....Howard St., Croswell
Jayson, Michael H.....Marlette
McCrea, John W.....Marlette
McGunegle, K. T.....Sandusky
Muir, Neil.....Croswell
Seager, M. C.....Brown City
Tweedie, G. Evans.....Sandusky
Tweedie, S. Martin.....Sandusky
Winfield, Raymond J.....Marlette

SHIAWASSEE COUNTY

Arnold, Alfred L., Jr.....812 Bradley St., Owosso
Austin, Eugene S.....319 E. Exchange, Owosso
Bach, Norman F.....113 E. Williams St., Owosso
Brenner, Ervin J.....500 E. Oliver, Owosso
Brown, Richard C.....113 E. Williams St., Owosso
Brown, Richard J.....113 E. Williams, Owosso
Buzzard, Walter D.....Chesaning
Chipman, E. M.....502 W. Williams, Owosso
Ford, Wm. A. J. (A).....1130 Paul St., Ann Arbor
Grommons, J. R.....Durand
Graves, James H.....511 W. Main St., Owosso
Gurden, Elizabeth L.....113 E. Williams St., Owosso
Harkness, Carleton A.....113 E. Williams St., Owosso
Harroun, John E.....306 Matthews Bldg., Owosso
Hoshal, Verne L.....Durand
Janci, Julius S.....215 E. Mason St., Owosso
Lieber, Robert W.....103 E. Clinton St., Durand
MacGregor, J. F.....113 E. Williams St., Owosso
McKnight, Edwin R.....320 N. Washington Ave., Owosso
Merz, Walter L.....224 N. Ball St., Owosso
Parker, Walter T.....1411 E. Tenth St., Apt. 3, Tucson, Ariz.
Pochert, R. C.....Matthews Bldg., Owosso
Richards, Chester J.....Durand
Sahlmark, Joseph F.....812 Bradley, Owosso
Sheperd, W. F.....Matthews Bldg., Owosso
Wachtel, A.....812 Bradley, Owosso
Weinkauf, William F.....Corunna
Weston, C. L.....1306 N. Washington, Owosso
Willoughby, William A. (A).....29711 Winter Drive, Garden City

TUSCOLA COUNTY

Ballard, James H.....Cass City
Cook, Raymond R.....Akron
Dickerson, Willard W.....Caro State Hospital, Caro
Donahoe, Harold T.....Cass City
Elmendorf, Edward N.....Vassar
Flett, Richard O.....Millington
Gilbert, Donald E.....Mayville
Gugino, Frank J.....Reese
Howlett, R. R.....624 W. Frank St., Caro
Kaven, G. H. (L).....Unionville
Merrill, Elmer H.....South State St., Caro
Miles, E. J.....Caro
Nigg, Herbert L.....Caro
Savage, Lloyd L.....General Delivery, Caro
Swanson, E. C.....Vassar
Von Renner, Otto (L).....Vassar

VAN BUREN COUNTY

Boothby, Carl F.....Hartford
Boothby, F. M.....Lawrence
Bope, William P. (E).....Decatur
Buckborough, M. W.....South Haven
Cooper, Joseph.....Bangor
Copeland, Evan L.....Decatur
Diephuis, Bert.....424 Huron St., South Haven
Dillon, Thomas J.....RFD No. 3, Paw Paw
Gano, Avison.....Bangor
Giffen, John R. (E).....Bangor
Itzen, J. F.....330½ Center St., South Haven
Loomis, F. J.....Paw Paw
Morgan, D. K.....326 Michigan Ave., South Haven
Penoyar, C. L.....South Haven
Spalding, R. W.....Gobles
Staggs, Adelbert L.....Hartford
Steele, Arthur H.....Paw Paw
Ten Houten, Charles.....Paw Paw
Terwilliger, Edwin H...326 Michigan Ave., South Haven
Urist, Martin J.....South Haven
Young, William R.....Lawton

WASHTENAW COUNTY

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Bassett, Robert C.....University Hospital, Ann Arbor
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Conn, Jerome W.....University Hospital, Ann Arbor
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Falls, Harold F.....408 First Nat. Bldg., Ann Arbor
Feller, Irving (A).....1213 Prospect St., Ann Arbor
Fink, George C.....411 N. Ingalls, Ann Arbor
Fisher, Joseph V.....Chelsea
Flotte, C. Thomas.....University Hospital, Ann Arbor
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Anderson, James O.....633 David Whitney Bldg., Detroit
Anderson, Walter L.....5902 Jos. Campau, Detroit
Anderson, Walter T.....923 David Whitney Bldg., Detroit
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Braden, Robert G.....2853 Biddle Ave., Wyandotte
Bradfield, Horace F.....510 E. Warren, Detroit
Bradley, George T.....1201 David Whitney Blvd., Detroit 26
Bradshaw, William H.....4715 St. Antoine, Detroit 1
Brady, Herbert A.....208 Reno Bldg., River Rogue 18
Braley, William N.....12897 Woodward Ave., Detroit 3
Bramigk, F. W.....509-11 Professional Bldg., Detroit 1
Brand, Benjamin.....4500 Wabash Ave., Detroit 8
Braun, Lionel.....516 Fox Theatre Bldg., Detroit 1
Braverman, Morris M.....1222 Maccabees Bldg., Detroit 2
Brekke, Viola G.....2763 W. Eight Mile Road, Detroit
Bremer, J. P. .....17818 E. Warren, Detroit
Bremer, William M.....15641 E. Warren, Detroit 24
Brengle, Deane R. (R)..... 1229 Washington, Wellington, Kan.
Brennan, M. J.....1176 Grayton, Grosse Pointe Park
Brent, Morris S.....1330 Strathcona, Detroit 3
Brey, Norman W.....1202 Maccabees Bldg., Detroit 2
Briegel, W. A. (R).....1519 S. E. Fourteenth St., Ft. Lauderdale, Fla.
Briggs, William J.....1202 Maccabees Bldg., Detroit 2
Brines, O. A.....1512 St. Antoine, Detroit
Bringard, Elmer L.....16901 James Couzens, Detroit 35
Brisson, Joseph C.....9191 Whittier, Detroit 24
Bristol, William R.....6142 Bishop Road, Detroit
Broadman, Sylvan A.....16401 Grand River, Detroit 27
Broderson, H. S.....10720 W. Jefferson, River Rogue
Bromme, William.....10 Peterboro, Detroit 1
Bronson, W. W.....22128 Grand River, Detroit 19
Brooks, Charles W.....2033 E. Division Ave., Detroit
Brooks, Clark D. (L)....113 Martin Place, Detroit 1
Brooks, Eugene M.....3130 Guardian Bldg., Detroit
Brooks, Nathan.....1001 Kales Building, Detroit
Brosius, C. O.....41001 Seven Mile Road, Northville
Brosius, William L.....Harper Hospital, Detroit
Brough, Glen A.....1402 David Whitney Bldg., Detroit
Brown, A. G.....12065 Wyoming, Detroit
Brown, Audrey O.....742 Maccabees Bldg., Detroit
Brown, Carlton F.....1229 David Whitney Bldg., Detroit 26
Brown, Charles H.....3152 Biddle Avenue, Wyandotte
Brown E. M.....Sinai Hospital, Detroit
Brown, Frances.....1940 Lincolnshire, Detroit
Brown, Gordon T.....1300 Hayes Avenue, Detroit 5
Brown, Harvey F...3714 W. McNichols Road, Detroit 21
Brown, Henry S.....18101 James Couzens Highway, Detroit 2
Brown, John R.....702 Maccabees Bldg., Detroit 2
Brown, Robert A.....3529 Jefferson, Ecorse
Brown, Samuel M.....16500 Wyoming Ave., Detroit 21
Brown, Stanley H.....8544 W. McNichols Road Detroit 21
Brown, Thomas A.....5430 W. Warren, Detroit
Brownell, Paul G.....18916 Woodward Ave., Detroit 3
Bruder, R. C.....10149 Michigan Ave., Dearborn
Bruehl, Richard A.....471 Fisher Building, Detroit
Bruer, E. L.....12170 Fort Street, Wyandotte
Bruer, E. S.....12170 Fort Street, Wyandotte
Brunke, Bruno B.....7765 Mack Avenue, Detroit 14
Brush, Brock Edwin, 2799 W. Grand Blvd., Detroit
Bryan, Donald I.....704 Medical Arts Building 13700 Woodward Avenue, Highland Park
Bryan, J. B.....Henry Ford Hospital, Detroit 2

Bryce, John D.....5400 Trumbull, Detroit 8
Buchanan, William Paul.....11751 Grand River Ave., Detroit, 4
Budd, R. D.....Northville State Hosp., Northville
Budson, Daniel.....10300 W. 7 Mile Road, Detroit 21
Buell, John H.....901 David Whitney Building, Detroit 26
Buerki, Robin C.....Henry Ford Hospital, Detroit
Buller, H. L.....4120 Fenkell Ave., Detroit 21
Bunch, D. C., Jr.....Henry Ford Hospital, Detroit 2
Burger, J. H.....Henry Ford Hospital, Detroit 2
Burke, Ralph M.....742 Maccabees Building, Detroit 2
Burnham, David C.....13700 Woodward Avenue, Highland Park
Burns, Robert T.....16101 Harper Ave., Detroit 24
Burnside, Howard B.....7220 Gratiot, Detroit 13
Burnstine, Julius Y.....45 Owen Avenue, Detroit
Burnstine, Perry P.....434 W. Palmer, Detroit 2
Burr, George C.....1706 David Whitney Bldg., Detroit 26
Burr, H. Leonard.....168 Fisher Road, Grosse Pointe
Burroughs, R. G.....1449 David Whitney Bldg., Detroit
Burrows, Howard A.....10423 W. Warren, Dearborn
Burstein, Harry S.....2950 W. Grand Blvd., Detroit 2
Burstein, I. Marvin....2950 W. Grand Blvd., Detroit 2
Burstein, Morris M.....2950 W. Grand Blvd., Detroit 2
Burton, D. T.....54 Arden Park, Detroit
Burton, Irving F.....14624 East 7 Mile Road, Detroit
Bush, Glendon J.....7704 Dexter Blvd., Detroit 6
Bush, L. M.....18950 Woodward Ave., Detroit
Buss, W. C.....Henry Ford Hospital, Detroit 2
Butler, Harry J. (L).....33 Waverly, Highland Park
Butler, John D.....1308 Broadway, Detroit 26
Butler, H. R.....3529 W. Jefferson, Encorse
Butler, J. Payne.....3403 W. Warren, Detroit 8
Butler, Lawrence H.....14521 E. Seven Mile Road, Detroit
Butler, Volney N.....28 W. Adams, Detroit 26
Buttrum, Edward J.....14755 Fenkell, Detroit 27
Byers, Dudley W.....8934 Oakland Ave., Detroit
Cadieux, Henry W. (L)..... 103 E. Grand Blvd., Detroit 7
Cadwell, Howard....Wayne County Health Dept., Eloise
Cahalan, Joseph L.....214 David Whitney Bldg., Detroit 26
Cain, Waldo L.....8033 Twelth Street, Detroit 6
Caldwell, George L.....12017 Jos. Campau, Detroit 2
Caldwell, J. R.....2799 W. Grand Blvd., Detroit 2
Cale, Edward E., Jr.....2799 W. Grand Blvd., Detroit 2
Calkins, H. N.....15302 Gilchrist, Detroit
Callaghan, Thomas T.....312 Professional Bldg., Detroit
Cameron, A. H.....2853 Biddle, Wyandotte
Cameron, D. A.....2255 Fort Street, Lincoln Park
Campbell, Charles A.....12922 West Warren, Dearborn
Campbell, Duncan.....9203 Grand River, Detroit 4
Campbell, Duncan A. (E)....1613 David Whitney Bldg., Detroit 26
Campbell, Kenneth N.....2229 E. Jefferson, Detroit
Campbell, M. D.....10 Peterboro, Detroit
Campbell Mary B.....660 Seward Street, Detroit 2
Campbell, R. E.....8445 E. Jefferson, Detroit
Campbell, Thelma. W.....22375 Garrison, Dearborn
Candler, C. L.....20040 Mack Avenue, Grosse Pointe Woods 30
Canter, Allie L.....13700 Woodward Ave., Detroit 5
Canter G. E.....13732 Woodward Ave., Detroit 3
Cantor, H. C.....668 Maccabees Bldg., Detroit
Cantor, Meyer O.....666 Maccabees Bldg., Detroit 2
Cantow, L. A.....1123 David Whitney Bldg., Detroit 26
Capano Oreste A.....16234 Cruse, Detroit 27
Capellari, Elmer.....310 E. Jefferson, Detroit 26
Caputo, Joseph N.....22575 Nona Avenue, Dearborn
Caputo, Nancy.....18145 Mack, Detroit
Capuzzi, Eugene T.....19214 Votrobeck Drive, Detroit 19
Caraway, Jas. E.....35804 John R. Street, Wayne
Carbone, Louis A.....9317 Gratiot, Detroit 13
Carey, Cornelius (L).....9667 Gratiot Ave., Detroit 13
Carlisle, J. C.....2900 S. Fort Street, Detroit 17
Carlson, Harold W.....18070 Wildemere, Detroit 21
Carmichael, Edward K.....7815 E. Jefferson, Detroit 14
Carnes, H. E.....Parke, Davis & Co., Detroit 32
Carp, Joseph.....8839 Mt. Elliott, Detroit 11
Carpenter, Claire H.....18700 Meyer Road, Detroit 21
Carpenter, C. J.....3835 Biddle Street, Wayne
Carpenter, Glenn B.....1416 David Whitney Building, Detroit 26
Carpenter, William S.....1317 David Whitney Building, Detroit 26
Carr, J. G.....14111 Korte, Detroit
Carrick, Lee.....1515 Kales Bldg., Detroit 26
Carroll, Elmer H.....9920 Stoepel Avenue, Detroit 4
Carroll, Lona B.....1066 Maccabees Bldg., Detroit 2
Carson, Herman J.....7745 Puritan, Detroit 21
Carstens, Henry R.....3706 Manor Road Chevy Chase 15, Md.
Carter, John M.....613 David Whitney Bldg., Detroit 26
Carter, L. F.....613 David Whitney Bldg., Detroit 26
Casey, Byron L., Jr.....1865 Guardian Bldg., Detroit
Cassidy, William J.....1737 David Whitney Bldg., Detroit 26
Castle, M. E. (M).....761 Fisher Building, Detroit 2
Castrop, Charles W.....10149 Michigan Ave., Dearborn
Catherwood, Albert E.....1337 David Whitney Bldg., Detroit 26
Caton, Dorothy F. (A).....17144 Oak Drive, Detroit 21
Caughey, A. F., Jr.....16889 James Couzens, Detroit 35
Caughey, Edgar H.....11301 Whittier, Detroit 24
Caumartin, F. E.....17184 Wildemere, Detroit 21
Cellar, Frank A.....944 Maccabees Bldg., Detroit
Ceravolo, Albert J.....Bon Secours Hosp., Grosse Pointe 30
Ceresko, A. R.....18650 W. Warren Ave., Detroit 10
Cetlinski, Constantine A.....11838 Joseph Campau Detroit 12
Cetnar, E. J. (M).....10492 Merlin, Detroit 24
Chabut, V. George.....206 W. Dunlap, Northville
Chalat, N. I.....212 David Whitney Bldg., Detroit 26
Chalk, Carl C.....9317 Gratiot Ave., Detroit 13
Chall, Henry G.....2941 W. McNichols, Detroit 21
Chapin, Sidney E.....10149 Michigan Ave., Dearborn
Chapman, Aaron L.....2550 Atkinson, Detroit 6
Chapman, Paul T.....1151 Taylor Ave., Detroit 2
Chapman, R. H.....7600 John Rd., Detroit
Chapnick, H. A.....506 Kales Bldg., Detroit
Charleston, R. A.....15174 Lasher Road, Detroit 23
Charnas, Sidney.....542 Maccabees Bldg., Detroit 2
Chase, Clyde H.....1002 David Whitney Bldg., Detroit 26
Chase, W. E.....2799 W. Grand Blvd., Detroit 2
Chason, Jacob L.....1512 St. Antoine.....Detroit 26
Check, Frank E.....3439 Iroquois, Detroit 14
Chen, Mey-en.....1420 St. Antoine, Detroit
Cheng, James T.....1800 Tuxedo, Detroit 26
Cherney, P. J.....912 Kales Bldg., Detroit 26
Cherup, Nicholas.....22728 Ryan Rd., Van Dyke
Chesluk, Herman M.....1312 David Broderick Tower, Detroit
Chester, William P.....5057 Woodward, Detroit 2
Childs, G. M.....2842 W. Grand Blvd., Detroit
Chipman, Willard A.....14300 W. McNichols Road, Detroit 35
Chittenden, George E.....7815 E. Jefferson Avenue, Detroit 14
Chostner, G. C. (R).....2237 S. Atlantic, Daytona Beach, Fla.
Christopher, James G.....Holy Cross Hospital, 4777 East Outer Drive, Detroit
Chrouch, Laurence A.....18456 Grand River, Detroit 23
Church, A. S.....19570 Bretton Dr., Detroit 23
Cioffari, M. S.....19363 James Couzens Highway Detroit
Ciprian, Joseph E.....1775 E. Grand Blvd., Detroit
Clapper, Muir.....1512 St. Antoine, Detroit
Clark, Arthur M.....22400 Cherryhill, Dearborn
Clark, Charles J.....Ford Motor Co., Dearborn
Clark, Clarence M.....2605 Holbrook, Detroit 12
Clark, Harold E.....17198 Oak Drive, Detroit 21
Clark, Harry G.....14600 Greenfield, Detroit 27

Clark, William P.....1682 S. Fort St., Lincoln Park
Clarke, Charles N.....2501 W. Grand Blvd., Detroit
Clarke, Norman E.....2501 W. Grand Blvd., Detroit 8
Clarke, Robert B.....1112 Kales Bldg., Detroit
Clifford, C. H.....10 Peterboro, Detroit 1
Clifford, John Edward.....
910 David Broderick Tower, Detroit 26
Clifford, R. H.....2799 W. Grand Blvd., Detroit
Clifford, Thomas P.....
1802 David Whitney Bldg., Detroit 26
Clippert, J. C. (E).....Dearborn Inn, Dearborn
Coan, Glenn L.....2336 Van Alstyne Blvd. Wyandotte
Coates, E. O.....2799 W. Grand Blvd., Detroit 2
Cobane, John H.....10 Peterboro, Detroit 1
Cochran, John.....2799 W. Grand Blvd., Detroit 2
Cochrane, Edgar G.....12805 Hamilton, Detroit 3
Cohen, H. Herbert.....12700 W. 7 Mile Rd., Detroit 21
Cohen, Lewis.....7441 W. Seven Mile, Detroit
Cohen, M. F.....20242 Braile, Detroit 19
Cohn, Daniel E.....409 Fox Bldg., Detroit 1
Cohoe, Don A.....18916 Woodward, Detroit 3
Cole, F. H.....1757 David Whitney Bldg., Detroit 26
Cole, James E.....344 Glendale, Detroit 4
Cole, Wyman C. C.....1077 Fisher Bldg., Detroit 2
Cole, Wyman C. C., Jr.....3001 W. Grand Blvd., Detroit
Coleman, Margarete W...58 W. Adams Ave., Detroit, 26
Coleman, P. F.....30935 Plymouth Rd., Livonia
Coleman, William G.....20526 Grand River, Redford 19
Collings, M. R.....9201 W. Outer Dr., Detroit 19
Collins, James E.....12845 Broadstreet, Detroit 4
Colvin, Leslie T.....474 Fisher Bldg., Detroit 2
Colyer, Raymond G.....56 Rhode Island, Detroit 3
Comfort, M. D.....28754 Seneca, Flat Rock
Comstock, Lawrence A.....P.O. Drawer L, Trenton
Condon, S. E. (M)..3157 E. Seven Mile Rd., Detroit 34
Conklin, Emma J.....Wayne County General Hosp., Eloise
Conley, L. C. M.....99 Tuxedo, Detroit 3
Connelly, Richard C.....
1645 David Whitney Bldg., Detroit 26
Connolly, Frank O.....5149 Joy Rd., Detroit 4
Connolly, John P.....5149 Joy Rd., Detroit 4
Connolly, P. J.....1317 David Whitney Bldg., Detroit 26
Connors, J. J.....3546 Trumbull, Detroit
Cook, James A.....2730 21st St., Wyandotte
Cook, James C.....5 Fairmount Ct., Dearborn
Cooksey, Warren B.....62 W. Kirby, Detroit
Cooper, Edmond L.....414 David Whitney Bldg., Detroit
Cooper, James B.....18145 Mack Ave., Detroit 24
Cooper, Ralph Ruehl.....
1515 David Whitney Bldg., Detroit 26
Corbeille, Catherine.....1050 Fisher Bldg., Detroit
Cosgelia, Robert P.....9901 Whittier Ave. Detroit 24
Costello, Russell T.....630 Fisher Bldg., Detroit 2
Cotant, John F.....8935 Fenkell, Detroit 21
Cotruro, Louis D.....3640 McDougall, Detroit 7
Cotton, Schuyler O.....2332 Carson Ave., Detroit 9
Coulter, William J.....5258 Chatsworth, Detroit 24
Courville, Charles J.....1202 Maccabees Bldg., Detroit 6
Cowan, Wilfrid.....6135 Chalmers, Detroit 13
Cowen, Leon B.....1038 Maccabees Bldg., Detroit 2
Cowen, Robert L.....907 Mutual Bldg., Detroit 26
Coyle, J. E.....573 Fisher Bldg., Detroit
Coyne, Douglas Ruthven....7376 Grand River, Detroit 4
Crews, Thomas H.....772 Fisher Bldg., Detroit 2
Crockett Emily E.....7263 American Ave., Detroit 10
Croll, Leo J.....1326 Maccabees Bldg. Detroit 2
Croll, Maurice M.....1326 Maccabees Bldg., Detroit 2
Crook, Charles L.....13700 Woodward, Detroit 3
Cross, Harold E.....
499 Sunningdale, Grosse Pointe Woods 30
Crossen, Robert J...902 David Whitney Bldg., Detroit 26
Croushore, James E.....573 Fisher Blvd., Detroit 2
Cruikshank, Alexander (E).....228 E. Grand Blvd.,
Detroit 7
Curhan, J. H.....18709 Meyer Rd., Detroit 21
Curtis, Frank E.....10 Peterboro, Detroit 1
Curtiss, William P.....3181 E. Jefferson, Detroit 9
Cushing, Russell G.....13424 Gratiot Ave., Detroit 5
Cusick, Paul L.....1108 Stroh Bldg., Detroit 26
Czuj, J. M.....17555 James Couzens, Detroit 35
Dale, Edward C.....28 W. Adams Ave., Detroit 26
Dale, Esther H.....1512 St. Antoine, Detroit 26
Dale, Mark.....3340 E. Eight Mile Rd., Detroit 34
Daly, Byrne M.....120 McLean, Detroit 3
Daly, E. T.....21714 Fenkell, Detroit 23
Danforth, James C., Jr.....
20175 Mack Ave., Grosse Pointe Woods
Danforth, James C., Sr.....
20175 Mack Ave., Grosse Pointe Woods
Danforth, Robert.....20175 Mack Ave., Detroit
Danforth, Mortimer E. (E).....
1311 Cadillac Blvd., Detroit 14
Daniels, Lewis E.....460 Fisher Bldg., Detroit 2
Darling, Charles E.....673 Fisher Bldg., Detroit
Darling, Milton A.....673 Fisher Bldg., Detroit 4
Darnley, J. D.....Henry Ford Hosp., Detroit 2
Darpin, Peter H. Y.....6602 W. Fort St., Detroit 9
Davidson, David M.....1055 Fisher Bldg., Detroit 2
Davidson, Harold.....6475 Woodward, Detroit
Davidson, Harry O.....Henry Ford Hosp., Detroit
Davies, T. S. (L).....15425 Kercheval, Grosse Pointe
Davies, Windsor S.....1302 Stroh Bldg., Detroit 26
Davis, W. N.....Wayne Co. Gen'l Hosp, Eloise
Dawson, W. A.....25951 Avondale Rd., Inkster
Day, Andrew J.....710 David Whitney Bldg., Detroit
Day, J. Claude.....703 David Whitney Bldg., Detroit
Dean, C. Robert.....
Rehabil. Inst. of Detroit, 811 Hamilton Ave., Detroit 2
DeBusk, R. W.....4160 John R. St., Detroit 1
Deering, Robert J.....1392 Coolidge Hwy., River Rouge
Defever, Cyril R.....15124 Kercheval, Grosse Pointe
Defnet, William A.....1302 Stroh Bldg., Detroit 26
De Groat, A. F.....Herman Kiefer Hosp., Detroit
DeGuistino, Caesar.....1175 E. Grand Blvd., Detroit 11
DeJongh, Edwin .....
Diesel Eng. Div., General Motors Corp.
13400 W. Outer Dr., Detroit 23
Delaini, Stella M.....461 Fisher Bldg., Detroit 2
Delaney, James R.....1020 David Whitney Bldg.,
Detroit 26
DeLawrence, Betty J.....21576 Michigan, Dearborn
DeLawrence, Thomas (A).....Grace Hosp., Detroit
Del Giorno, T. E.....St. John's Hosp., Detroit
Demaray, John F.....15312 Burt Rd., Detroit 23
Denison, Louis L.....4026 W. McNichols Rd., Detroit 21
Dennis, M. S.....751 S. Military Ave., Dearborn
DePonio, Sylvester A.....20249 Van Dyke, Detroit 12
Deresz, Alphonse R.....19444 Van Dyke, Detroit
Derleth, Paul E.....562 W. Oakridge, Ferndale
Derr, J. W.....702 Maccabees Bldg., Detroit
DeSmyter, George C.....15527 E. Warren, Detroit
De Spelder, Ray E.....2970 W. Grand Blvd., Detroit 11
Deuby, Owen J.....15105 W. Seven Mile Rd., Detroit 35
Deur, Julius J.....2201 E. Jefferson, Detroit 7
DeVault, Marion.....7431 Orchard, Dearborn
Devine, Herbert W.....22101 Moross Rd., Detroit 24
Dibble, Harry F...1313 David Whitney Bldg., Detroit 26
Dickson, B. R.....337 W. Grand Blvd., Detroit 16
Dickson, Elias L.....7716 Oakland, Detroit 11
Dickson, Leon A.....5119 Milford. Detroit
Dickson, L. C., Jr.....Henry Ford Hosp., Detroit 2
Dickson, Mary D.....
18424 Mack Ave., Grosse Pointe Farms 36
Diebel, Nelson W.....660 Cadieux, Detroit 30
Dieterich, G. C.....14300 W. McNichols, Detroit
Dietze, Margaret R.....22148 Michigan, Dearborn
Dietzel, H. O.....1024 W. Seven Mile Rd., Detroit
Dill, Hugh L.....16114 E. Warren, Detroit 24
Dill, J. Lewis.....18615 Birchcrest. Detroit 21
DiLoreto, Panfilo C.....285 Vincennes Place,
Grosse Pointe Farms 36
DiMaso, G. J.....16545 E. Warren, Detroit 24
Dimond, George E.....861 Monroe Blvd., Dearborn
Disney, Charles.....6 M Tech. Center, Detroit
Dittmer, Edwin F.....
18412 Mack Ave., Grosse Pointe Farms 30

Dixon, Fred W.....530 N. Telegraph Rd., Dearborn
Dixon, Ray S.....5001 Van Dyke Ave., Detroit 13
Dixon, Robert K.....2501 W. Grand Blvd., Detroit 8
Dobkin, Joseph (A).....Receiving Hosp., Detroit
Dodds, John C. (L).....
1355 David Whitney Bldg., Detroit 26
Dodenhoff, Chas. F.....791 E. Grand Blvd., Detroit 7
Dodrill, F. D.....1553 Woodward, Detroit
Doering, Wendell R.....968 Fisher Bldg., Detroit 2
Doerr, Louis E., Jr.....16401 Grand River, Detroit 27
Dolega, Stanley F.....10053 Gratiot Ave., Detroit
Dolgoff, Sidney.....7301 Schaefer, Dearborn
Domzalski, Casimer A.....5361 McDougall, Detroit 11
Domzalski, H. M.....1020 Maccabees Bldg., Detroit 2
Donald, Douglas.....7815 E. Jefferson, Detroit 7
Donelson, Kater.....27371 Michigan Ave., Inkster
Donovan, Daniel R., Jr.....8378 Grand River, Detroit 4
Donovan, Eugene T.....13365 Michigan, Dearborn
Donovan, Richard S.....968 Fisher Bldg., Detroit 2
Doran, J. H.....15101 Plymouth Rd., Detroit
Dorian, A. L.....Lynn Hosp., Detroit 17
Dorman, Jack.....18245 Warrington Dr., Detroit
Dorsey, John M.....65 Moss St., Highland Park 3
Doty, Chester A. (L).....
1735 David Whitney Bldg., Detroit 26
Doub, Howard P.....Henry Ford Hosp., Detroit
Douglas, Clair L.....405 David Whitney Bldg., Detroit
Dovitz, Benj. W.....95 Martin Place, Detroit
Dowdle, Edward F.....2501 W. Grand Blvd., Detroit 8
Downer, Ira G.....8445 E. Jefferson Ave., Detroit
Downes, George O.....8007 Harper, Detroit 13
Drake, Ellet H.....Henry Ford Hosp., Detroit 2
Drake, J. J. (R).....
402 Locarno Apts., 5121 W. Chicago Blvd., Detroit 4
Draves, Edward F.....19647 Joy Rd., Detroit 28
Drazek, Joseph A.....8600 W. McNichols Rd., Detroit 21
Drews, Robert S.....12500 Broadstreet, Detroit 4
Drinkhaus, H. I., Lt. Col. MC (M).....
7th Evac. Hosp., APO 34, c/o PM, New York, N. Y.
Droock, Victor.....10 Peterboro, Detroit 1
D'Sena, Dorothy.....10605 W. Warren, Detroit 28
Dubin, Joseph J.....10401 W. Chicago Blvd., Detroit 4
Dubnove, Aaron.....2115 W. Grand Blvd., Detroit 8
DuBois, Paul W.....1708 Broderick Tower, Detroit 26
Dubpernell, Karl (E).....3525 28th St., Detroit 10
Dubpernell, Martin S.....4019 Gilbert, Detroit 10
Dubpernell, Robert O. (M).....
9125 Meyers Rd., Detroit 28
Dudek, J. J.....16401 Grand River, Detroit 27
Dumke, P. R.....Henry Ford Hosp., Detroit 2
Dundas, Edward M.....4700 Schlaff Dearborn
Dunlap, Henry A.....7815 E. Jefferson Ave., Detroit 14
Dunlap, Samson F.....9100 Oakland, Detroit
Dunn, Cornelius E.....18145 Mack Ave., Detroit
Durham, Everett W.....904 S. Military, Dearborn
Durham, Robert.....Henry Ford Hosp., Detroit 2
Durocher, Edmund J. (L).....4158 W. Jefferson, Ecorse
Durocher, Raymond E.....4158 W. Jefferson, Ecorse
Dutcher, Dwight J.....
18514 Mack Ave., Grosse Pointe Farms 36
Duwe, Frank A.....25296 Fenkell, Detroit
Dwaihy, Paul J.....14530 E. Warren, Detroit
Dwyer, Francis W.....7448 Linwood, Detroit
Dygert, H. P., Jr.....Receiving Hosp., Detroit 26
Dykema, Rosemary.....14827 E. Jefferson, Detroit
Dziuba, John F.....8559 W. Jefferson, Detroit 17
Dzul, Paul (M).....275 W. Grand Blvd., Detroit 16

Eades, Charles C.....863 Fisher Bldg., Detroit 2
Eadie, G. A.....16083 Southampton, Livonia
Eakins, F. J. (R).....1768 Mortensen, Berkley
Easterly, Robert L.....2854 Biddle Ave., Wyandotte
Eaton, Crosby D.....462 Fisher Bldg., Detroit 2
Ebner, C. M.....14917 Gratiot Ave., Detroit 5
Echt, Raymond.....3320 W. Chicago, Detroit 6
Eckhous, Arthur W.....1015 Kales Bldg., Detroit
Eder, Samuel J.....1116 Maccabees Bldg., Detroit 2
Edgar, Irving I.....712 Maccabees Bldg., Detroit 2
Edmonds, Gerald W.....18425 Morang Dr., Detroit 5
Edmonds, W. N.....10 Peterboro, Detroit 1
Edmondson, Robert B.....18501 Mack Ave., Detroit 24
Eisman, Clarence H.....
1121 Whittier Rd., Grosse Pointe 30
Eldredge, Edward F.....
18540 Mack Ave., Grosse Pointe 36
Elliott, William G.....4101 Fenkell, Detroit 21
Ellis, Frank.....Wayne County General Hosp., Eloise
Elman, Meyer J.....14002 Woodward, Detroit
Elson, Abraham.....22519 Plymouth, Detroit 28
Elvidge, Robert J.....2900 W. Grand Blvd., Detroit
Emmert Herman C. (L).....7303 Grandmont, Detroit 10
Engel, E. H.....2336 Van Alstyne Blvd., Wyandotte
Engstrom, F. W.....Veterans' Adm. Hosp., Dearborn
Engstrom, Ruby M...Wayne County General Hosp., Eloise
Eno, Laurel S.....1001 David Whitney Bldg., Detroit 26
Ensign, Dwight C.....Henry Ford Hosp., Detroit
Ensing, Osborn, H. B.....758 Fisher Bldg., Detroit 2
Epstein, S. G.....6438 Van Dyke, Detroit 13
Erickson, Eldon W.....2900 S. Fort St., Detroit 26
Erkfitz, Arthur W...545 David Whitney Bldg., Detroit 26
Erman, J. M.....9225 Grand River, Detroit
Eschbach, J. W.....936 S. Military, Dearborn
Estabrook, Bert U. (L).....850 Virginia Park, Detroit 2
Ettinger, Clayton J. (L).....18734 Woodward, Detroit 3
Evans, E. W.....9025 Linwood, Detroit 6
Evans, G. P., Jr.....414 David Whitney Bldg., Detroit 26
Evans, Jos. M.....10500 E. Warren Ave., Detroit 13
Evans, Leland S.....20953 Grand River, Redford 19
Evans, W. A., Jr.....552 Fisher Bldg., Detroit 2
Evison, Emerson O. S. (M).....
1003 Hawthorne Rd., Grosse Pointe Woods 30
Ewing, C. H.....17120 E. Warren, Detroit 24
Eyler, W. R.....Henry Ford Hosp., Detroit 2
Eyres, A. E.....567 Fisher Bldg. Detroit

Faello, S. J.....16840 E. Warren, Detroit 24
Fagin, I. Donald.....18254 Livernois, Detroit 21
Falick, Mordecai Louis.....960 Fisher Bldg., Detroit
Falk, Ira E.....7925 W. Verner Hwy., Detroit 9
Fallis, Lawrence S.....Henry Ford Hosp., Detroit 2
Fandrich, Theodore S.....1376 Lochmoor Blvd., Grosse Pointe 30
Farbman, Aaron A.....14515 Kercheval, Detroit 15
Faunce, Sherman P.....8300 Kercheval, Detroit 14
Feicks, William J. (M).....200 Ninth St., Lorain, Ohio
Felcyn, W. George.....2091 W. Grand Blvd., Detroit 8
Feld, David.....15101 W. McNichols Rd., Detroit 35
Feldkamp, Lee E.....585 Forest, Plymouth
Feldman, N. L.....17338 Woodingham, Detroit
Feldman, Paul H.....954 Maccabees Bldg., Detroit 2
Fellers, Ray L.....6505 Grand River, Detroit 8
Fenech, H. B.....324 Professional Bldg., Detroit
Fenner, William G.....12454 E. Outer Dr., Detroit 24
Fenton, Edwin H.....15125 Grand River Ave., Detroit 27
Fenton, Meryl M.....8600 W. McNichols Rd., Detroit
Fenton, Russell F.....15125 Grand River Ave., Detroit 27
Fenton, Stanley C.....15310 E. Warren St., Detroit 24
Ferrara, Louis V.....13805 Parkgrove Ave., Detroit 5
Ferrara, Virginia M.....18422 Woodward Ave. Detroit 3
Ferrell, Robert D.....15200 Leslie, Detroit 37
Ferris, G. N. (M).....No Address
Fettig, Carl A. (E).....1026 Harvard Road, Grosse Pointe Park 30
Figiel, Leo S.....18700 Meyers Rd., Detroit 21
Figiel, Steven J. (M).....Grace Hospital, Detroit 1
Fill, Leon.....1506 David Broderick Tower, Detroit
Finch, Alvis D.....17555 James Couzens, Detroit
Finch, F. Sinclair..894 N. Renaud, Grosse Pte. Woods 36
Fine, Edward.....1112 Kales Bldg. Detroit 26
Fink, J. L.....11544 Dexter, Detroit
Finkell, Lawrence J.....
15231 W. Seven Mile Rd., Detroit 35
Finkelstein, J. H.....25447 Plymouth Rd., Detroit 28
Finkelstein, Lionel.....275 W. Grand Blvd., Detroit
Finkelstein, M. B.....17300 Schaefer Rd., Detroit 35
Fischhoff, Joseph.....5475 Woodward Ave., Detroit 2
Fischer, Frederick J.....205 Professional Bldg., Detroit 1
Fishbein, Herbert .....987 E. Jefferson, Detroit

Fisher, George S...1709 David Whitney Bldg., Detroit 14
Fisher, James M.....79 Kercheval, Grosse Pointe
Fisher, O. O. (L).....2475 Iroquois Ave., Detroit 14
Fisher, Ralph L.....8445 Jefferson, East Detroit
Fitzgerald, James M.....2536 W. Grand Blvd., Detroit 8
Flaherty, H. J.....15865 Wyoming, Detroit 21
Flaherty, N. W.....3677 Fort St., Lincoln Park
Fleming, Joseph L.....Henry Ford Hosp., Detroit 2
Flora, William Robert....8100 E. Jefferson, Detroit 14
Flower, J. A.....14140 Puritan, Detroit 27
Fogt, Robert G.....11801 Morang, Detroit
Fogt, Herbert E.....11801 Morang, Detroit
Folberg, Irving I.....862 W. McNichols Rd., Detroit 3
Foley, Hugh S.....22255 W. Michigan, Dearborn 23
Foley, Joseph M.....1553 Woodward, Detroit 26
Font, Anthony J.....710 Kales Bldg., Detroit 26
Ford, George A. (L).....803 Stroh Bldg., Detroit 26
Ford, Sylvester.....1010 Stroh Bldg., Detroit 26
Ford, Walter D. (E).....626 Morley Court, Dearborn
Fordell, F. S.....441 S. Oakwood, Lincoln Park 25
Forgrave, E. G.....18520 Grand River Ave., Detroit 23
Forrer, Gordon R.....21603 Grand River. Detroit
Foster, Daniel P. (A).....Henry Ford Hosp., Detroit 2
Foster, E. Bruce.....853 Fisher Bldg., Detroit 2
Foster, Owen C...1015 David Whitney Bldg., Detroit 26
Foster, Wallace M.....13700 Woodward Ave., Detroit 3
Foster, William L.....2567 W. Grand Blvd., Detroit 8
Fowler, Melvin E.....247 E. Warren, Detroit
Fox, Leonard.....3152 Biddle St., Wyandotte
Fox, Morris Edward.....10 Peterboro, Detroit 1
Fraiberg, Paul L.....13001 W. Chicago, Detroit 27
France, C. J.....3401 Burns Ave. Detroit 14
Franjac, M. J.....25447 Plymouth Rd., Detroit 28
Franzen, Nils A.....19566 Grand River. Detroit 23
Frazer, Mary Margaret.....812 Kales Bldg., Detroit 26
Frederickson, G. C.....3919 John R, Detroit
Free, Harry W.....952 Fisher Bldg., Detroit 2
Freedman, John.....4853 Second Blvd. at Warren Ave., Detroit 1
Freedman, Milton....18626 Santa Barbara St., Detroit 21
Freeman, D. K.....881 Chalmers, Detroit 15
Freeman, Mable.....1316 Broderick Tower, Detroit 26
Freeman, Michael W.....
401 David Whitney Bldg., Detroit 26
Freeman, Wilmer.....940 E. Seven Mile Rd., Detroit 3
Freid, Samuel.....17537 Parkside, Detroit 21
Freier, Morton L.....1503 Kales Bldg., Detroit 26
Freitas, E. L.....St. John's Hosp., Detroit 24
Fremont, Joseph C.....
1202 David Whitney Bldg., Detroit 26
Frey, James L.....755 David Whitney Bldg., Detroit 26
Friedlaender, Alex S.....10300 W. Seven Mile Road, Detroit 21
Friedlaender, Sidney .....
10300 W. Seven Mile Rd., Detroit 21
Friedman, David....2429 E. Milwaukee Ave., Detroit 11
Friedman, I. H.....3773 2nd Ave., Detroit 1
Fritz, G. E.....St. John's Hospital, 22101 Moross Road, Detroit 21
Frothingham, George E. (E).....
707 David Whitney Bldg., Detroit
Fryfogle, James D.....655 Fisher Bldg., Detroit 2
Fulgenzi, Andrew A.....7445 Mack Ave., Detroit
Fuller, Hugh M...1257 David Whitney Bldg., Detroit 26
Fulton, H. E., Jr.....Harper Hosp., Detroit 1
Fulton, William James.....
3-204 General Motors Bldg., Detroit 2
Gaffney, J. M. (A).....13600 Ohio, Detroit 4
Gagliardi, C. A.....Lynn Hosp., Detroit 17
Gagliardi, Raymond, A. E.....15864 Rosemont, Detroit 23
Gajewski, J. E.....Parke, Davis & Co., Detroit 32
Galantowicz, Henry C.....7433 Michigan, Detroit 10
Galdonyi, Laslo.....2311 Broderick Tower, Detroit 26
Galdonyi, Nicholas L.....8001 W. Jefferson, Detroit 17
Galerneau, D. B.....7394 Engleman, Centerline
Galvin, P. P.....7416 Twelfth, Detroit
Ganos, Thomas.....6525 Park, Allen Park
Ganschow, John H.....10025 Nadine, Huntington Woods
Gardner, Lawrence Wm.....
18782 Glenwood Ave., Lathrup Village, Birmingham
Gardner, Max L.....812 Kales Bldg., Detroit
Gariepy, Louis B.....16401 Grand River Ave., Detroit 27
Gariepy, L. J.....16401 Grand River Ave., Detroit
Gass, H. Harvey.....815 Kales Bldg., Detroit
Gaston, Herbert B.....871 Fisher Bldg., Detroit 2
Gates, Nathaniel (L).....10 Peterboro, Detroit 1
Gaynor, Alex.....1435 E. Seven Mile Rd., Detroit 3
Gehring, Harold W.....767 Fisher Bldg., Detroit 2
Geib, Ledru O. (L).....3528 Van Dyke St., Detroit 14
Geitz, William A.....7234 E. Forest Ave., Detroit 13
Gelbach, Philip D.....2900 S. Fort St., Detroit 25
Gellert I. S. (L)..1229 David Whitney Bldg., Detroit 26
Gemeroy, J. C.....664 Fisher Bldg., Detroit 2
Gerisch, Robert A. (M).....8 Hillisde, Winchester, Mass.
Gerondale, Edmond J.....750 Fisher Bldg., Detroit 2
Giese, F. W.....18526 Schoolcraft, Detroit
Gigante, Nicola.....10 Peterboro, Detroit
Gigliotti, David.....Providence Hosp., Detroit
Gilbert, H. R.....13146 Phelps, Wyandotte
Gillard, James L.....13300 Livernois, Detroit
Gillespie, Stephen M.....1011 Haigh St., Dearborn
Gillman, R. W. (E).....61 Peterboro, Detroit 1
Gilpin, W. A...4560 Niagara Lane, Route 1, Birmingham
Gimbel, N. S.....1512 St. Antoine, Detroit 26
Ginsberg, Harold I.....952 Maccabees Bldg., Detroit 2
Gitlin, Charles.....1610 Glendale St., Detroit 6
Gittins, Perry C.....732 Maccabees Bldg., Detroit 2
Givens, D. H.....3453 Charlevoix, Detroit 7
Gizynski, W. E.....15400 Edington Rd., Livonia
Glasgow, Gordon K.....
1170 Harvard Rd., Grosse Pointe 30
Glassman, Samuel.....60 W. Hancock, Detroit 1
Glazer, Walter S.....8600 W. McNichols Rd., Detroit 21
Gleason, John E. (L).....
17401 Pontchartrain Drive, Detroit 3
Glees, John L.....11631 Mack, Detroit
Glemet, Raymond B.....3314 Bagley, Detroit 16
Glowacki, B. F.....1144 Maccabees Bldg., Detroit 2
Godley, A. J.....18060 Conant, Detroit
Goerke, Elmer A.....3663 Goddard Rd., Romulus
Goetz, Angus G.....710 David Whitney Bldg., Detroit 26
Goins, W. F.....6675 Tireman, Detroit 10
Goldberg, Arthur.....340 E. 8 Mile Rd., Detroit 3
Goldberg, Harry H.....514 Fox Theater Bldg., Detroit 1
Goldberg, Nathan H.....514 Fox Theater Bldg., Detroit 1
Goldfaden, Alfred.....8111 Navy, Detroit 9
Goldin, M. I.....632 Maccabees Bldg., Detroit 2
Goldman, Abe A.....19100 Manor, Detroit
Goldman, Aubrey.....909 Kales Bldg., Detroit
Goldman, Perry....15401 W. McNichols Rd., Detroit 35
Goldstein, Abe S.....18450 Northlawn, Detroit 21
Goldstein, Sidney.....14620 B-E 7 Mile Rd., Detroit 5
Goldstone, R. R.....10 Peterboro, Detroit 1
Gollman, Maurice D.....819 Maccabees Bldg., Detroit 2
Gonne, William S.....
619 David Whitney Bldg., Detroit 26
Goodman, H. L. (M).....1512 St. Antoine, Detroit 26
Goodman, M. M.....9246 Grand River, Detroit
Goodman, V. P.....3540 Somerset Ave., Detroit 24
Goodwin, W. W.....41001 Seven Mile Rd., Northville
Gordon, John W. (R).....12700 Mendota, Detroit
Gordon, W. E., Jr. (M).....(No Address)
Gordon, William H.....
1102 David Whitney Bldg., Detroit 26
Gorelick, Martin J.....23901 Michigan Ave., Dearborn
Gorning, Raymond P.....857 Marlborough, Detroit 15
Goryl, Stephen V.....9953 E. Forest, Detroit 13
Goss, Samuel B.....10 Peterboro, Detroit
Gostine, Edmond J.....
9758 Chalmer Ave. at Longview, Detroit
Gottschalk, Fred W.....1314 Maccabees Bldg., Detroit 2
Goudie, F. D.....27210 Eldorado, Birmingham
Gould, S. E.....19427 Chesterfield, Detroit 21
Gourley, E. V.....16901 James Couzens, Detroit

Goux, Raymond S.....
545 David Whitney Bldg., Detroit 26
Grace, Joseph M.....17505 Parkside, Detroit
Grady, J. A.....15865 Wyoming Ave., Detroit 38
Grady, R. C.....Children's Hospital, Detroit
Graham, J. A.....4102 Brush, Detroit 1
Graham, John G., Jr.....7815 E. Jefferson, Detroit 14
Grain, Gerald O.....Henry Ford Hosp., Detroit 2
Grajewski, Leo E.....2201 E. Jefferson Ave., Detroit 7
Gramley, William....13328 E. Jefferson Ave., Detroit 15
Granger, Francis L.....14160 Gratiot Ave., Detroit 5
Granger, G. R.....705 David Whitney Bldg., Detroit 26
Grant, A. H.....18024 Sorrento, Detroit 35
Grant, H. E. (L).....Lewiston
Gratton, Henri L.....1301 Kales Bldg., Detroit 26
Gravelle, Lawrence J.....
1036 David Whitney Bldg., Detroit 26
Gray, Jacques Pierce.....1415 Parker, Detroit 14
Greek, Louis M.....12901 E. McNichols Rd., Detroit 5
Green, Ellis R.....5172 Scotten Ave., Detroit 10
Green, Lewis.....13000 Grand River, Detroit 27
Green, Louis M.....14636 E. Seven Mile Rd., Detroit 5
Green, Nelson W.....15819 Wyoming, Detroit 21
Green, W. E.....9825 Grand River, Detroit 4
Greenberg, Jack R.....15473 W. 7 Mile Rd., Detroit 19
Greenberg, J. J.....7441 W. 7 Mile Rd., Detroit
Greenberg, M. Z.....9105 Van Dyke, Detroit
Greene, John B.....2730 Hastings St., Detroit 1
Greenidge, Robert I.....4839 Beaubien St., Detroit 1
Greenlee, William Tate.....15053 Maddelein, Detroit 5
Greenslit, Frank S.....Veterans Adm. Hosp., Dearborn
Gregory, L. J.....2325 E. Grand Blvd., Detroit
Greiner, Bert A.....12410 Van Dyke, Detroit 34
Greifenstein, F. E.....1512 St. Antoine, Detroit 26
Grekin, John N.....7441 W. 7 Mile Rd., Detroit 21
Griffin, J. P.....17555 James Couzens, Detroit
Griffin, Robert J.....20227 Lancaster, Detroit 24
Griffith, A. J.....14049 Warwick, Detroit
Griffiths, Sidney J.....15400 Plymouth Rd., Detroit 27
Grimaldi, G. J.....2983 Seminole, Detroit
Grino, Antonio.....Veterans Adm. Hosp., Dearborn
Grinstein, Alexander.....
18700 Woodingham Dr., Detroit 21
Grob, Otto.....651 Fisher Bldg., Detroit 2
Gross, Louis.....18937 Van Dyke, Detroit
Grossman, S. C.....538 Maccabees Bldg., Detroit 2
Grotz, Genevieve A.....22148 Michigan Ave., Dearborn
Gudes, David S.....1080 Fisher Bldg., Detroit
Guerrero, Jose.....13535 Woodward, Detroit
Guimaraes, A. S.....7301 Schaefer Highway, Dearborn
Guinan, G. E.....414 S. Goodman, Rochester, N. Y.
Gulick, Arthur E.....
1429 David Whitney Bldg., Detroit 26
Gurdjian, E. S.....840 David Whitney Bldg., Detroit 26
Gurskis, Eugenia.....504 Kales Bldg., Detroit
Gutov, Benjamin R.....602 Maccabees Bldg., Detroit
Guyton, Jack S.....Henry Ford Hosp., Detroit 2
Hack, D. W.....14453 Cedargrove, Detroit 5
Hacker, Elaine M.....2201 E. Jefferson, Detroit
Haefele, Leslie P.....29108 Ford Rd., Garden City
Hagge, D. R.....1201 David Whitney Bldg., Detroit 26
Haidostian, B. H.....18456 Grand River, Detroit 23
Haitinger, K. S.....7850 E. Jefferson, Detroit
Haking, Leonard.....9661 Gratiot, Detroit 13
Hale, Arthur S.....1501 David Whitney Bldg., Detroit
Halekas, G. P.....19685 Fenelon, Detroit 34
Haley, W. A.....3631 McClellan, Detroit
Hall, E. Walter.....10 Peterboro, Detroit 1
Hall, James A. J.....28 W. Adams St., Detroit 26
Hall, Ralph E.....10 Peterboro, Detroit 1
Hall, Robert J.....6014 W. Fort St., Detroit 9
Hall, Winthrop D.....36200 Plymouth Rd., Livonia
Hallen, Leonard J.....14032 Ohio, Detroit 38
H'Amada, Norman K.....904 Maccabees Bldg., Detroit 2
Hamburg, Robert H.....
1515 David Whitney Bldg., Detroit 26
Hamburger, A. C...1512 David Broderick Tower, Detroit
Hamil, Brenton M.....Henry Ford Hosp., Detroit
Hamilton, Norman C.....
300 W. McNichols Rd., Highland Park
Hamilton, Q. P...1613 David Whitney Bldg., Detroit 26
Hamilton, William....13836 Woodward Ave., Detroit 3
Hamilton, W. F. (L)....234 East Grand Blvd., Detroit 4
Hammer, Edwin J.....16616 Mack, Detroit 24
Hammer, Roy W.....16620 E. Warren, Detroit
Hammond, Arthur E.....
1863 David Whitney Bldg., Detroit 26
Hammond, J. L. (L).....
General Delivery, Escondido, Calif.
Hand, Fordus V.....81 East Kirby, Detroit 2
Hank, Emil.....8261 Cheyenne, Detroit 28
Hansen, F. E.....120 Glynn Ct., Detroit
Hanser, Joshua (L).....2730 E. Jefferson, Detroit
Hardstaff, R. John (L)..648 Neff Rd., Grosse Pointe 30
Harelik, E. W.....614 Maccabees Bldg., Detroit
Harkaway, Roman W.....19125 Van Dyke, Detroit 34
Harley, Garth H.....834 N. York, Dearborn
Harley, Louis M.....
4100 W. McNichols Rd., Detroit 21
Harm, Winfred B.....5884 West Vernor Highway, Detroit 9
Harmon, L. G.....987 E. Jefferson, Detroit
Harper, Jesse T.....1248 David Whitney Bldg., Detroit 26
Harrell, V. E.....806½ N. Oakwood Blvd., Dearborn
Harrington, Frank L.....8935 Fenkell, Detroit 21
Harris, Arthur D. (M).....5262 Tireman, Detroit 4
Harris, Harold H.....8011 W. Vernor Highway, Detroit
Harris, Ivor David.....
817 David Whitney Bldg., Detroit 26
Harris, L. C.....1401 Rivard St., Detroit
Harrison, Wesley.....4847 Iroquois, Detroit 14
Harrison, W. L.....Clairmount at Hamilton St., Detroit 2
Hart, Charles E.....9341 Moffat Ave., Detroit
Hart, John Clarence.....9341 Moffat, Detroit
Harten, James .....2900 S. Fort, Detroit
Hartkop, Henry H.....16321 Mack Ave., Detroit 24
Hartman, F. W.....2799 W. Grand Ave., Detroit
Hartquist, R. J.....1495 Fort St., Wyandotte
Hartzell, John B.....7815 Jefferson Ave. E., Detroit 14
Hasley, Clyde K.....
1429 David Whitney Bldg., Detroit 26
Hasley, Daniel E.....1401 Rivard St., Detroit 7
Hassig, W. W.....14504 Mack Ave., Detroit 15
Hastings, Orville J.....15744 Harper, Detroit 24
Hathaway, Hubert R.....230 Madison Ave., Detroit
Hause, Glen E.....18250 Grand River, Detroit 23
Hauser, I. Jerome.....7411 Third Ave., Detroit 2
Hauser, John E.....671 Fisher Bldg., Detroit 2
Hauser, Maurice J.....7411 Third Ave., Detroit
Havers, Howard.....1032 Maccabees Bldg., Detroit 2
Hawkins, James W.....14237 Greenfield, Detroit 27
Hayes, D. M.....713 David Whitney Bldg., Detroit 26
Hayes, J. O.....776 Crescent, Buffalo 16, N. Y.
Hazen, Roy S.....20526 Grand River Ave., Detroit 23
Heath, Leonard P.....
1457 David Whitney Bldg., Detroit 26
Heavner, Lyle E.....119 Kercheval, Detroit
Hecht, Manes S.....
25622 Coolidge Hwy., Huntington Woods
Hedgeman, E. C.....3425 Hastings, Detroit
Heenan, Theophilus H.....
1409 David Whitney Bldg., Detroit 26
Heideman, Louis E.....
12901 W. Seven Mile Rd., Detroit 35
Heldt, R. F.....1951 Monroe, Dearborn
Heldt, Thomas J. (L).....Henry Ford Hosp., Detroit 2
Hellems, H. K.....319 Moross, Grosse Pointe Farms
Hendelman, Manuel H.....14350 Harper, Detroit 13
Henderson, Allison B.....5320 John R, Detroit 2
Henderson, Arthur B.....10452 Mack, Detroit
Henderson, Charles W.....853 Fisher Bldg., Detroit
Henderson, Harold.....852 Fisher Bldg., Detroit 2
Henderson, Hugh W.....308 Professional Bldg., Detroit 1
Henderson, John C.....
316 Chalfonte, Grosse Pointe Farms 36

Henderson, Leslie T.....13038 E. Jefferson, Detroit 15
Henderson, William E.....9341 Chalmers, Detroit 13
Hendry, H. W.....2716 Rochester, Detroit
Henig, Fred N.....7605 W. Seven Mile Rd., Detroit 21
Henkin, Raymond (M)....2225 Christine, Anniston, Ala.
Henkin, William A.....19166 James Couzens, Detroit 35
Henrich, Lawrence E.....2501 W. Grand Blvd., Detroit 8
Herbst, Harold B.....20482 Ardmore, Detroit 21
Herkimer, Dan R.....1802 Buckingham, Lincoln Park 25
Herrold, Rose E.....1277 E. Grand Blvd., Detroit 11
Herschelmann, Roy E.....
3343 Gratiot Ave. at Mack, Detroit 7
Hertzler, Jack H.....752 Fisher Bldg., Detroit 2
Herwick, John T.....Henry Ford Hospital, Detroit 2
Hess, Murray W.....13732 Woodward Ave., Detroit 3
Hesselschwerdt, D. W.....3919 John R., Detroit 1
Hewitt, Leland V...917 David Whitney Bldg., Detroit 26
Heyman, L. F.....19001 W. Seven Mile Rd., Detroit 19
Heyner, Stanley A.....3424 Oakman Blvd., Detroit 4
Hickey, Joseph.....6004 W. Fort St., Detroit 9
Hicks, Fred G.....7301 Schaefer Rd., Dearborn
Higbee, Arthur L.....429 E. Grand Blvd., Detroit 7
Hileman, S. Lee.....4043 W. Jefferson, Ecorse
Hill, E. J., Jr.....1515 David Whitney Bldg., Detroit 26
Hill, Gerald (M).....
Med. Co., Sup. Bn., 3rd Div., Ft. Benning, Ga.
Hill, W. T.....6303 Mack Ave., Detroit
Hillenberg, Sidney J...20215 W. Seven Mile Rd., Detroit
Hillenbrand, Alfred E.....14321 Kercheval, Detroit 15
Hiller, Glenn I.....13700 Woodward Ave., Detroit 3
Hiller, H. M.....987 E. Jefferson, Detroit 7
Hillier, Leland G.....18750 Woodward Ave., Detroit 3
Hilton, William E.....13902 Mack, Detroit 15
Hiratzka, Tomiharu.....1512 St. Antoine, Detroit
Hirsch, Lore.....22671 Garrison, Dearborn
Hirschfeld, A. H. .....829 Fisher Bldg., Detroit
Hirschman, L. J. (E)..2619 Munson Ave., Traverse City
Hoagland, F. L.....1260 E. Grand Blvd., Detroit 11
Hoagland, Thomas V.....81 E. Kirby, Detroit
Hobbs, Donald V.....18530 Grand River Ave., Detroit 23
Hochman, Morton M.....16633 Plymouth Rd., Detroit 27
Hodges, Jason.....1200 S. Oxford Road,
Grosse Pointe Woods 30
Hodgkinson, C. P.....Henry Ford Hosp., Detroit
Hoffer, Thomas.....6825 Allen Road, Allen Park
Hoffman, Edward A.....7615 W. Vernor Hwy., Detroit
Hoffman, E. S.....766 Fisher Bldg., Detroit 2
Hoffman, Harry Y...15085 E. Seven Mile Rd., Detroit 5
Hoffman, Henry A.....10015 E. Outer Drive, Detroit 24
Hoffman, M. C., Capt., MC (M).....
Parks AFB Hospital, Pleasanton, Calif.
Hoffmann, Martin H.....
1311 David Whitney Bldg., Detroit 2
Holcomb, August A.....117 W. Wing, Northville
Holdredge, Jean M.....972 Fisher Bldg., Detroit 2
Hollander, A. J.....8026 Michigan Ave., Detroit 10
Hollinger, F. W.....Henry Ford Hosp., Detroit 2
Hollis, H. B.....6809 Sarina, Detroit
Holloway, H. R.....2017 W. Boston Blvd., Detroit 6
Holloway, Janet L.....3919 John R., Detroit
Holt, C. J., Jr.....8525 Ward St., Detroit
Holt, Henry T.....5050 Cass, Detroit
Honhart, Fred L...1405 Berkshire Rd., Grosse Pointe 30
Hookey, John A.....2918 Biddle, Wyandotte
Hooper, Norman L.....6 Port Drive, Detroit
Hoops, George B. (E).....754 Fisher Bldg., Detroit
Hopkins, J. E.....6381 W. Fort St., Detroit 9
Hopson, G. H.....13626 E. Seven Mile Rd., Detroit 5
Hopson, Patricia C.....21324 Bournemouth, Detroit
Horkins, E. J.....14300 W. McNichols Rd., Detroit 35
Horkins, Harold A.....893 Lakewood, Detroit
Horny, Hugo O.....11600 Whittier, Detroit 24
Horrigan, T. F.....21519 Kingsville, Harper Woods 36
Horton, Reece H.....
938 David Whitney Bldg., Detroit 26
Horvath, James J.....1337 David Whitney Bldg.,
Detroit 26
Horvath, Louis O.....9122 W. Fort St., Detroit 9
Horwitz, John B.....
1208 David Broderick Tower, Detroit 26
Hotchkiss, Loris M.....33220 W. 7 Mile Rd., Livonia
House, W. W.....10350 Twelth St., Detroit 6
Howard, Austin Z.....
825 David Whitney Bldg., Detroit 26
Howard, Philip J.....Henry Ford Hosp., Detroit 2
Howard, W. L.....Maybury San., Northville
Howell, Bert F.....10800 Whittier, Detroit 24
Howell, James T.....Henry Ford Hosp., Detroit 2
Howes, Homer A.....
1515 David Whitney Bldg., Detroit
Howes, Willard Boyden.....1800 Tuxedo, Detroit 6
Howlett, Howard T.....868 Fisher Bldg., Detroit 2
Hranchook, Michael.....5042 Haverhill, Detroit 24
Hromadko, Louis.....1075 Fisher Bldg., Detroit 26
Hubbard, John P., Jr.....1130 E. Grand Blvd., Detroit 7
Hubbard, Ralph G. (A).....14800 Prevost, Detroit 27
Huber, Phillip J.....10 Peterboro, Detroit
Hudson, J. Stewart.....
17443 E. Jefferson Ave., Grosse Pointe
Hudson, William A.....
602 David Whitney Bldg., Detroit 26
Huegli, Wilfred A.....
290 Moross Rd., Grosse Pointe Farms 36
Hull, LeRoy W...1701 David Whitney Bldg., Detroit 26
Huminski, T. S.....19244 Van Dyke, Detroit 34
Hummel, Arthur R.....8045 E. Jefferson, Detroit
Hunt, T. H.....19431 Van Dyke, Detroit 12
Hunt, Verne G...723 David Whitney Bldg., Detroit 26
Hunter, B. H.....13341 Livernois, Detroit
Husband, Chas. W.....3810 Northwestern Ave., Detroit 6
Husband, R. C.....18715 Prairie, Detroit 21
Hyatt, Jarvis M.....22340 Michigan, Dearborn
Hyde, Frederick W., Jr.....Grace Hosp., Detroit 1
Hyland, John R.....13030 Mack Ave., Detroit 15
Hyman, Samuel J.....27342 Michigan Ave., Inkster
Iacobell, Peter H.....19300 Van Dyke, Detroit 34
Ice, G. T.....18060 Conant St., Detroit 34
Igna, Eli J.....Henry Ford Hosp., Detroit 2
Irvin, Earle Albert....Ford Motor Co., 3000 Schaefer Rd.,
Dearborn
Irwin, William A.....Providence Hosp., Detroit 8
Isaacson, Arthur.....2921 E. Davison, Detroit
Isaacson, H. E.....15101 W. Seven Mile Rd., Detroit
Iseri, Lloyd T. (M).....Wayne University, Detroit
Israel, Barney B.....1424 Maccabees Bldg., Detroit
Israel, Joseph G.....870 Maccabees Bldg., Detroit 21
Israel, Kenneth.....1072 Maccabees Bldg., Detroit 2
Iwata, Herbert T.....7611 Patton Ave., Detroit 28
Izner, S. M.....17500 Schaefer, Detroit 35
Jacobs, Arnold.....16861 Wyoming, Detroit 35
Jacobson, Samuel D.....2435 Oakman Blvd., Detroit 4
Jacobus, Wayne .....
21461 Sloan Dr., Apt. 206, Harper Woods 36
Jaeger, Grove A.....1802 E. Grand Blvd., Detroit 11
Jaekel, C. N.....1086 E. Grand Blvd., Detroit 7
Jaffar, Donald J.....734 Maccabees Bldg., Detroit 2
Jaffe, J. L.....7465 Harper, Detroit 13
Jaffe, Jacob.....501 Fox Theater Bldg., Detroit 1
Jaffe, Louis.....1605 David Broderick Tower, Detroit 26
Jahsman, William E.....Henry Ford Hospital, Detroit 2
Jamieson, Thomas J.....1310 Warwick, Lincoln Park
Janicki, Natalia J.....Wayne Co. General Hospital, Eloise
Jarre, Hans A.....Grace Hospital, Detroit
Jarsen, Frank J.....817 Beechmont, Dearborn
Jarvis, Harold F.....14110 Gratiot Avenue, Detroit
Jasion, Lawrence J.....11945 Payton Ave., Detroit
Jaynes, Richard V.....25296 Fenkell, Detroit
Jeffries, Benjamin.....1010 Harvard, Detroit 30
Jend, W. J. (L).....3598 Mitchell, Detroit 7
Jend, William, Jr.....1365 Cass Ave., Detroit 26
Jenkins, Elwood A.....514 Kales Bldg., Detroit
Jennings, Charles G.....14827E. Jefferson, Detroit 15
Jennings, Elmer R.....432 E. Hancock, Detroit 1
Jensen, E. H.....610 Blaine St., Detroit 2
Jensen, V. W.....5050 Cass Ave., Detroit 2
Jentgen, Chas. J.....22101 Moross Road, Detroit 24

Jeremias, Robert C.....13300 Livernois, Detroit 4
Jerius, D. H.....9437 Van Dyke, Detroit
Jewell, F. C.....7220 Gratiot Ave., Detroit 13
Jewell, J. S.....751 S. Military, Dearborn
Jocz, M. W.....Chrysler Corp., 341 Massachusetts Ave., Detroit 31
Jodar, E. O.....15760 Mack, Detroit 24
Jodar, L. W.....6307 W. Fort St., Detroit 9
John, Hubert R.....650 Maccabees Bldg., Detroit 2
Johnson, A. S.....816 David Whitney Bldg., Detroit 26
Johnson, Homer L.....Henry Ford Hospital, Detroit 2
Johnson, J. F. (M).....3560th Med. GP. WEBB AFB, Big Springs, Texas
Johnson, R. A.....7815 E. Jefferson, Detroit
Johnson, Thomas D.....20526 Grand River, Detroit
Johnson, Vernon P.....10445 Kercheval, Detroit 14
Johnson, Vincent C.....10 Peterboro, Detroit
Johnson, W. H. M.....7159 Michigan, Detroit 10
Johnston, Charles G.....1512 St. Antoine, Detroit
Johnston, E. V.....3919 John R, Detroit
Johnston, Joseph A.....Henry Ford Hospital, Detroit
Johnston, J. L. (A)..1950 W. McNichols Road, Detroit 3
Johnston, William E.....1071 Fisher Bldg., Detroit 21
Johnstone, B. I.....555 Fisher Bldg., Detroit 2
Joinville, E. V.....1202 Stroh Bldg., Detroit 26
Jones, Adrian R.....15309 Mack Ave., Detroit 24
Jones, Edna M. (A).....Route 1, Clinton, Mo.
Jones, L. F.....1800 Tuxedo Ave., Detroit 6
Jones, Roy D.....10234 Puritan Ave., Detroit 38
Jones, W. J.....2514 Biddle, Wyandotte
Jordan, Prescott....1515 David Whitney Bldg., Detroit 26
Joyce, Stanley J.....1078 Fisher Bldg., Detroit 2
Juliar, Benjamin....4100 W. McNichols Road, Detroit 21
Jury, Donald B.....18800 Woodward, Detroit 3

Kaine, H. D.....755 Fisher Bldg., Detroit 2
Kalayjian, Bernard S.....Womans Hospital, Detroit 1
Kalder, Ned Block.....6071 W. Outer Drive, Detroit 35
Kalichman, Nathan.....532 Maccabees Bldg., Detroit 2
Kallenbach, R. W.....985 Suningale Drive, Inkster
Kallet, Herbert I.....944 Maccabees Bldg., Detroit 2
Kallet, Maerit.....944 Maccabees Bldg., Detroit 2
Kallman, David.....5725 Cass, Detroit 2
Kallman, Leo.....5725 Cass, Detroit 2
Kallman, R. Robert....2632 Woodward Ave., Room 202, Detroit
Kamin, Louis E.....4642 Second Blvd., Detroit
Kaminski, Zeno L.....3504 24th St., Detroit 8
Kamperman, George A. (L)..1807 David Whitney Bldg., Detroit 26
Kanter, Herman.....13127 West 7 Mile Road, Detroit 21
Kapetansky, A. J.....1728 Clairmont, Detroit 6
Kapetansky, N. J.....4790 W. Fort St., Detroit 9
Kaplita, Walter A.....5087 Caniff, Detroit 12
Karch, Saul.....12805 Broadstreet, Detroit 4
Kasabach, Harry Y.....952 David Whitney Bldg., Detroit 26
Kasabach, V. Y.....523 Book Tower Bldg., Detroit 26
Kashtan, H. A...1410 David Broderick Tower, Detroit 26
Kasper, Joseph A.....Bon Secour Hosp., Grosse Pointe 30
Kaspor, Albert J.....16715 Harper Ave., Detroit
Kass, Arnold.....1316 David Stott Bldg., Detroit
Katz, Lawrence.....987 E. Jefferson, Detroit 7
Katzman, I. S.....412 Fox Theater Bldg., Detroit 1
Kaufman, J. M.....618 David Whitney Bldg., Detroit
Kaufman L. W.....19467 Livernois, Detroit
Kaump, Donald H.....Providence Hospital, Detroit 8
Kauppinen, J. A.....15400 Plymouth Road, Detroit 27
Kawecki, Lucian....10734 Hart Ave., Huntington Woods
Kazdan, Louis L.....13801 W. Nine Mile Road, Oak Park
Kazdan, Morris.....15024 McLain, Allen Park
Keating, Thomas F. (L).....18675 Gainsborough, Detroit 23
Kehoe, Henry J.....15252 Gratiot, Detroit 5
Keim, H. L.....1110 David Broderick Tower, Detroit 26
Keith, Kelly.....106 West Davison, Detroit 3
Kelley, Frank James.....3919 John R. St., Detroit
Kelly, Edward W., Jr.....156 Harmon, Detroit 2
Kelmenson, Victor A.....7356 12th St., Detroit 6
Kelson, Malcolm J.....1045 Harvard, Grosse Pointe 30
Kemler, Walter J.....4045 W. Jefferson, Ecorse 18
Kennary, James M.....4900 Cadieux Road, Detroit
Kennedy, Chas. S.....10 Peterboro, Detroit 1
Kennedy, Donald J.....2730 E. Jefferson, Detroit 7
Kennedy, R. B. (R).....3481 Seminole, Detroit 14
Kenney, L. J.....Henry Ford Hospital, Detroit 2
Kenning, John C. (A).....6044 Waverly, La Jolla, Calif.
Kennison, Warren S.....1103 Kales Bldg., Detroit
Kernkamp, Ralph F.....1204 Broderick Tower, Detroit
Kernick, M. O.....13700 Woodward Ave., Detroit
Kerzman, Joseph H.....850 Maccabees Bldg., Detroit 21
Keshishian, Sarkis K.....13544 Woodward Ave., Detroit 3
Keyes, Eugene Charles.....4840 Maple St., Dearborn
Keyes, John W.....Henry Ford Hospital, Detroit
Killins, C. G.....8100 E. Jefferson, Detroit
Kimberlin, Kenneth K.....11110 Morang Dr. at Balfour, Detroit 24
King, Edward D.....5455 W. Vernor Highway, Detroit 9
King, Melbourne J...5455 W. Vernor Highway, Detroit 9
Kingsley, J. W., Jr.....2201 E. Jefferson, Detroit 7
Kingswood, Roy C.....90 E. Warren Ave., Detroit 1
Kinsley, George.....909 Kales Bldg., Detroit
Kirschbaum, H. M.....528 Maccabees Bldg., Detroit 2
Kirtland, William B.....2201 E. Jefferson, Detroit 7
Kitzmiller, John L.....15819 Wyoming Ave., Detroit 21
Klein, Herman.....14825 W. McNichols, Detroit
Klein, Howard A.....1838 David Whitney Bldg., Detroit
Klein, Sander P...14825 W. McNichols Road, Detroit 21
Klein, William.....1795 Oakman, Detroit 38
Kleinman, S.....2909 W. Grand Blvd., Detroit
Kliger, David.....7756 Southfield, Detroit 10
Klosowski, Joseph.....8222 E. Outer Drive, Detroit
Knabe, G. W., Jr. (A).....Henry Ford Hospital, Detroit
Knaggs, Charles W.....12244 Gratiot, Detroit 5
Knaggs, Earl J. (L).....3164 Biddle, Wyandotte
Knapp, Byron S.....10909 W. Jefferson, River Rouge 18
Knapp, Floyd B.....16565 Birwood, Detroit 21
Knapp, W. L.....106 West Davison, Highland Park 3
Knighton, R. S.....2199 W. Grand Blvd., Detroit
Knights, E. M., Jr.....Harper Hospital, Detroit
Knobloch, Edmund J.....5933 Chene, Detroit 11
Knoch, Hubert S.....14149 E. Jefferson, Detroit 15
Knox, Ross M.....9 Salliotte, Ecorse
Kobernick, S. D.....6767 W. Outer Drive, Detroit 35
Kobrak, Heinrich..1419 David Whitney Bldg., Detroit 26
Koebel, R. H.....14504 Mack Ave., Detroit 24
Koerber, Edward J.....4876 Lakeview Ave., Detroit 13
Kogut, C. S.....10627 Puritan, Detroit
Kokowicz, Raymond J...1056 Maccabees Bldg., Detroit 2
Kopel, Joseph O.....10 Peterboro, Detroit 11
Koran, V. L.....972 Maccabees Bldg., Detroit 2
Koren, Louis.....1214 Griswold St., Rm. 610, Detroit 26
Korum, L. W.....18585 E. Warren, Detroit
Koschnitzke, Herman K.....2900 S. Fort, Detroit
Kossayda, Adam W.....5605 Michigan Ave., Detroit 10
Kovach, E. P.....14149 E. Jefferson, Detroit 15
Kovan, D. D.....16965 Hamilton, Highland Park
Koven, Abraham.....614 Professional Bldg., Detroit 1
Kowaleski, J. J.....1104 Elm, Wyandotte
Kozlinski, Anthony E.....2195 E. Grand Blvd., Detroit 11
Krabbenhoft, K. L.....Harper Hospital, Detroit
Kraft, Raymond B.....12408 Van Dyke, Detroit 34
Kraft, Ruth M.....972 Fisher Bldg., Detroit 2
Krakauer, Bernard.....767 Fisher Bldg., Detroit 2
Krass, Edward W.....11088 Gratiot Ave., Detroit 5
Kraus, John J.....16840 E. Warren, Detroit
Krebs, William T.....16419 E. Warren, Detroit 24
Kreinbring, George E.....4229 Mt. Elliott, Detroit 14
Kretzschmar, John C.....535 E. Grand Blvd., Detroit 7
Krevsky, D. A.....2015 Fort St., Lincoln Park
Krevsky, Seymour.....2015 Fort St., Lincoln Park
Krieg, Earl G. M.....1842 David Whitney Bldg., Detroit 26
Krieger, Harley L.....11390 Strathmore, Detroit 27
Kritchman, M. J.....2314 David Broderick Tower, Detroit 26

Kroha, Lawrence A.....15124 Kercheval, Detroit 30
Krohn, Albert H.....5137 Second Ave., Detroit 2
Kroll, H. V.....7815 E. Jefferson, Detroit 14
Krynicki, F. X.....15300 W. McNichols, Detroit
Kubanek, Joseph L.....23134 Myrtle St., Dearborn
Kucmierz, Francis S.....12181 Joseph Campau, Detroit 12
Kuhn, Albert Arthur.....90 E. Warren, Detroit 1
Kuhn, Richard F.....1700 Junction, Detroit 9
Kulaski, Chester H.....9309 Jos. Campau, Detroit 12
Kullman, Harold J. F.....Veterans Administration Hosp., Dearborn
Kurcz, Joseph A.....7433 Michigan, Detroit 10
Kurnetz, Ruben.....18200 Wyoming, Detroit 21
Kurtz, Harry C.....833 Barrington Road, Grosse Pointe Park 30
Kurtz, I. J. (A).....503 Fox Theatre Bldg., Detroit 1
Kutche, John D.....2057 W. Jefferson, Trenton
Kuyawski, Walter.....20897 Littlestone, Detroit
Kyle, W. V., Jr.....3430 Harrison, Inkster
Kwasiborski, Stanley A.....2300 Oak St., Wyandotte
Kyle, W. M., Jr.....3430 Harrison, Inkster
Kyprie, H. M.....414 Kales Bldg., Detroit

LaBerge, James M.....100 Oak St., Wyandotte
LaBine, Alfred C.....8-259 General Motors Bldg., Detroit
Laderach, D. C.....1217 David Whitney Bldg., Detroit 26
La Ferte, Alfred D.....1401 David Whitney Bldg., Detroit 26
LaHood, M. J.....17555 James Couzens, Detroit 35
Lake, R. C.....10700 Balbour Road, Detroit 24
Lakoff, Charles.....10234 W. Seven Mile Road, Detroit 21
Lam, Conrad R.....Henry Ford Hospital, Detroit 2
Lamberson, Frank A.....19001 Grand River, Detroit 23
Lammy, James V.....644 Maccabees Bldg., Detroit 2
Lampman, H. H.....675 Fisher Bldg., Detroit 2
Lang, E. F.....Harper Hospital, Detroit
Lang, L. W.....5929 W. Outer Drive, Detroit 21
Lange, William A.....3919 John R., Detroit
Laning, George M.....1217 David Whitney Bldg., Detroit 26
Lansky, Mandell.....14427 Mack Ave., Detroit
Large, A. M.....10 Peterboro, Room 210, Detroit
Larkin, D. A.....27309 Plymouth Road, Detroit 28
Larned, Richard I.....14182 Gratiot, Detroit
Larson, C. J.....12820 Ward, Wyandotte
Larsson, Bror H. (L).....Doctors Bldg.—Suite 401, 3919 John R St., Detroit
Lasichak, Andrew G.....908 Kales Bldg., Detroit
Lasley, James William.....1026 Maccabees Bldg., Detroit 2
Lathrop, Philip L.....415 Book Bldg., Detroit 26
Latimer, F. R.....28 W. Adams Ave., Detroit
Latteier, K. K.....10 Peterboro, Detroit
Lauppe, Edward H.....1650 David Whitney Bldg., Detroit 26
Lauppe, Frederick A.....1801 David Whitney Bldg., Detroit 26
Laupus, W. E.....25750 Outer Drive, Lincoln Park
Laurisin, Eugene.....5290 W. Chicago, Detroit
LaVielle, C. J.....1500 Kirtland Drive, Ann Arbor
Lawhead, N. R.....7348 Kercheval, Detroit 14
Lawrence, L. F.....17300 Schaefer, Detroit 35
Lawson, John W.....18456 Grand River Ave., Detroit 23
Lazar, Morton R.....7401 Third Ave., Detroit 2
Leach, David.....865 Fisher Bldg., Detroit 2
Leach, R. B.....1401 Rivard, Detroit 7
Leacock, R. C.....10619 E. Jefferson, Detroit
Leader, Luther R.....1129 David Whitney Bldg., Detroit 26
Leaver, L. Ross.....757 Lakewood, Detroit 15
Lebamoff, Alexander T.....6586 Allen, Allen Park
Lechner, M. S.....3787 Oakman Blvd., Apt. No. 2, Detroit 4
Leckie, George C.....1355 David Whitney Bldg., Detroit 26
Lecklider, A. F.....Fisher Body Division, 601 Piquette, Detroit 2
Lee, Harry E.....13616 Gratiot Ave., Detroit 5
Lee, L. E., Jr.....Wayne County General Hosp., Eloise
LeGallee, George M.....15921 W. Seven Mile Road, Detroit 35
Leibinger, Henry R.....511 Barrington Road, Grosse Pointe
Leipsitz, Louis S.....3566 Cass, Detroit 1
Leiser, Rudolf.....230 South Martha, Dearborn 7
Leiter, Forrest C.....22375 W. Garrison, Dearborn
Leithauser, D. J.....14540 E. Warren, Detroit
Leland, Solomon.....6563 Grand River, Detroit 8
Lemley, Clark F.....553 Fisher Bldg., Detroit 2
Lemmer, J. A., Jr.....9300 Mack Ave., Detroit
Lemmon, Charles E.....1337 David Whitney Bldg., Detroit 26
Lemon, Bruce K.....1202 Maccabees Bldg., Detroit 2
Lentine, James J.....3485 Audubon, Detroit
Lenz, Willard R.....418 Moran Road, Grosse Pointe 30
Lepard, C. W.....1025 David Whitney Bldg., Detroit 26
Lepley, Fred O.....13302 Kercheval, Detroit 15
Lerman, S. E.....23700 Van Dyke, Van Dyke
Lerman, Samuel I.....4400 Livernois, Detroit
Lerner, L. H.....16901 W. McNichols, Detroit
Lesesne, J. M.....17700 Mack Ave., Grosse Pointe
L'Esperance, Simon P. (R).....Route 3, Woodslee, Ont., Canada
Lessem, David.....19945 Prevost, Detroit 19
Leszynski, J. S.....517 Professional Bldg., Peterboro and Woodward, Detroit 1
Leucutia, Traian.....10 Peterboro, Detroit
Levagood, Floyd B.....14056 Artesian, Detroit
Levant, Arthur B.....15715 E. Warren, Detroit
Levenson, M. L.....3205 Sherbourne Rd., Detroit 6
Leventer, Ira.....2950 South Fort St., Detroit 17
Levin, David M.....8819 Dexter Blvd., Detroit 6
Levin, Herbert G.....17300 Schaefer, Detroit
Levin, Michael M.....616 Maccabees Bldg., Detroit
Levin, Samuel J.....469 Fisher Bldg., Detroit 2
Levine, E. E.....Veterans Adm. Hospital, Dearborn
Levine, S. S.....8233 W. Chicago, Detroit
Levitt, Edward J.....840 Maccabees Bldg., Detroit 2
Levitt, Irving.....19214 Santa Barbara, Detroit
Levitt, Nathan.....607 Kales Bldg., Detroit
Levy, D. B.....13003 Santa Clara, Detroit
Levy, Marvin B.....13906 Woodward, Detroit 3
Levy, S. H.....7441 W. Seven Mile Road, Detroit 21
Lewin, Harry.....2457 Woodward Ave., Suite 702, Detroit 1
Lewis, Charles T.....5050 Jov Road, Detroit 4
Lewis, J. Hugh.....2956 Biddle, Wyandotte
Lewis, L. A.....2730 E. Jefferson, Detroit 7
Lewis, Wilfred John.....404 Professional Bldg., Detroit 1
Libbrecht, Robert V.....6540 Park, Allen Park
Lichter, M. L.....2900 Oakwood, Melvindale 25
Lichtwardt, Hartman A.....432 Hancock Ave., E., Detroit
Liddicoat, A. G.....20125 Fenkell, Detroit 23
Lieberman, B. L.....19212 Woodward Ave., Detroit
Lightbody, James J.....501 David Whitney Bldg., Detroit 26
Lignell, Rudolph W.....16259 James Couzens Hwy., Detroit
Lilly, Charles J.....2950 Puritan Ave., Detroit 21
Lincoln, A. R.....15300 Kercheval, Detroit
Linkner, Leonard S.....738 Maccabees Bldg., Detroit 2
Lipinski, Stanley L.....7540 Michigan Ave., Detroit 10
Lipkin, Ezra.....5715 Michigan Ave., Detroit 10
Lipnik, C. E.....31619 Plymouth, Livonia
Lipnik, Morris J.....15101 W. Seven Mile Rd., Detroit 35
Lipschutz, Louis S.....19750 Chesterfield Road, Detroit 21
Lipson, C. T.....Detroit Receiving Hosp., Detroit 26
Lipson, Madeleine L.....7401 Third Ave., Detroit 2
Lipton, Raymond F.....10 Peterboro, Detroit 1
Litsky, Abraham D.....1183 E. Grand Blvd., Detroit 11
Little, James W.....2050 Beverly Road, Berkley
Livingood, Clarence.....Henry Ford Hosp., Detroit 2
Lockhart, E. C.....4724 Tireman, Detroit
Lockwood, Bruce C.....723 David Whitney Bldg., Detroit 26

Lofstrom, James E.....1420 St. Antoine, Detroit 26
Long, Earle C.....2626 Rochester, Detroit 6
Long, John J.....12421 Monica, Detroit 4
Longo, Salvatore.....Detroit Memorial Hosp., Detroit
Longyear, Harold W.....3019 N. Woodward, Royal Oak
Lookanoff, Victor A.....Highland Park Gen. Hosp., Detroit 3
Loranger, C. B.....20825 Mack, Detroit
Loranger, Guy L.....34 Moross Road, Grosse Pointe Farms
Lorber, J. H.....16558 Northlawn Ave., Detroit 21
Lorentzen, Edwin H.....11702 Grand River, Detroit 4
Lovas, W. S.....7704 Jackson, Dearborn
Love, W. Thomas.....231 E. Warren, Detroit 1
Lowe, Adolf W.....17559 Santa Rosa, Detroit 21
Lowe, Townsend G.....9430 Oakland, Detroit 11
Lowrie, William L., Jr.....Henry Ford Hosp., Detroit 2
Lowry, George L.....11601 E. Jefferson, Detroit 14
Lublin, Anna.....18412 Mack Ave., Detroit 24
Luby, E. D.....730 Maccabees Bldg., Detroit 2
Luce, Henry A. (E).....629 David Whitney Bldg., Detroit 26
Lukas, John R.....19212 W. Warren, Detroit 28
Lumpkin, John G., Jr.....243 East Warren, Detroit
Lutz, Earl F.....13-204 General Motors Bldg., Detroit 2
Lutz, S. J.....19355 Wisconsin, Detroit
Lynch, John M. (M)..F. A. Surgeon (R) F. E. H. Unit, U. S. Public Health Service, Bethesda 14, Md.
Lynn, David H.....2900 S. Fort St., Detroit
Lynn, Harvey D.....2900 S. Fort St., Detroit 25
Lyons, William Harrington..1012 Kales Bldg., Detroit 26
Lytle, Robert P.....411 Professional Bldg., Detroit 1

Maben, Hayward C., Jr.....9342 Oakland, Detroit 11
Mabley, J. Donald.....1139 David Whitney Bldg., Detroit 26
MacArthur, Robert A. (A)....95 Martin Place, Detroit 1
MacCracken, Frances L.....3752 Gladstone, Detroit 6
MacDougall, O. P.....13700 Woodward, Detroit
MacFarlane, Howard W.....1105 David Whitney Bldg., Detroit 26
MacGregor, William W.....6320 West Surrey-Foxcroft, Birmingham
Mack, Harold C.....955 Fisher Bldg., Detroit 2
MacKenzie, Earle D.....81 E. Kirby, Detroit
MacKenzie, Edward P.....12801 E. Jefferson, Detroit 14
MacKenzie, Frank M.....641 David Whitney Bldg., Detroit 26
MacKenzie, John W.....289 Rivard Blvd., Grosse Pointe 30
Mackersie, W. G.....18205 Roselawn, Detroit 21
Mackey, G. S.....Henry Ford Hospital, Detroit 2
MacMillan, Francis B.....920 David Whitney Bldg., Detroit 26
MacMullen, Frank B. (R).....Box 393, Boca Raton, Fla.
MacPherson, K. C.....8100 E. Jefferson, Detroit 2
MacQueen, Malcolm D.....1654 1st Nat'l Bank Bldg., Detroit 26
Maczewski, John E.....9535 Jos. Campau, Detroit 12
Maddock, W. O. (M)....Wayne Univ. Col. of Medicine, Detroit
Magnell, Ralph C.....8825 Puritan, Detroit
Maguire, Clarence E.....536 David Whitney Bldg., Detroit 26
Mahlin, M. S.....Harper Hospital, Detroit
Mahoney, Hugh M.....214 David Whitney Bldg., Detroit
Maibauer, Frederick P.....2966 Biddle, Wyandotte
Maino, Linus J.....2501 W. Grand Blvd., Detroit 8
Mainwaring, Rosser L.....15705 Jonas, Allen Park
Maire, Edward D.....15224 E. Jefferson, Grosse Pointe
Maitland, Ruth J.....Mich. Bell Telephone Co., Detroit
Majzoub, Ahmad J.....3334 Fort St., Lincoln Park
Malachowski, B. T.....2501 W. Grand Blvd., Detroit 8
Malik, Edward A.....11302 Chalmers, Detroit 5
Malik, Nur M. (A).....Holy Family Hospital, Rawalpindi, Pakistan, India
Malina, Stephen.....1601 Kirkway Road, Pontiac RFD No. 3
Malone, J. M.....17555 James Couzens, Detroit
Malone, Richard S. (M).....7424th USAF Hospital, APO 132, New York, N. Y.
Maloney, John A.....1338 Maccabees Bldg., Detroit 2
Maltzer, Joseph H.....950 E. State Fair, Detroit 3
Mamos, Photius.....2170 E. Jefferson, Detroit 7
Mancuso, Vincent S.....962 E. Grand Blvd., Detroit 7
Mandiberg, Jack N.....12700 W. 7 Mile Road, Detroit
Mann, Andrew D.....16715 Harper, Detroit 24
Manning, Morey H.....950 E. State Fair, Detroit
Manz, H. N. (A).....1427 E. Jefferson, Detroit 7
Mapletoft, Kenneth E. (M).....320 S. Washington, Neosho, Mo.
Marcotte, Oliver J.....2890 W. Grand Blvd., Detroit 2
Marecki, V. J.....7068 Michigan Ave., Detroit 10
Margules, S. Z.....2092 Ewald Circle, Detroit 38
Margulis, R. R.....Henry Ford Hospital, Detroit 2
Marinus, Carleton J.....303 David Whitney Bldg., Detroit 26
Mark, Hansi.....24270 Manistee, Oak Park
Mark, Jerome.....903 Kales Bldg., Detroit 26
Markey, Alexander P.....13810 Michigan Ave., Dearborn
Markey, Frank R.....17174 Fairfield, Detroit 21
Markoe, Rupert C. L.....4102 Brush St., Detroit 1
Marks, Ben.....902 Industrial Bank Bldg., Detroit 26
Marks, Bert W...8250 Lincoln Drive, Huntington Woods
Marks, Morris H.....8233 W. Chicago, Detroit 4
Marsh, Alton R.....1218 Maccabees Bldg., Detroit 2
Marshall, James R.....14528 E. Jefferson, Detroit 15
Martin, Elbert A...1151 David Whitney Bldg., Detroit 26
Martin, F. A.....801 David Whitney Bldg., Detroit 26
Martin, J. B., Jr.....449 E. Elizabeth, Detroit 1
Martin, L. R.....2000 Second Blvd., Detroit 26
Martin, M. T.....Delray Gen. Hospital, Detroit 17
Martin, Peter A.....17185 Muirland, Detroit 21
Martin, R. D. (M).....No Address
Martin, Wilbur C.....7440 W. Jefferson, Detroit 17
Martineau, P. C.....1151 Taylor Ave., Detroit
Martinez, Pedro O.....1439 Bagley, Detroit 16
Martmer, Edgar E.....526 Professional Bldg., Woodward at Peterboro, Detroit
Marvel, Howard R.....Henry Ford Hospital, Detroit 2
Marwil, T. B.....16965 Hamilton, Highland Park
Mason, P. W.....13311 E. Jefferson, Detroit 15
Mateer, John G.....Henry Ford Hospital, Detroit 2
Mattman, Paul E.....1422 Seyburn, Detroit 14
Mattson, Theodore.....3919 John R, Detroit
Maun, Mark E.....1551 David Whitney Bldg., Detroit
Maxwell, J. Harvey.....2415 W. Grand Blvd., Detroit 2
May, Frederick T.....608 Kales Bldg., Detroit 26
Mayer, E. V.....16525 Woodward Ave., Detroit 3
Mayer, Willard D.....51 W. Boston Blvd., Detroit
Maynard, F. M.....6828 Park, Allen Park

McAlonan, William T.....10 Peterboro, Detroit 1
McAlpine, Gordon S.....658 Fisher Bldg., Detroit 2
McCadie, James H.....13700 Woodward, Detroit 3
McCandless, Virginia....20390 Harper Road, Detroit 24
McCaughey, R. S.....Receiving Hospital, Detroit 26
McClaughry, R. I.....1401 Rivard, Detroit 7
McClelland, Rachel L.....33026 Five Mile Road, Livonia
McClellan, Robert J., Sr. (L)....906 Michigan Theater Bldg., Detroit 26
McClellan, Robert J., II....906-8 Michigan Theatre Bldg., Detroit
McClendon, James J.....503 E. Warren Ave., Detroit 1
McClintock, J. J.....16151 Schoolcraft, Detroit 27
McClure, Robert W.....1306 David Whitney Bldg., Detroit 26
McClure, William R.....954 Fisher Bldg., Detroit 2
McColl, Charles W.....2826 Biddle, Wyandotte
McColl, Clarke M.....Henry Ford Hospital, Detroit 2
McColl, K. M.....20323 Mack Ave., Grosse Pointe Woods 36
McCollum, E. B.....761 David Whitney Bldg., Detroit
McCord, Carey P.....University Hosp., 111 Maternity Bldg., Ann Arbor
McCormick, Colin C.....222 Shaefer Bldg., Dearborn

McCullough, Lester E.....521 David Whitney Bldg., Detroit 26
McDonald, Angus L.....13856 Gratiot Ave., Detroit 5
McDonald, A. W. (L).....15015 Ward, Detroit 27
McDonald, William G.....7301 Schaefer Highway, Dearborn
McDowell, D. B.....Wayne Co. Gen. Hospital, Eloise
McEvitt, William G.....2605 W. Grand Blvd., Detroit 8
McFadyen, Hugh A.....10 Peterboro, Detroit 1
McGarvah, A. W...15105 W. Seven Mile Rd., Detroit 35
McGhee, Richard S.....10015 W. Eight Mile Road, Detroit 21
McGillicuddy, Walter E.....511 Kales Bldg., Detroit 26
McGlaughlin, Nicholas D.....2312 Biddle Ave., Wyandotte
McGough, Joseph M.....18716 Grand River Ave., Detroit 23
McGuire, John F.....815 Kales Bldg., Detroit 26
McGuire, M. Ruth.....763 Fisher Bldg., Detroit 21
McIntosh, Robert O.....13000 Eckles Road, Livonia
McIntyre, W. B.....1233 Audubon, Detroit 30
McKean, G. Thomas.....1515 David Whitney Bldg., Detroit 26
McKean, Richard M.....1515 David Whitney Bldg., Detroit 26
McKeever, George E.....13349 Michigan Ave., Dearborn
McKenna, Charles J.....1130 E. Grand Blvd., Detroit 11
McKinnon, John D.....106 W. Davison, Detroit 3
McKnight, Robert E.....10030 W. McNichols Road, Detroit 21
McLane, Harriet E.....4350 Oregon, Detroit 4
McLean, Don W.....1066 Fisher Bldg., Detroit 2
McLean, Harold G.....10 Peterboro, Detroit 1
McMorrow, Kathryn J.....18278 Biltmore, Detroit 35
McPherson, R. J.....12626 Meyers Road, Detroit 27
McQuiggan, Mark R.....1050 Fisher Bldg., Detroit 2
McQuiggan, Thelma....Wayne County Gen'l Hosp., Eloise
McRae, Donald H. (L)..275 W. Grand Blvd., Detroit 16
Meek, S. F.....13020 Kilbourne, Detroit
Mellen, Hyman S.....622 Maccabees Bldg., Detroit 2
Mellinger, R. C.....Henry Ford Hospital, Detroit 2
Mellins, Harry Z.....Sinai Hospital, Detroit
Melnik, M. P. (A).....19479 Burlington Drive, Detroit 3
Menagh, Frank R.....Henry Ford Hospital, Detroit 2
Mendelssohn, R. J.....14427 Mack, Detroit 24
Mendoza, Samuel.....4400 Livernois, Detroit 10
Merkel, Charles C.....85 Kercheval, Grosse Pointe 30
Merrill, William O.....958 Fisher Bldg., Detroit 2
Merritt, Earl G.....10 Peterboro, Detroit 1
Mersky, Charlotte I. (A).....32215 Queensboro Ave., Farmington
Metes, John S.....1261 Fairholme Road, Grosse Pointe Woods 30
Metzger, Harry C.....25504 Wareham, Huntington Woods
Meyer, Ruben.....18254 Livernois, Detroit 21
Meyers, Marjorie.....5320 John R St., Detroit 2
Meyers, Maurice P.....7411 Third Ave., Detroit 2
Meyers, Sidney.....19635 Mack Ave., Detroit
Meyers, Solomon G.....1320 Maccabees Bldg., Detroit 2
Michael, Michael J.....703 Mutual Bldg., Detroit
Michels, Julius.....9424 Mack Ave., Detroit
Mihay, Benjamin (M)....14876 Warwick St., Allen Park
Mikesell, Wesley B., Jr.....21124 Goddard Rd., Dearborn
Millard, Glenn E.....2900 W. Grand Blvd., Detroit 2
Miller, Daniel H.....8011 W. Vernor Highway, Detroit 9
Miller, Elmer B.....10 Peterboro, Detroit 1
Miller, Karl L.....1101 David Whitney Bldg., Detroit
Miller, M. H.....27243 Southfield, Lathrop Vill., Birmingham
Miller, M. M.....10514 E. Jefferson, Detroit 14
Miller, Thomas H.....1305 David Whitney Bldg., Detroit 26
Miller, William Ernest.....10 Peterboro, Detroit 1
Milliken, L. D.....Henry Ford Hospital, Detroit 2
Mills, Clinton C.....16190 James Couzens Highway, Detroit 21
Milton, S. B.....600 Palmerston, River Rouge
Mimura, J. T.....1419 David Whitney Bldg., Detroit 26
Mintz, Edward I.....7401 Third Ave., Detroit 2
Mintz, Morris J.....16895 Livernois, Detroit 21
Miral, Solomon P.....4858 E. Davison, Detroit 12
Mishelevich, Sophie..4651 E. Nine Mile Road, Van Dyke
Miskinis, Martyna.....393 W. Grand Blvd., Detroit
Missavage, Edward, Jr. (M)....Wayne Co., Gen. Hosp., Eloise
Mitchell, Augustus W. (M).....314 Visger Road, River Rouge
Mitchell, C. Leslie.....Henry Ford Hospital, Detroit 2
Mitchell, D. P.....7713 Oakland, Detroit 11
Mitchell, Gertrude F.....650 W. Bethune, Detroit 2
Mitchell, Ralston S.....243 E. Warren, Detroit
Moehlig, Robert C.....964 Fisher Bldg., Detroit 2
Mogill, George.....3150 Second Ave., Detroit 6
Moisides, V. P.....1205 Stroh Bldg., Detroit 26
Moll, Clarence D.....10 Peterboro, Detroit 1
Molnar, S. K.....4525 S. Telegraph, Dearborn
Molner, Joseph G.....334 Bates St., Detroit
Mond, Edward..1812 David Broderick Tower, Detroit 26
Monson, Robert C.....16404 E. Warren, Detroit 24
Montante, Joseph R.....14447 W. Seven Mile Road, Detroit 35
Montgomery, John C.....25622 Coolidge Highway, Huntington Woods
Monto, Raymond W.....Henry Ford Hospital, Detroit 2
Moore, J. W.....8507 W. Eight Mile Road, Detroit 21
Moore, W. R.....541 David Whitney Bldg., Detroit 26
Mopper, Coleman....14633 E. Seven Mile Road, Detroit 5
Morand, Louis J.....641 David Whitney Bldg., Detroit 26
Morgan, Donald N.....1807 David Whitney Bldg., Detroit 26
Moriarty, George J.....770 Fisher Bldg., Detroit 2
Morin, J. B. (L).....14416 Beach Road, Detroit 23
Morita, Yoshikazu.....1401 Rivard, Detroit 7
Moritz, H. C.....1053 David Whitney Bldg., Detroit 26
Morley, A. R.....2301 23rd St., Wyandotte
Morley, Harold V.....773 Fisher Bldg., Detroit 2
Morley, James A.....10520 Plymouth Ave., Detroit 4
Moroun, S. J.....8045 E. Jefferson, Detroit 14
Morris, Harold L.....1069 Fisher Bldg., Detroit 2
Morse, Plinn F.....Harper Hospital, Detroit 1
Morton, David G.....19445 Plymouth Road, Detroit 28
Morton, John B. (E) .....90 E. Warren, Detroit 1
Mosee, W. Jones.....5205 Hastings, Detroit 11
Mosen, Max M.....8015 Harper, Detroit 13
Moses, J. W.....970 Fisher Bldg., Detroit 2
Moss, Ervin B.....1907 Pingree, Detroit 6
Moss, Nathan H.....2847 Trumbull, Detroit 16
Moss, Selma S.....18254 Livernois, Detroit 21
Mossman, J. D.....1052 Maccabees Bldg., Detroit 21
Mott, Carlin P.....2395 W. Grand Blvd., Detroit 8
Moulton, Charles W. (A)....106 N. Silver St., Olney, Ill.
Mullen, J. R.....19003 Ecorse Road, Allen Park
Munson, Henry T. E.....14344 E. Jefferson, Detroit
Murphy, D. J.....10 Peterboro, Detroit 1
Murphy, John M.....17700 Mack Ave., Grosse Pointe 24
Murphy, Robert T.....113 Martin Place, Detroit 1
Murphy, Scipio G.....603 E. Forest, Detroit 1
Murphy, W. M.....10500 Warren East, Detroit 14
Murray, G. M.....8045 E. Jefferson, Detroit
Murray, Thomas H.....19345 West McNichols, Detroit 19
Murray, William A.....11841 Ohio Ave., Detroit 4
Muske, Paul H.....5605 Michigan Ave., Detroit 10
Myers, D. W.....224 Professional Bldg., Detroit 1
Myers, Gordon B.....1512 St. Antoine, Detroit
Nagle, John W.....114 Maple, Wyandotte
Nahigian, Russell..15801 W. McNichols Road, Detroit 35
Nahoun, Antoine E.....2201 E. Jefferson, Detroit
Naud, Henry J.....18456 Grand River Ave., Detroit 23
Nawotka, E. E.....6531 Longacre, Detroit
Naylor, A. H.....10033 Tireman, Dearborn
Neeb, Walter G.....16840 E. Warren, Detroit
Nehra, John N.....18514 Mack Ave., Detroit 36
Neill, Edwin J.....8045 E. Jefferson, Detroit 14
Nelson, Darwin M.....153 W. Grand Blvd., Detroit 16
Nelson, Harry M.....1067 Fisher Bldg., Detroit 2
Nelson, Victor E.....7345 Fenkell, Detroit

Newman, Ernest.....17371 Evergreen, Detroit 19
Newman, M. K.....16861 Wyoming Ave., Detroit
Nickel, W. O.....VA Hospital, Dearborn
Nickels, Albert W.....471 Fisher Bldg., Detroit 2
Nickerson, I. D.....6245 Golfxiew Drive, Birmingham
Nielsen, Aage E.....10 Peterboro, Detroit 1
Nigro, Norman D.....10 Peterboro, Detroit 1
Nill, John B.....15001 E. Warren, Detroit 24
Nill, William F.....15001 E. Warren, Detroit 24
Noble, William C.....4045 W. Jefferson, Ecorse 18
Nolan, Bernard E.....1056 Maccabees Bldg., Detroit 2
Nolte, E. C. (M)....1716 Bu Don Court, Columbia, S. C.
Nolting, Wilfred S. H.....15850 E. Warren. Detroit 24
Norconk, A. A.....859 Fisher Bldg., Detroit 2
Norcott, Edith S.....16350 Mack Ave., Detroit 24
Norris, Edgar H.....Alden Park Manor, Detroit 14
Northcross, David C.....668 Winder. Detroit 1
Norton, A. B.....1076 Maccabees Bldg., Detroit
Norton, Charles S. (L).....3503 14th St., Detroit 8
Noshay, William C.....Henry Ford Hospital, Detroit 2
Novack, Richard L.....9928 Farmington Road, Livonia
Novy, R. L.....858 Fisher Bldg., Detroit 2
Nowicki, Joseph A.....3841 Junction, Detroit 10
Nunn, James W.....106 W. Davison, Detroit 3
Nyboer, Jan.....Harper Hosp., Detroit 1
O'Brien, E. J.....307 David Whitney Bldg., Detroit 26
O'Brien, G. M.....2501 West Grand Blvd., Detroit 8
Obushkevich, L. S.....10149 Michigan Ave., Dearborn
O'Connor, Katheryn L.....14301 Grand River Ave., Detroit 27
O'Donnell, Charles H...10 Peterboro, Room 504, Detroit
O'Donnell, David H. (E)..2501 W. Grand Blvd., Detroit
O'Donnell, Dayton H., Jr.....2501 W. Grand Blvd., Detroit
Oetting, E. M.....8045 E. Jefferson, Detroit 14
O'Hare, W. J.....3000 Schaeffer Highway, Dearborn
Ohmart, Galen B.....8721 E. Jefferson, Detroit 14
Ohrt, Harold F.....285 E. Grand Blvd., Detroit 7
Okun, Milton H.....3261 Sherbourne Road, Detroit 21
Olechowski, Leo, Cmdr, MC USN, (M).....Navy 824, Box 2, FPO, San Francisco, Calif.
Olen, Alex.....13100 Harper, Detroit 13
O'Linn, Francis P.....1055 Fisher Bldg., Detroit 2
Olmsted, George S...18530 Grand River Ave., Detroit 23
Olson, James A.....28 W. Adams, Suite 911, Detroit 26
Oman, Cyrus F.....12608 Wyoming Ave., Detroit 4
Onoda, B. Y.....6819 Asbury Park, Detroit 28
Oppenheim, J. M.....1050 Fisher Bldg., Detroit 2
Orecklin, Leo .....914 Maccabees Bldg., Detroit 2
Organ, Fred W.....10304 Woodward Ave., Detroit 2
Ormond, John K. (A)..1169 N. Woodward, Birmingham
Ornstein, Charles.....19504 Kelly Road, Detroit 24
O'Rourke, Paul V.....307 David Whitney Bldg., Detroit 26
O'Rourke, R. M.....7384 Twelfth St., Detroit 6
Osius, Eugene A.....901 David Whitney Bldg., Detroit 26
O'Sullivan, G. S.....14300 W. McNichols, Detroit 35
Otlewski, Eugene A.....853 Fisher Bldg., Detroit 2
Ott, Harold A.....3019 N. Woodward Ave., Royal Oak
Ottaway, John P...1337 David Whitney Bldg., Detroit 26
Owen, Clarence I.....4160 John R., Detroit 1
Owen, James A.....67 E. Forest, Detroit 1
Palmer, Alice E.....3919 John R., Detroit 1
Palmer, M. R.....7624 Dexter Blvd., Detroit 3
Palmisano, I. J.....25447 Plymouth Rd., Detroit 28
Pangburn, L. E.....7 Avalon. Detroit
Panic, Stephen M.....1001 W. Seven Mile Rd., Detroit 12
Parcells, Frank H.....1014 Buckingham Rd., Detroit
Paris, Delmo A.....Alexander Blain Hosp., Detroit 7
Parker, Benjamin R.....17306 W. 7 Mile Rd., Detroit 19
Parnell, John W.....
1297 Lochmoor Blvd., Grosse Pointe Woods, 30
Parr, Robert W...8-265 General Motors Bldg., Detroit 2
Parsons, John P.....
808 Grand Marais, Grosse Pointe Park 30
Past, W. L. (A).....Henry Ford Hosp., Detroit
Pasternacki, Nobert T.....6203 Chene, Detroit 11
Paterson, Walter G. (L)....471 Fisher Bldg., Detroit 3
Pawlowski, Jerome I.....2009 East Grand, Detroit
Payne, Eugene H.....
P.O. Box 118, Roosevelt Park Annex, Detroit 32
Payne, W. A., Jr.....Henry Ford Hosp., Detroit 2
Paysner, Harry A.....13700 Woodward Ave., Detroit 3
Peabody, Charles W.....474 Fisher Bldg., Detroit
Pearce, A. J.....15317 Piedmont, Detroit 23
Pearlman, C. L. R.....1509 Kales Bldg., Detroit
Pearlman, Jack.....14146 Bramell, Detroit 23
Pearse, H. A.....852 Fisher Bldg., Detroit
Peat, A. C.....2201 E. Jefferson, Detroit 7
Pedersen, Herbert E.....1209 Kales Bldg., Detroit
Peggs, George F.....5419 Livernois, Detroit 10
Penberthy, G. C...1515 David Whitney Bldg., Detroit 26
Pendy, George V.....
1808 David Broderick Tower, Detroit
Pendy, John M...1401 David Whitney Bldg., Detroit 26
Pensler, Leslie.....8844 Joy Rd., Detroit
Pensler, Meyer M.....8844 Joy Rd., Detroit
Pequegnot, Charles F. (L).....
6283 W. Outer Dr., Detroit
Percy, D. F.....106 W. Davison, Highland Park 3
Perdue, Grace M.....762-63 Fisher Bldg., Detroit 2
Perkin, Frank S.....970 Fisher Bldg., Detroit 2
Perlis, H. L.....1036 Maccabees Bldg., Detroit 2
Perrin, E. V.....2509 Southern, S.E., Washington, D. C.
Peterman, Earl A.....13700 Woodward, Detroit 3
Peters, Wm. R.....12400 E. Seven Mile Rd., Detroit 5
Peterson, R. A.....17581 Prest, Detroit 35
Petix, Samuel C.....19207 Schaefer, Detroit 21
Petoskey, Edward A.....6004 West Fort, Detroit 9
Petty, Thomas A. (M).....
1204 Yorkshire, Grosse Pointe Park
Peven, P. S.....18709 Meyers Rd., Detroit
Pevin, Pauline.....18709 Meyers Rd., Detroit 21
Pfeiffer, Rudolph L. (L)..469 E. Grand Blvd., Detroit 7
Phillips, B. E.....7600 John R., Detroit
Phillipson, Chester.....7411 Third Street, Detroit
Picard, J. D.....13349 Michigan Ave., Dearborn
Piccone, Louisa.....10605 W. Warren, East Dearborn
Pichette, J. W.....15146 Michigan Ave., Dearborn
Pickard, Orlando W.....952 Fisher Bldg., Detroit 2
Pierson, M. J. .....1030 Maccabees Bldg., Detroit
Pietraszewski, A. W.....10338 Jos. Campau, Detroit 12
Pinckard, Karl G.....932 Mason St., Dearborn
Pingel, J. F.....10637 W. Ten Mile Rd., Oak Park
Pink, Rose M.....11413 Jos. Campau, Detroit
Pinney, L. J.....28 W. Adams Ave., Detroit
Pino, Ralph H.....208 David Whitney Bldg., Detroit 26
Piper, Ralph R.....1530 McKinstry Ave., Detroit 7
Pittman, J. E.....1613 David Whitney Bldg., Detroit 26
Platz, Carol K.....11368 Kelly Rd., Detroit
Plavnick, H. M.....13300 Fenkell, Detroit
Pliskow, Harold....10730 W. Seven Mile Rd., Detroit 21
Podolsky, Harold M.....2785 S. Fort, Detroit 25
Poirier, Ralph A.....1405 Mutual Bldg., Detroit 26
Polentz, Charles P.....10 Peterboro, Detroit 1
Polk, John E. (M).....8742 Twelth St., Detroit 6
Pollack, John J.....18200 Wyoming Ave., Detroit 21
Ponka, Joseph L.....Henry Ford Hosp., Detroit 2
Pool, Walter D.....20901 Morross Rd., Detroit
Poos, Edgar E.....554 Fisher Bldg., Detroit 2
Porretta, Anthony C.....11146 Gratiot, Detroit 5
Porretta, F. S.....1076 Maccabees Bldg., Detroit 2
Porter, F. G.....14001 Greenfield, Detroit 27
Porter, Howard J. (R)....36911 Goddard Rd., Romulus
Portnoy, Harry.....4253 Leslie, Detroit
Posch, J. L.....1410 Kales Bldg., Detroit
Posner, Irving.....12901 W. 7 Mile Rd., Detroit 21
Potts, E. B.....8943 12th St. Detroit 6
Pratt, Jean P. (L).....18910 Fairway Dr., Detroit 21
Pratt, Lawrence A.....
Doctors Bldg., Suite 800, 3919 John R., Detroit
Prendergast, John J.....4436 Soles Rd., Dryden
Prescod, H. J.....Wayne County Gen'l Hosp. Eloise
Preston, Ruth E.....460 Fisher Bldg., Detroit 2
Price, Alvin Edwin....313 David Whitney Bldg., Detroit
Price, A. Hazen.....62 W. Kirby, Detroit 2

Priest, R. J.....Henry Ford Hosp., Detroit
Prince, A. E.....18060 Conant, Detroit 34
Prisbe, Edward J.....16603 Plymouth Rd., Detroit 27
Priver, Julian.....6741 W. Outer Dr., Detroit 35
Procailo, A. B.....29627 Ford Rd., Garden City
Proctor, Bruce....1419 David Whitney Bldg., Detroit 26
Proud, Robert H.....26151 Huron River Dr., Flat Rock
Prust, F. W. (M).....Harper Hosp., Detroit
Pugh, G. B.....Reciving Hospital, Detroit
Pugh, Howard C.....
1165 David Whitney Bldg., Detroit 26
Pugliesi, Benedetto.....9489 E. Outer Dr., Detroit 5
Purcell, Frank H.....
1808 David Broderick Tower, Detroit 26
Purves, William H. L...1767 Guardian Bldg., Detroit 26
Quigley, Eugene H.....22340 Michigan, Dearborn
Quigley, William G.....742 Maccabees Bldg., Detroit
Quinn, Edward L.....Henry Ford Hosp., Detroit 2
Rabinovitch, Bella.....4063 Waverly, Apt. 106, Detroit
Rahm, Lambert P.....14411 E. Jefferson, Detroit 19
Raiford, F. P.....1308 Broadway, Detroit 26
Raiford, Frank P., Jr.....631 E. Vernor Hwy., Detroit 1
Ramsey, R. H.....861 Monroe, Dearborn
Randall, David S.....1765 W. Fort St., Lincoln Park
Raskin, Herbert A.....611 Kales Bldg., Detroit 26
Raskin, Morris.....987 E. Jefferson, Detroit
Rastello, Peter B.....6307 W. Fort St. Detroit 9
Rau, Frederick W.....113 Martin Place, Detroit
Ray, K. J.....2336 Van Alstyne Blvd., Wyandotte
Raynor, Harold F.....
Room 700, 13700 Woodward Ave., Detroit 3
Rebuck, John W.....Henry Ford Hosp., Detroit
Redding, Lowell G.....1336 Southfield, Lincoln Park 25
Reder, Benjamin.....20731 Evergreen, Detroit 19
Redfern, William E.....Henry Ford Hosp., Detroit 2
Reed, Everett Hobart (A).....40321 Webb, Detroit
Reed, H. Walter.....8150 Grand River Ave., Detroit 4
Reed, Ivor E.....305 David Whitney Bldg., Detroit 26
Reed, Joseph O., Jr.....434 St. Clair, Grosse Pointe 30
Rees, Howard C.....15700 Mack Ave., Detroit 24
Reichling, R. J. (A).....
18514 Mack, Grosse Pointe Farms 30
Reid, John Gilbert.....
1337 David Whitney Bldg., Detroit 26
Reid, Wesley G.....974 Fisher Bldg., Detroit 2
Reiff, Morris V.....10241 Joy Rd., Detroit
Reinbolt, Charles A. (L).....
33570 Quaker Valley Rd., Farmington
Reinsh, Ernest R.....18674 Muirland Ave., Detroit
Reisman, Nathan J.....1122 Maccabees Bldg., Detroit 2
Reisman, S. G.....1078 Maccabees Bldg., Detroit
Reive, David L.....24401 Plymouth, Detroit 28
Rennell, Leo P.....2567 West Grand Blvd., Detroit 8
Renton, George W.....1530 Seward, Apt. 209, Detroit
Retenbach, R. F.....314 David Whitney Bldg., Detroit 26
Reveno, William S.....958 Fisher Bldg., Detroit 2
Reyner, C. E.....515 Professional Bldg., Detroit 1
Reynolds, Lawrence.....10 Peterboro, Detroit 1
Reynolds, R. P.....858 Fisher Bldg., Detroit 2
Rezanka, H. J.....952 Westchester Rd., Grosse Pointe 30
Rhoades, Francis P.....970 Maccabees Bldg., Detroit 2
Rice, Harold B.....10 Peterboro, Detroit 1
Richardson, Allan L. (R).....
Route 2, Box 76, Zephyr Hills, Fla.
Richardson, Robert P.....3714 Monroe, Wayne
Richardson, Robert P.....564 Fisher Bldg., Detroit 2
Rick, Paul J.....4227 Mt. Elliott, Detroit 7
Ridge, Ralph W.....100 Oak St., Wyandotte
Rieckoff, George C...14905 E. Jefferson Ave., Detroit 15
Rieden, J. A.....2567 W. Grand Blvd., Detroit 8
Rieg, John F.....5695 W. Vernor Hwy., Detroit 9
Rieger, John B...1265 David Whitney Bldg., Detroit 26
Rieger, Mary H.....746 Pallister, Detroit
Riethmiller, Robert F. (M).....
623 Pemberton Rd., Detroit 30
Rinkel, Robert W.....6586 Allen Rd., Allen Park
Riseborough, E. C.....90 E. Warren, Detroit 1
Ritter, George.....15801 W. McNichols, Detroit 35
Rizzo, Albert.....11631 Mack Ave., Detroit 14
Rizzo, Paul .....14874 Seymour, Detroit 5
Robb, Edward L.....17380 Livernois, Detroit
Robb, Herbert F.....381 S. Main St., Belleville
Robb, J. Milton (L).....
633 David Whitney Bldg., Detroit 26
Roberts, Arthur J.....1310 Warwick, Lincoln Park
Robertson, S. B.....962 Fisher Bldg., Detroit
Robins, Samuel C...18963 Jas. Couzens Hwy., Detroit 21
Robinson, Fred L.....13530 Michigan, Dearborn
Robinson, George W. (L).....
1701 E. Grand Blvd., Detroit 11
Robinson, Howard.....953 Fisher Bldg., Detroit
Robinson, H. A.....10040 Yellowstone Ave., Detroit 4
Robinson, J. H., Jr. (A).....
1553 W. Grand Blvd., Detroit 8
Robinson, R. G.....3751 31st St., Detroit 10
Roe, Chester, Jr.....16646 Woodingham Dr., Detroit 21
Roeglin, O. F. F.....
18412 Mack Ave., Grosse Pointe Farms 30
Rogers, Aaron Z.....
20451 Mack Ave., Grosse Pointe Woods
Rogers, C. S.....Henry Ford Hosp., Detroit 2
Rogers, George E. B.....
2108 David Broderick Tower, Detroit 26
Rogers, James D.....2966 Biddle Ave., Wyandotte
Rogers, J. T.....16921 James Couzens Hwy., Detroit 19
Rogin, James R.....3027 David Stott Bldg., Detroit 26
Rogoff, Abraham S.....676 Maccabees Bldg., Detroit 2
Rohde, Paul C.....12282 E. Outer Drive, Detroit 24
Rom, Jack.....8600 W. McNichols Rd., Detroit 35
Roman, Stanley J.....742 Maccabees Bldg., Detroit 2
Ronayne, J. J.....16116 W. McNichols Rd., Detroit
Roney, Eugene H.....17187 Schaefer Hwy., Detroit
Rosbolt, Oscar P.....8505 Plymouth Rd., Detroit 4
Rosefield, John L.....65 W. Hancock, Detroit 1
Rosen, Harold M.....8620 W. McNichols, Detroit 21
Rosen, T. S.....18700 Meyers, Detroit
Rosenbaum, Herbert....19776 Snowden Ave., Detroit 35
Rosenbloom, Alvin B.....17555 Parkside, Detroit 21
Rosenthal, Louis H.....1318 Maccabees Bldg., Detroit
Rosenthal, Samuel A.....16350 Hamilton, Detroit 3
Rosenwach, F. F.....19149 W. 7 Mile Rd., Detroit 19
Rosenzweig, Saul R.....
2114 David Broderick Tower, Detroit 26
Ross, B. C.....4493 14th St., Detroit
Ross, Donald G.....
654 St. Clair at Kercheval, Grosse Pointe
Ross, Hyman D.....19149 Joy Rd., Detroit 28
Rotarius, Edward M.....
1030 South Brys Dr., Grosse Pointe Woods 36
Roth, Edward T.....640 E. Grand Blvd., Detroit 7
Roth, Theodore I.....60 W. Hancock, Detroit
Rothman, Emil D.....19467 Livernois, Detroit 21
Rothman, H. R.....20171 Canterbury, Detroit 21
Rottenberg, Leon.....13419 Fenkell, Detroit 27
Rourke, R. F.....3390 Piquette, Detroit 11
Rottenberg, C. M. J.....13419 Fenkell, Detroit
Rowda, Michael S.....2001 E. Grand Blvd., Detroit 11
Rowe, J. J.....14138 Kentfield, Detroit 23
Royer, R. R.....16840 E. Warren Ave., Detroit 24
Rucker, Julian J.....668 Farnsworth Ave., Detroit 2
Ruedemann, A. D.....
1018 Three Mile Dr., Grosse Pointe Park
Ruedemann, A. D., Jr.....
1633 David Whitney Bldg., Detroit 26
Rueger, Milton J.....708 Kales Bldg., Detroit 26
Rueger, Ralph C.....9149 E. Jefferson, Detroit 14
Runge, Edward F.....25449 Rouge River Dr., Dearborn
Rupe, C. E.....2799 W. Grand Blvd., Detroit
Rupp, Jacob R.....7056 W. Fort St., Detroit 9
Rupprecht, E. F.....5525 W. Chicago, Detroit
Ruskin, Samuel H.....
1306 David Broderick Tower, Detroit 26
Russell, John C. (L)....2934 Davidson St. E., Detroit 3
Rutzen, Arthur C.....771 Fisher Bldg., Detroit 2
Rutzky, Julius.....5224 St. Antoine, Detroit 2
Ryan, James M.....19207 Schaefer Rd., Detroit 35

Ryan, W. D.....6389 Tuxedo, Detroit
Rydzewski, Jos. B.....12170 Jos. Campau, Detroit 12
Ryerson, F. S. (M)....Capt. MC, USAH, Camp Chaffee
Sack, Anthony G.....2567 W. Grand Blvd., Detroit 8
Sa'di, Lutfi M.....525 Professional Bldg., Detroit 1
Sadler, Henry H., Jr.....15 Kercheval, Detroit
Sadzikowski, Joseph T.....1320 N. Denwood, Dearborn
Sage, Bernard A.....1013 Haigh, Dearborn
Sage, Edward O. (E).....415 Burns Dr., Detroit
Sage, Thomas.....7815 E. Jefferson, Detroit 14
Sager, Edward L.....13902 Gratiot Ave., Detroit 5
St. Amour, Hector J.....9545 Grand River, Detroit
St. Louis, R. J.....10909 W. Jefferson, River Rouge 18
Sakorraphos, Stelios N.....1346 Broadway, Detroit 26
Salchow, Paul T., Med. Dir.....
Herman Kiefer Hosp., Detroit
Salisbury, Carolyn S.....527 Professional Bldg., Detroit
Salamon, James L.....
Ford Motor Corp., P.O. Box 3668, Highland Park 3
Salowich, John N.....15235 Harrison, Allen Park
Saltzstein, Harry C.....966 Fisher Bldg., Detroit 2
Sand, Harry H.....24110 Oxford, Dearborn
Sander, F. V., Jr.....344 Glendale, Highland Park
Sander, Irvin W.....5050 Cass Ave., Detroit 2
Sanders, Alex W.....920 Maccabees Bldg., Detroit 2
Sanderson, Alvord R.....
978 Pemberton Rd., Grosse Pointe Park
Sanderson, Susanne M.....
The Shelton Hotel, 15 E. Kirby, Detroit
Sandler, Nathaniel.....1004 Kales Bldg., Detroit 26
Sandweiss, D. J.....9739 Dexter Blvd., Detroit 6
Sapala, M. Andrew.....6356 Dexter Blvd., Detroit 6
Saraf, L. B.....14540 E. Warren, Detroit
Sargent, Richard C.....17357 Fenkell Ave., Detroit 27
Sargent, William R.....17357 Fenkell Ave., Detroit 27
Sarracino, J. B. (M).....
97th Gen. Hosp., APO 757, c/o P.M., New York, N. Y.
Sauber, B. J.....Ford Rouge Plant, Dearborn
Sauk, J. J. .....302 W. McNichols Rd., Detroit
Sauter, Simon H.....1082 E. Grand Blvd., Detroit 7
Savignac, Eugene M.....4777 E. Outer Dr., Detroit 12
Scarney, Herman D.....573 Fisher Bldg., Detroit 2
Schaefer, R. L.....1206 Kales Bldg., Detroit 26
Schaefer, R. L., Jr.....1204 Kales Bldg., Detroit 26
Schaeffer, Martin.....18275 Warrington, Detroit 21
Schane, David (A).....17157 Mendota, Detroit 21
Scheinberg, Schayel.....966 Fisher Bldg., Detroit
Schembeck, I. S...1655 David Whitney Bldg., Detroit 26
Schiff, Donald W. (A)....1211 Joliet St., Aurora, Colo.
Schiller, A. E.....1737 David Whitney Bldg., Detroit
Schillinger, Harold K.....4838 Neckel, Dearborn
Schimek, R. A.....Henry Ford Hosp., Detroit 2
Schkloven, Norman.....20051 Warrington, Detroit 21
Schlafer, Nathan H.....
1806 David Broderick Tower, Detroit 26
Schlemer, John H.....13826 Dexter Blvd., Detroit 6
Schlesinger, Henry.....13544 Woodward, Detroit 3
Schmaltz, J. D.....1701 David Broderick Tower, Detroit
Schmidt, Harry E.....667 Fisher Bldg., Detroit 2
Schmidt, Milton R.....2615 W. Jefferson, Trenton
Schmidt, Werner F.....1807 Stroh Bldg., Detroit
Schmier, Burton L.....5440 Cass, Detroit 2
Schmitt, Norman L.....101207 W. McNichols, Detroit 21
Schneck, R. J.....641 David Whitney Bldg., Detroit 26
Schneider, Charles L.....22148 Michigan Ave., Dearborn
Schneider, Curt P.....655 Fisher Bldg., Detroit 2
Schoenfield, G. D.....8830 W. McNichols Rd., Detroit
Schooten, Sarah S.....
13700 Woodward Ave., Highland Park 3
Schorr, Robert L. (E).....1325 E. Jefferson, Detroit 7
Schreiber, Frederic.....10 Peterboro, Detroit 1
Schroeder, Carlisle F.....7815 E. Jefferson, Detroit
Schuknecht, Harold F.....Henry Ford Hosp., Detroit 2
Schulte, Carl H.....808 Mutual Bldg., Detroit 26
Schultz, Ernest C...840 David Whitney Bldg., Detroit 26
Schwartz, Benjamin.....275 W. Grand Blvd., Detroit 16
Schwartz, H. A.....7605 Puritan, Detroit 21
Schwartz, Louis A.....861 Fisher Bldg., Detroit 2
Schwartz, Oscar D.....7441 W. Seven Mile Rd., Detroit
Schwartzberg, Jos. A.....19445 Plymouth, Detroit
Schweigert, C. F.....10627 Cadieux, Detroit 24
Schwocho, N. H.....6525 Park, Allen Park
Sciarrino, Stanley V.....15388 Livernois, Detroit 21
Scott, Marrion U.....79 Kercheval, Grosse Pointe 36
Scott, R. J.....7333 W. 7 Mile Rd., Detroit 21
Scott, William J.....79 Kercheval, Grosse Pointe 36
Scruton, Foster D. (A).....5419 Livernois, Detroit 10
Seabrooks, B. F., Jr.....9136 Oakland Ave., Detroit
Secord, Eugene W.....761 Fisher Bldg., Detroit
Seeley, James B.....5460 Shaefer Rd., Dearborn 2
Seeley, Ward F.....1807 David Whitney Bldg., Detroit 26
Segar, Laurence F.....
1410 David Broderick Tower, Detroit 26
Segel, N. P.....2116 David Stott Bldg., Detroit 26
Seibert, Alvin H. (L).....
1180 Bedford Rd., Grosse Pointe Parke 30
Seiferlein, A. L.....508 David Whitney Bldg., Detroit 26
Self, William G.....19365 Mack Ave., Detroit
Seligson, Alvin (M)....1505 Morris Ave., Bronx 57, N. Y.
Sellers, Charles W.....2314 W. Grand Blvd., Detroit 8
Sellers, Graham A...2405 W. McNichols Rd., Detroit 21
Serrester, Bernard F.....18650 W. Warren, Detroit 10
Seski, Arthur G.....863 Fisher Bldg., Detroit 2
Sewell, George....1116 David Whitney Bldg., Detroit 26
Sewell, Guy W.....16321 Mack Ave., Detroit 24
Shada, J. C...18424 Mack Ave., Grosse Pointe Farms 36
Shafarman, Eugene M.....5320 John R., Detroit 2
Shaffer, Jos. H.....2401 Rodner Dr., Birmingham
Shaffer, Loren W.....
325 Kercheval, Grosse Pointe Farms 36
Shafter, Royce R.....655 Fisher Bldg., Detroit 2
Shanoski, Stanley J.....728 Maccabees Bldg., Detroit 2
Shapiro, I. Allen.....4400 Livernois, Detroit 21
Shapiro, Jacob.....15085 E. Seven Mile Rd., Detroit
Shapiro, Reuben I.....636 Maccabees Bldg., Detroit
Sharp, Elwood.....635 Neff Rd., Detroit 30
Sharrer, Charles H.....16840 E. Warren, Detroit 24
Shekerjian, Armen.....20194 Wakefield, Detroit 21
Shelden, Warren E.....14215 W. McNichols Rd., Detroit
Sheldon, J. A. (L).....
1435 Three Mile Dr., Grosse Pointe Park 30
Shellhamer, C. S.....438 Maccabees Bldg., Detroit
Shelton, C. F.....910 David Broderick Tower, Detroit 26
Sheppard, Emma L. W. (R).....
7245 Engleman Ave., Centerline
Sherman, Nimrod.....3413 McDougall, Detroit 7
Sherman, William LaRue.....10 Peterboro, Detroit 1
Sherman, Wm. L., Jr. (M).....201 E. Kirby, Detroit 2
Sherrin, E. R.....17555 James Couzens Hwy., Detroit 35
Shewchuk, Alexander P.....7300 Allen Rd., Allen Park
Shields, William L.....18600 Woodward, Detroit 3
Shifrin, Peter G.....767 Fisher Bldg., Detroit 2
Shiovitz, Louis.....5419 Michigan Ave., Detroit 10
Shipley, R. E. (M).....
San Francisco Naval Shipyard, San Francisco 24, Calif.
Shipton, W. H. (A)....c/o General Delivery, Naples, Fla.
Shlain, Benjamin.....10244 W. 7 Mile Rd., Detroit
Shortz, Gerald.....General Delivery, Bloomfield Hills
Shotwell, Carlos W. (L)..1411 Atkinson Ave., Detroit 6
Shreve, Alfred J.....10149 Michigan, Dearborn
Shulak, Irving B.....
1714 David Broderick Tower, Detroit 26
Shulman, Herschel A.....1120 Maccabees Bldg., Detroit 2
Shumaker, E. J.....773 Fisher Bldg., Dearborn 2
Siddall, Roger S.....955 Fisher Bldg., Detroit 2
Sieber, Edward H.....15146 Michigan Ave., Dearborn
Siefert, John L.....12645 Gratiot, Detroit 5
Siefert, William A...17400 Grand River Ave., Detroit 27
Siegel, Henry.....10440 W. 7 Mile Rd., Detroit 21
Sievers, Lorraine A.....Harper Hosp., Detroit 1
Sigler, J. W.....Henry Ford Hosp., Detroit 2
Sill, Jack A.....19635 Mack Ave., Detroit 30
Sillery, R. J.....1511 David Whitney Bldg., Detroit 26
Silvarman, I. Z.....9103 Van Dyke, Detroit 13
Silver, I. W.....20000 W. Chicago, Detroit 28
Silverman, Maurice M.....3925 Joy Rd., Detroit 6

Silverman, Max.....11340 Dexter Blvd., Detroit 6
Simmons, Donald R. (M).....815 Kales Bldg., Detroit
Simon, Emil R.....1020 Maccabees Bldg., Detroit 2
Simon, Heinz G.....5097 Balfour Rd., Detroit 24
Simpson, G. E.....8721 E. Jefferson, Detroit
Simpson, Clarence E. (L).....18448 Prest, Detroit 35
Sims, W. S.....11665 Joseph Campau, Detroit 12
Sinclair, James W.....16404 E. Warren, Detroit 24
Singer, Floyd W.....24441 Emerson, Dearborn
Sippola, George W.....13603 LaSalle, Detroit 6
Sisson, John M.....17320 W. McNichols, Detroit 35
Skully, Edward J.....13535 Woodward Ave., Detroit 3
Sklover, J. I.....1326 E. 7 Mile Rd., Detroit 3
Sladen, F. J. (L).....Henry Ford Hosp., Detroit
Slahetka, Vincent E.....7435 Michigan, Detroit 10
Slaugenhaupt, J. G...600 Griswold, Suite 602, Detroit 26
Slaughter, F. M.....455 E. Adams, Detroit 26
Slazinski, Leo W.....7618 Michigan, Detroit 10
Slevin, John G.....
1304 David Broderick Tower, Detroit 26
Sliwin, E. P.....641 David Whitney, Detroit
Slutzky, Gilbert.....18943 Monica, Detroit
Slusky, Joseph.....1826 Oakman Blvd., Detroit
Sly, R. F.....22213 Tenny, Dearborn
Small, Henry.....11507 Hamilton, Detroit 3
Small, John.....655 Fisher Bldg., Detroit 2
Smathers, H. M.....14219 W. McNichols, Detroit 35
Smathers, W. M.....14219 W. McNichols, Detroit 35
Smeck, Arthur R. (L).....1036 Waterman, Detroit 9
Smith, Clarence V.....1716 E. Grand Blvd., Detroit 11
Smith, Claude A. (L).....7 Adams Lane, Dearborn 2
Smith, D. H.....1800 Tuxedo, Detroit 6
Smith, F. J.....369 Wimbleton Dr., Birmingham
Smith, Henry L.....16401 Grand River Ave., Detroit 27
Smith, J. Allen.....14140 Puritan, Detroit 27
Smith, J. C. (A).....(No Address)
Smith, Richmond W., Jr.....Henry Ford Hosp., Detroit 2
Smith, R. F.....2799 W. Grand Blvd., Detroit
Smolenski, J. J.....5149 Joy Rd., Detroit 4
Smyka, E. J.....6111 Charles, Detroit 12
Smyka, Stanley M.....716 Kales Bldg., Detroit 26
Snedeker, Bernard C.....18800 Woodward Ave., Detroit 3
Snider, J. J. (M).....22699 Van Dyke, Van Dyke
Snow, L. W.....508 W. Main St., Northville
Snyder, Arthur M.....
13700 Woodward Ave., Suite 503, Detroit 3
Sobel, Robert A.....18254 Livernois, Detroit 21
Socall, Charles J.....8500 Mt. Elliott, Detroit 11
Sokol, William M.....10 Peterboro, Detroit 1
Sokolov, Raymond A.....755 Fisher Bldg., Detroit 2
Solomon, Abraham B.....4067 Tyler, Detroit 4
Sonda, Lewis P.....544 David Whitney Bldg., Detroit 26
Sorock, Milton L.....19467 Livernois, Detroit 21
Sosin, Allen.....23603 Farmington Rd., Farmington
Spademan, Loren C.....
1013 David Whitney Bldg., Detroit 26
Speck, Carlos C.....6525 Park Ave., Allen Park
Spector, Maurice J.....12504 E. Jefferson, Detroit 15
Spero, Gerald D.....7330 W. Seven Mile Rd., Detroit 21
Sperry, Frederick L.....463 Fisher Bldg., Detroit 2
Sphire, R. D. .....4160 John R., Detroit
Spiro, Adolph S.....11255 Mack Ave., Detroit 15
Springborn, B. R.....15818 E. Warren, Detroit 24
Sprunk, Carl J.....869 Fisher Bldg., Detroit 2
Squires, W. H.....Wayne County General Hosp., Eloise
Stafford, Frank W. J.....1111 Griswold, Detroit
Stalker, Hugh.....411 Fisher Rd., Grosse Pointe 30
Stamell, B. B.....658 Maccabees Bldg., Detroit
Stamell, Meyer.....14634 Greenfield, Detroit
Staniszewski, Casimir.....1301 W. Grand Blvd., Detroit
Stanton, James M.....1001 Mutual Bldg., Detroit
Stanton, Myron R.....3400 W. Warren, Detroit 8
Stapleton, William J., Jr. (E).....
641 David Whitney Bldg., Detroit 26
Starrs, Thomas C. (L).....
509 Fox Theater Bldg., Detroit 1
Staryk, Steven E.....
1010 N. Oxford, Grosse Pointe Woods 36
Staub, Howard P.....9210 Jerome, Detroit 39
Staudt, L. W...Chrysler Corporation, Highland Park 3
Stearns, A. B.....504 Doctors Bldg., Detroit 1
Stebbins, Charles E.....856 Fisher Bldg., Detroit
Steele, C. H.....1144 David Whitney Bldg., Detroit 26
Steele, Catherine H.....7720 E. Jefferson, Detroit
Stefani, E. L.....18455 James Couzens Hwy., Detroit 35
Stefani, Raymond T.....13516 Stoepel, Detroit 4
Steffensen, Ellis H.....Henry Ford Hosp., Detroit
Stein, Albert H.....19334 San Juan Dr., Detroit 21
Stein, Emory.....13115 Woodward Ave., Detroit 3
Stein, James R.....125 W. 9 Mile Rd., Ferndale
Stein, Saul C.....23105 Van Dyke, Van Dyke
Steinbach, Albert L. (M).....
1229 David Whitney Bldg., Detoit
Steinbach, Henry B.....411 Lakeland, Grosse Pointe
Steinberger, Eugene .....
12901 W. Seven Mile Rd., Detroit 35
Steinberger, Eugene J.....6409 W. Fort St., Detroit 9
Steiner, Frederick B.....29627 Ford Rd., Garden City
Steiner, Gabriel.....10 Peterboro, Detroit 1
Steiner, L. J.....12636 Chelsea Ave., Detroit 13
Steinhardt, Milton J.....670 Maccabees Bldg., Detroit 2
Stellhorn, Chester E.....12900 W. 7 Mile Rd., Detroit 21
Stellhorn, Mary Christine.....16616 Mack Ave., Detroit
Stempel, E. M.....17550 Ohio, Detroit 21
Sterba, Richard F.....1130 Parker, Detroit 14
Sterling, Robert R.....
1541 David Whitney Bldg., Detroit 26
Stern, Edward A.....12710 Dexter, Detroit 6
Stern, H. L.....14137 Warwick, Detroit 23
Stern, Julian....1314 David Whitney Bldg., Detroit 26
Stern, L. H.....22699 Van Dyke, Van Dyke
Stern, Louis D.....1049 David Whitney Bldg., Detroit
Stevens, C. H.....15422 Manor, Detroit 21
Stevenson, Charles S.....1405 Kales Bldg., Detroit
Stewart, Lula Belle.....8635 Dexter Blvd., Detroit 6
Stewart, M. N., Jr.....411 Professional Bldg., Detroit
Stewart, Marjorie R.....25750 Outer Dr., Lincoln Park
Stewart, Thomas O.....17187 Schaefer Hwy., Detroit 35
Stiefel, Daniel M.....
1563 David Whitney Bldg., Detroit 26
Stillwater, Karl.....18311 Appoline, Detroit 35
Stirling, A. M.....10 Peterboro, Detroit 1
Stith, Dwight E.....505 Owen, Detroit 11
Stobbe, Godfrey D.....Grace Hospital, Detroit
Stocker, Lawrence L.....7330 W. Seven Mile Road, Detroit 21
Stocker, M. L.....116 N. Adams St., Ypsilanti
Stockwell, B. W.....703 Doctors Bldg., 3919 John R, Detroit
Stokfisz, Thaddeus.....7012 Michigan Ave., Detroit 10
Stone, S. L.....7411 Third Ave., Detroit 2
Straith, Claire L.....2605 West Grand Blvd., Detroit 8
Straith, R. E.....2605 W. Grand Blvd., Detroit 8
Strand, Martin E.....22400 Cherry Hill, West Dearborn
Stratton, D. P.....1710 Third St., Detroit
Stricker, Henry D.....5624 W. Fort St., Detroit 9
Strickroot, Fred L.....707 Kales Bldg., Detroit
Strohschein, D. F.....1063 Fisher Bldg., Detroit 2
Strutz, Wm. C.....1553 Woodward Ave., Detroit
Stryker, Joan C.....2853 Biddle St., Wyandotte
Stryker, Walter A.....Wyandotte Gen. Hosp., Wyandotte
Stubbs, C. T.....13930 Woodward, Detroit 3
Stubbs, Harold W.....13930 Woodward, Detroit 3
Stump, George D...1314 David Whitney Bldg., Detroit 26
Sugar, David I.....13120 Broadstreet, Detroit
Sugar, H. Saul.....311 Kales Bldg., Detroit
Sugarman, Marcus H.....9739 Dexter, Detroit 6
Sullivan, Hugh A...1053 David Whitney Bldg., Detroit 26
Detroit 26
Sullivan, J. J. Jr., (M).....440 East 23rd St., New York, N. Y.
Sultzman, L. C.....474 Fisher Bldg., Detroit
Summers, William A.....1613 David Whitney Bldg., Detroit 26

Summers, William S. (L)....1613 David Whitney Bldg., Detroit
Surbis, John P.....22277 Long Blvd., Dearborn
Sutherland, Jacob M.....662 Fisher Bldg., Detroit 2
Suwinski, R. H.....9243 Joseph Campau, Detroit 12
Swan, Lionel F.....3400 McDougall, Detroit 7
Swanson, Carl W.....936 Alter Road, Detroit 15
Swanson, Cleary N.....16921 James Couzens Highway, Detroit 2
Swanson, Robert G.....936 Alter Road, Detroit
Swartz, F. G., Jr.....1229 David Whitney Bldg., Detroit
Sweeny, Donald N., Jr.....8445 E. Jefferson, Detroit 14
Swift, Karl L.....869 Fisher Bldg., Detroit 2
Swihart, J. J.....912 Kales Bldg., Detroit 26
Switzer, Bertrand C. (R)..17354 James Couzens, Detroit
Syphax, C. S., Jr.....1819 E. Davison, Detroit
Szappanyos, B. J. (M).....2567 W. Grand Blvd., Detroit
Szilagyi, D. Emerick.....14638 Stahelin, Detroit 23
Szladek, F. J.....4045 W. Jefferson, Ecorse
Szmigiel, A. J.....7527 E. 7 Mile Road, Detroit 34
Talbot, Frank G. (M)....19154 Westmoreland, Detroit 19
Tallant, Edward J.....14001 Greenfield, Detroit
Talmers, Frederick.....Receiving Hospital, Detroit
Tamblyn, E. J.....15315 E. Jefferson, Detroit 30
Tanner, Natalia M.....8033 Twelfth St., Detroit 6
Tapert, Julius C.....888 Chalmers, Detroit 15
Tasker, Helen E.....76 W. Adams, Detroit
Tassie, Ralph N.....14060 Saratoga, Detroit
Tatelis, Gabriel A.....1011 E. Grand Blvd., Detroit
Tatelman, Maurice.....410 Kales Bldg., Detroit 26
Taurence, William H.....1860 Ford, Wyandotte
Taylor, Aaron.....19438 Whitcomb, Detroit
Taylor, Ivan B.....504 Doctor Bldg., 3919 John R, Detroit
Taylor, J. L.....1566 W. Grand Blvd., Detroit
Taylor, Nelson M.....654 St. Clair, Grosse Pointe 30
Taylor, W. V.....895 Coplin, Detroit 15
Tazzioli, Henry A.....21970 Moross Road, Detroit 36
Tear, Malcolm J. J.....5008 Trumbull Ave., Detroit 8
Teitelbaum, Myer.....405 Kales Bldg., Detroit 26
Tenaglia, Thomas A.....9 Salliotte, Ecorse 18
Tenerowicz, Rudolph G.....2925 Lehman, Detroit 12
Tesluk, Henry.....Henry Ford Hospital, Detroit 2
Texter, Elmer C.....7457 Gratiot Ave., Detroit 13
Thompson, Arthur Lee.....6125 Scotten, Detroit 10
Thompson, H. E.....2212 Clinton, Detroit
Thompson, H. O.....6014 W. Fort, Detroit 9
Thompson, W. A.....6125 Scotten, Detroit 10
Thomson, Daniel C.....2966 Biddle Ave., Wyandotte
Thornell, Harold E.....4839 Beaubien, Detroit 1
Thornton, J. A.....525 Visger, Ecorse
Thosteson, George C.....1139 David Whitney Bldg., Detroit 26
Thumann, R. C., Jr.....1757 David Whitney Bldg., Detroit
Thumim, Sadie.....15306 Joy Road, Detroit
Ting, Y. M.....3515 West Point, Dearborn
Tkaczuk, Dmytro.....10345 Joseph Campau, Detroit 12
Toaz, Robert B.....13700 Woodward, Detroit 3
Tobin, J. S.....2860 Clark St., Detroit
Todoroff, Theodore.....904 S. Military, Dearborn
Tolbert, Vassal G.....3705 Hastings, Detroit 1
Tomsu, Charles L.....6170 Michigan Ave., Detroit 10
Torres, Estelle.....3985 Caniff, Detroit
Torres, Raul M., Jr.....3985 Caniff, Detroit 12
Tourkow, L. P.....4741 Fullerton, Detroit 38
Townsend, Frank M.....1551 Trumbull, Detroit 16
Trader, Kenneth N.....951 Fisher Bldg., Detroit 2
Tregenza, W. K.....18530 Grand River, Detroit
Tremain, Harold L.....106 W. Davison, Detroit
Trinkaus, W. F.....20601 Harper, Detroit 36
Trisler, J. J.....651 Fisher Bldg., Detroit
Troester, George A.....1140 Maccabees Bldg., Detroit
Thombino, James F.....2567 W. Grand Blvd., Detroit 8
Trombley, Joseph J.....18595 Grand River Ave., Detroit 23
Truba, Paul K.....1409 Kales Bldg., Detroit 26
Trudeau, J. M.....14807 W. McNichols Road, Detroit 35
Truszkowski, Edward G...St. Francis Hospital, Detroit 12
Trythall, S. W.....13300 Livernois, Detroit 4
Tulloch, John.....923 David Whitney Bldg., Detroit
Tupper, Roy D.....15101 W. 7 Mile Road, Detroit 19
Turbett, Claude W. (L).....4230 Commonwealth Ave., Detroit 8
Turcotte, Vincent J.....14015 Gratiot, Detroit 5
Turkel, Henry.....1302 Industrial Bank Bldg., Detroit 26
Turnbull, Jack V.....22340 Michigan, Dearborn
Turner, John J.....25447 Plymouth Road, Detroit
Tuttle, W. M.....307 David Whitney Bldg., Detroit
Tuynman, Peter E...20032 W. McNichols Rd., Detroit 19
Ujda, Chester J.....3106 Washington, Wayne
Ulbrich, Henry L. (L).....1540 Torrey Road, Grosse Pointe Woods 30
Ulmer, A. A.....14616 E. Seven Mile Road, Detroit 5
Ulrich, Willis H.....22365 Grand River, Detroit
Umphrey, Clarence E.....15300 W. McNichols Road, Detroit 35
Unkefer, W. T.....1063 Fisher Bldg., Detroit 2
Usher, William Kay.....15605 Kercheval, Detroit 30
Usndek, Harold E.....14632 E. Seven Mile Road, Detroit
Vale, C. Fremont (R).....2615 Via Tuscany, Winter Park, Fla.
Van Becelaere, L. A.....1860 Ford, Wyandotte
VandenBerg, Henry J., Jr.....816 David Whitney Bldg., Detroit 26
Van Eck, James E.....9165 Whittier, Detroit 24
VanHoek, Donald E.....2001 Lancaster, Grosse Pointe Woods
Van Hoey, A. F.....19154 James Couzens, Detroit
Van Raaphorst, L. F.....1306 Kales Bldg., Detroit 26
Van Riper, Steven L.....1490 Iroquois, Detroit 14
Van Slyck, E. J.....2201 E. Jefferson, Detroit 7
Vardon, Edward M.....12897 Woodward Ave., Detroit 3
Vasu, V. O.....4829 Woodward, Detroit 1
Veldhuis, A. H.....Henry Ford Hospital, Detroit 2
Veling, William F.....1060 Fisher Bldg., Detroit 2
Vogel, Hyman A.....29901 Ford Road, Garden City
Vokes, Milton D.....10182 Gratiot Ave., Detroit
Vonder Heide, E. C.....17190 Strathmore, Detroit 21
Vorwald, A. J.....1401 Rivard, Detroit 7
Vossler, A. E.....825 David Whitney Bldg., Detroit 26
Waddington, J. E. G. (E).....3818 Northwestern, Detroit 6
Waggoner, C. Stanley.....541 David Whitney Bldg., Detroit 26
Waggoner, Lyle G...404 David Whitney Bldg., Detroit 26
Wainger, Max J.....1012 David Broderick Tower, Detroit 26
Wainstock, Michael A.....1508 David Broderick Tower, Detroit 26
Wakeman, Everal M.....22276 Garrison, Dearborn
Waldbott, George L.....2930 W. Grand Blvd., Detroit 2
Walker, George L.....1209 Kales Bldg., Detroit 26
Walker, J. Paul.....15510 Mack Ave., Grosse Pointe 30
Walker, Roger V...1255 David Whitney Bldg., Detroit 26
Walkowiak, Robert G.....716 Kales Bldg., Detroit 26
Wallace, S. Willard.....7815 E. Jefferson, Detroit 14
Wallaert, Arthur.....1305 Kales Bldg., Detroit 26
Walls, Arch.....17201 W. McNichols Road, Detroit
Walser, Howard Carleton.....566 Fisher Bldg., Detroit 2
Walsh, Francis P.....205 Professional Bldg., Detroit 1
Walter, Arthur W.....14201 Rutland, Detroit 27
Walter, Floyd J.....18714 Grand River, Detroit 23
Walters, Albert G.....11078 Gratiot Ave., Detroit 5
Waltz, Paul J.....16127 Woodward Ave., Detroit 3
Wangner, William F.....7220 Gratiot Ave., Detroit 13
Ward, C. H.....904 Kales Bldg., Detroit
Warner, J. F.....7850 E. Jefferson, Detroit 14
Warner, P. L.....10314 Puritan, Detroit 21
Warren, Irving A.....4100 W. McNichols Road, Detroit 21
Warren, Wadsworth.....1144 David Whitney Bldg., Detroit 26
Wasserman, Harold.....1328 Maccabees Bldg., Detroit
Wassermann, Lewis C...300 W. McNichols Rd., Detroit 3

Waszak, Charles J.....2501 West Grand Blvd., Detroit 8
Watkins, T. W. (M).....605 Blake St., Killeen, Texas
Watson, Douglas J.....15101 Plymouth Road, Detroit
Watson, Harwood G.....935 S. Military, Dearborn
Watson, J. Edwin.....2536 W. Grand Blvd., Detroit 8
Watts, Frederick B.....16321 Mack, Detroit
Watts, J. C.....7360 Twelfth St., Detroit 6
Watts, Joseph.....742 Maccabees Bldg., Detroit 2
Watts, J. J. (A).....7360 Twelfth St., Detroit 6
Wayne, Morris A.....18474 Roselawn, Detroit 21
Weaver, Clarence E.....113 Martin Place, Detroit 1
Weaver, Delmar F.....571 Fisher Bldg., Detroit
Weber, Karl W.....16400 E. Warren, Detroit 27
Webster, John E.....840 David Whitney Bldg., Detroit 26
Weed, Milton R.....1997 E. Grand Blvd., Detroit 11
Wehenkel, Albert M. (L).....7356 12th St., Detroit 6
Weidner, J. H.....c/o Dearborn Engineering Lab., 21500 Oakwood, Dearborn
Weiner, Maurice B.....1114 Maccabees Bldg., Detroit 2
Weingarden, David.....13240 Vassar Drive, Detroit
Weingarten, J. S.....275 W. Grand Blvd., Detroit 16
Weinstein, Jacob.....4237 Grand River Ave., Detroit 8
Weisberg, A. A.....20 W. Seven Mile Road, Detroit
Weisberg, Harry....15101 W. McNichols Road, Deroit 21
Weisberg, Jacob....15101 W. McNichols Road, Detroit 35
Weisenthal, Irvin.....5764 Woodward, Detroit 2
Weiser, Frank A.....4162 John R, Detroit
Weiss, Casimer P.....10040 Joseph Campau, Detroit 12
Weiss, C. F.....20323 Mack Ave., Grosse Pointe Woods
Weiss, J. G.....7740 Third, Detroit 2
Weiss, Woodrow W. (A).....60 W. Hancock, Detroit 1
Welch, John H.....18550 W. Outer Drive, Dearborn 7
Welch, W. K. (M).....No Address
Weller, Charles N.....730 Watervale Road, Arcadia
Wells, Martha L.....760 Fisher Bldg., Detroit
Weltman, Carl G...1701 David Whitney Bldg., Detroit 26
Wendel, Jacob S. (L).....744 David Whitney Bldg., Detroit 26
Wenzel, Jacob F.....1006 Kales Bldg., Detroit 26
Werle, Peter Paul.....1420 St. Antoine, Detroit 26
West, G. A.....6310 Mack Ave., Detroit 7
West, H. G.....12739 Puritan, Detroit 27
Westmaas, William J.....310 E. Jefferson, Detroit 7
Weston, Bernard.....3200 Tyler, Detroit 6
Weston, Earl E.....18101 James Couzens Highway, Detroit 21
Weston, Horace L.....703 Mutual Bldg., Detroit 26
Weston, Jean K.....444 Lodge Drive, Detroit 14
Weyher, Russell F.....5383 Oakman Blvd., Detroit 4
Whalen, Neil J.....1515 David Whitney Bldg., Detroit 26
Wharton, Thomas V.....1809 Oak St., Wyandotte
Wheeler, S. C.....19207 Schaefer, Detroit 21
Whelan, Joseph L.....28 West Adams Ave., Detroit 26
Whinnery, Randall A.....752 Fisher Bldg., Detroit 2
Whitcomb, C. E. (M)....15756 Kentfield St., Detroit 23
White, Donald H.....1313 Cleveland, Lincoln Park 25
White, D. L.....10410 Moross, Dearborn
White, Milton W.....2329 E. Grand Blvd., Detroit 11
White, Prosper D.....66 Tuxedo, Highland Park
White, Theodore M.....7159 Michigan Ave., Detroit 10
Whitehead, Leston S.....1718 David Whitney Bldg., Detroit 26
Whitehead, Walter K.....413 David Whitney Bldg., Detroit 26
Whiteley, Robert K.....541-3 David Whitney Bldg., Detroit 26
Whitelock, E. H.....1809 Oak St., Wyandotte
Whitney, Elmer L.....2 Kenberton Dr., Pleasant Ridge
Whitney, Rex E.....5525 W. Chicago Blvd., Detroit 4
Whittaker, Alfred H.....1427 E. Jefferson, Detroit 7
Wiant, John L. (M)....309 Professional Bldg., Detroit 1
Wiechowski, Henry E.....10345 Joseph Campau, Detroit
Wiener, Israel....13011 W. McNichols Road, Detroit 35
Wiener, Morton J.....612 Kales Bldg., Detroit 26
Wieterson, Fred K.....260 Manor Road, Route 2 Birmingham
Wight, Fred B.....1048 David Whitney Bldg., Detroit 26
Wikiera, Edward S.....15020 Michigan Ave., Dearborn 2
Wilcox, L. F.....110 Professional Bldg., Detroit 1
Wiley, William M.....17041 Wa[illegible]ney, Detroit 24
Wilhelm, R. E. (M)....530 N. Telegraph [illegible]d., Dearborn 7
Wilhelm, Seymour K.....13011 W[illegible]cNichols Road, Detroit 21
Wilkinson, A. P.....974 Fi[illegible]r Bldg., Detroit 2
Williams, C. R.....987 E[illegible]ff[illegible]rson, Detroit 7
Williams, Clarence J.....5[illegible]24 E. Jefferson, [illegible]se Pointe Park 30
Williams, Delford G., Jr.....[illegible]2th St., Detroit
Williams, Eugene.....101[illegible]i[illegible]igan, Dearborn
Williamson, J. G. (A).....366[illegible]Kinley, Dearborn
Wilner, I. A.....17701 W. McNich[illegible]Road, Detroit 35
Wilson, Andrew G.....47[illegible] Spokane, Detroit
Wilson, G. S.....4741 Spokane, Detroit 4
Wilson, Gerald A.....4741 Spokane, Detroit 4
Wilson, M. C.....15439 Harper, Detroit 24
Wilson, Stuart C. (L).....10 Peterboro, Detroit 1
Winnick, Laurence C.....19120 Snowden, Detroit
Winton, George J.....1007 David Stott Bldg., Detroit 26
Wise, Robert K.....15801 W. McNichols, Detroit 35
Wishropp, E. A.....227 Kenwood Court, Grosse Pointe
Wittenberg, Arthur A.....7101 W. Chicago, Detroit
Wittenberg, Samson S.....934 Maccabees Bldg., Detroit 2
Wittenberg, Sydney S.....4400 Livernois, Detroit 10
Witter, Joseph A.....344 Glendale, Detroit 3
Witus, Carl.....18412 Mack Ave., Detroit 24
Witus, Morris.....9036 Dexter Blvd., Detroit 6
Wolever, T. H.....Henry Ford Hospital, Detroit 2
Wolfe, Max O.....7-260 General Motors Bldg., Detroit 2
Wollank, Helen Wilson..15324 East Jefferson, Detroit 30
Wollenberg, R. A. C. (L).....939 David Whitney Bldg., Detroit 26
Wolter, J. G.....Mt. Carmel Mercy Hosp., Detroit 21
Wood, A. L.....25001 Ford Road, Dearborn
Wood, D. J.....2860 Clark St., Detroit 10
Wood, G. P.....2730 E. Jefferson, Detroit 7
Wood, Kenneth A.....3919 John R, Detroit 1
Wood, W. C.....463 Fisher Bldg., Detroit
Woodward, Douglas.....4515 Trumbull, Detroit 8
Woodworth, W. P. (L)....17387 Quincy Ave., Detroit 21
Woolfenden, Joseph B.....16321 Mack Ave., Detroit
Worzniak, Joseph J.....2312 Biddle St., Wyandotte
Wreggit, Winston R.....79 Highland Ave., Detroit 3
Wright, C. H.....1549 W. Grand Blvd., Detroit 8
Wruble, Joseph.....411 Seldon, Detroit
Wunsch, Richard E.....7815 E. Jefferson, Detroit 14
Yamasaki, Ken..1514 David Broderick Tower. Detroit 26
Yarrows, Morton.....455 Medbury, Detroit
Yates, Arthur J. W.....8045 E. Jefferson, Detroit
Yesayian, H. G.....609 Kales Bldg., Detroit 26
Yetzer, William J.....511 Professional Bldg., Detroit 2
Yoder, R. R.....41001 E. Seven Mile Road, Northville
Yott, William J.....854 Lakeshore Drive, Grosse Pointe
Young, Donald A.....14807 W. McNichols, Detroit
Young, Donald C.....1151 Taylor Ave., Detroit 2
Young, I. I.....Detroit Receiving Hospital, Detroit 26
Young, Lloyd B.....857 Fisher Bldg., Detroit 2
Young, Viola M.....10 Peterboro, Detroit 1
Young, Watson A., Maj. M.C. (M)....97th Gen. Hosp., APO 757, New York, N. Y.
Youngstrom, Clarence.....791 E. Grand Blvd., Detroit
Zabinski, Edward J.....19036 Van Dyke, Detroit 12
Zackheim, Herschel S.....22265 Garrison, Dearborn
Zawacki, Sigmund.....22214 Ford Road, Dearborn
Zawadzki, E. S.....14961 Piedmont Ave., Detroit
Zbikowski, Joseph.....Wayne Co. Gen. Hosp., Eloise
Zbikowski, Z. T.....Wayne Co. Gen. Hosp., Eloise
Zbudowski, Myron R.....2758 Belmont, Hamtramck
Zemens, Joseph L.....13061 E. Eight Mile Road, East Detroit
Ziegler, Robert F.....Henry Ford Hospital, Detroit
Zielinski, C. J.....18900 W. Warren, Detroit
Zinn, George H.....641 David Whitney Bldg., Detroit [illegible]
Zinterhofer, John.....27621 Santa Barbara Dr., Rout[illegible] Birming

Zolliker, Margaret Z.....20390 Harper Ave., Detroit
Zonnis, M. E.....1064 Fisher Bldg., Detroit 2
Zuelzer, Wolfg ng W.....Children's Hospital, Detroit
Zukowski, Henry J.....1916 Manchester Blvd., Grosse Pointe Woods 30
Zukowski, Sigmund A.....6626 Van Dyke, Detroit 13

WEXFORD-MISSAUKEE COUNTIES

Cardinal, The na H.....302 E. Chapin, Cadillac
Daugharty, R be V.....302 E. Chapin, Cadillac
Holm, August .....828 Seventeenth St., Moline, Ill.
Inman, J. C.....Lake City
Lommen, Ral .....Manton
Moon, Willia A .....826 Oak St., Cadillac
Moore, Gregor F .....302 E. Chapin, Cadillac
Murphy, Micha l .....120 E. Cass St., Cadillac
Paye, Philip H.....Mercy Hospital, Cadillac
Posthuma, Millard M.....423 E. Cass St., Cadillac
Purdy, Calvin S. (L).....Buckley
Seger, D. W.....Lake City
Smith, Wallace J.....East Harris St., Cadillac
Stokes, William H.....Lake City
Tornberg, Gordon C.....124 E. Case St., Cadillac
Youngman, D. C.....Marion

HONORARY MEMBERS

Brake, D. Hale.....Stanton
Cline, John W.....3467 Pacific Ave., San Francisco, Calif.
de Kruif, Paul, Ph.D.....Wake Robin, Holland
Kahlke, Charles E.....Benton Harbor
Potter, LeRoy A.....Mich. Dept. of Health, Lansing
Tompkins, C. E.....American Baptist Assembly, Green Lake, Wisc.
Upjohn, Lawrence N.....Upjohn Co., 301 Henrietta St., Kalamazoo

Woman's Auxiliary

Roster, 1955

ALLEGAN COUNTY

Brachman, Mrs. Peter.....Allegan
Brown, Mrs. L. F.....451 W. Allegan, Otsego
Brunson, Mrs. E. T.....Ganges
Chase, Mrs. Walter E.....Martin
Clark, Mrs. James I.....Box B, Fennville
Corkill, Mrs. C. C.....Douglas
Johnson, Mrs. E. B.....144 Brady, Allegan
Kromer, Mrs. Robert.....Wayland
Mahan, Mrs. James.....402 Trowbridge, Allegan
Miller, Mrs. Kenneth.....Rt. No. 2, Fennville
Mitchell, Mrs. A. B.....River View Park, Allegan
Ramseyer, Mrs. Gladwin E.....421 Marrell St., Plainwell
Rickert, Mrs. Ruth.....219 River St., Allegan
Schneiter, Mrs. Harry E.....Allegan
Vander Kolk, Mrs. Bert.....Hopkins

BAY COUNTY

Alcorn, Mrs. Kent.....2211 McKinley Street, Bay City
Alcorn, Mrs. Marshall.....210 Pendleton, Bay City
Allen, Mrs. A. D.....Three Mile Rd., RFD, Bay City
Andrews, Mrs. F. T.....1414 McKinley, Bay City
Asline, Mrs. J. N. .....406 Pine, Essexville
Baird, Mrs. Fred.....30 Hendrick Dr., Lagoon Beach, Bay City
Baird, Mrs. Thomas.....235 Washington, Bay City
Bowman, Mrs. David A.....1917 Fifth St., Bay City
Bristow, Mrs. John.....Bay City
Brown, Mrs. G. M.....2257 Carroll Rd., Bay City
Campbell, Mrs. John.....1838 McKinley, Bay City
Chapin, Mrs. F. J.....2121 Center St., Bay City
Connelly, Mrs. C. J.....1004 Borton Avenue, Essexville
Cosens, Mrs. Stanley A.....701 Webb, Bay City
Cook, Mrs. Hugh.....1540 Park, Bay City
Criswell. Mrs. R. H.....1412 Center Avenue, Bay City
Crissey, Mrs. Robert H.....2144 Fifth St., Bay City
DeWaele. Mrs. Paul.....1106 N. Johnson St., Bay City
Drummond, Mrs. Fred.....Kawkawlin
Dumond. Mrs. V. H.....1700 Fifth, Bay City
Ellison, Mrs. Alfred.....2010 Second St., Bay City
Foster, Mrs. L. F.....1801 McKinley Avenue, Bay City
Freel, Mrs. J. A.....2202 Eleventh St., Bay City
Gale, Mrs. H. M.....517 N. Van Buren, Bay City
Gamble, Mrs. W. G.....2010 Fifth Avenue, Bay City
Gehman. Mrs. Robert.....Omer
Hagelshaw, Mrs. G. L.....1203 Fifth St., Bay City
Heuser, Mrs. Harold.....2021 Sixth Street, Bay City
Horowitz. Mrs. S. F.....2136 Fifth St., Bay City
Howland, Mrs. Walter.....Pinconning
Huckins, Mrs. E. S.....436 Cass Avenue, Bay City
Huckins, Mrs. Roger,.....404 Trumbull St., Bay City
Jacoby, Mrs. A. H.....2202 Ninth, Bay City
Jens, Mrs. Otto.....1106 Prairie, Essexville
Johnson, Mrs. O. J.....105 Parkwood, Bay City
Jones, Mrs. Culver.....1024 Rosemary Lane, Essexville
Knobloch, Mrs. H. T.....1911 Center, Bay City
Kulinski, Mrs. Eugene.....207 Huron, Bay City
Langin, Mrs. John.....2116 Seventh St., Bay City
MacRae, Mrs. L. D.....813 N. Sherman St., Bay City
McDonnell, Mrs. W. R.....Box 600, Pinconning
McEwan, Mrs. J. H.....2310 Nurmi Drive, Bay City
McGee, Mrs. Harry.....204 N. Mountain, Bay City
McLurg, Mrs. John.....1900 Center, Bay City
Medvezky, Mrs. M. J.....314 Hill St., Bay City
Miller, Mrs. Edwin C.....614 Nurmi Ct., Bay City
Moore, Mrs. G. W.....200 N. Barclay, Bay City
Moore, Mrs. N. R.....2141 Fifth St., Bay City
Mosier, Mrs. D. J.....307 W. Midland, Bay City
Pearson, Mrs. S. M.....501 W. Jenny St., Bay City
Pelczar, Mrs. Walter.....321 N. Johnson, Bay City
Perkins, Mrs. R. C.....2118 Fifth Ave., Bay City
Reddick, Mrs. Charles .....2015 Seventh St., Bay City
Reuter, Mrs. C. W.....5561 Gaertner Ct., Bay City
Ruggles, Mrs. F. E.....605 N. Lincoln St., Bay City
Shafer, Mrs. Harold C.....324 Green St., Bay City
Slattery, Mrs. M. R.....2215 McKinley, Bay City
Staley, Mrs. Hugh.....Omer
Stinson, Mrs. Walter.....4216 Ann Court, Bay City
Swantek, Mrs. Chas.....240 Washington, Bay City
Switzer, Mrs. L. W.....2150 Second St., Bay City
Tarter, Mrs. C. S.....1712 Center Ave., Bay City
Taylor, Mrs. Robert.....4656 Richardson Dr., Bay City
Teheri, Z. E.....520 Webb Dr., Bay City
Tompkins, Mrs. Dana.....Pinconning
Urmston, Mrs. P. R.....1862 McKinley St., Bay City
Wilcox, Mrs. J. W.....210 Gates, Bay City
Wilson, Mrs. T. G.....414 N. Farragut St., Bay City
Wittwer, Mrs. E. A.....104 N. Erie St., Bay City
Woodburne, Mrs. H. L.....1107 Borton, Essexville
Wright, Mrs. Thomas.....531 Handy Dr., Bay City
Zaremba, Mrs. A. J.....108 S. Madison St. Bay City
Ziliak, Mrs. A. L.....3393 Kiesel Road, Bay City

BERRIEN COUNTY

Bailey, Mrs. John.....2150 Samuel, Benton Harbor
Beal, Mrs. Gerald.....114 Hawthorne, St. Joseph
Bliesmer, Mrs. August.....2108 Morton Ave., St. Joseph
Bronfenbrenner, Mrs. J.....2218 Harriet, St. Joseph
Bush, Mrs. Chas. W.....1728 Broadway, Niles
Butler, Mrs. William J.....2216 Lakeview, St. Joseph
Cawthorne, Mrs. H. J.....192 Robbins, Benton Harbor
Chickering, Mrs. W. Alan.....205 E. Delaware, Benton Harbor
Conybeare, Mrs. R. C.....234 Orchard Lane, Benton Harbor
Cooper, Mrs. W. L.....901 Wisconsin, St. Joseph
Cowdery, Mrs. K. H.....1620 Niles Ave., St. Joseph
Crowell, Mrs. Richard C...1920 Sunset Court, St. Joseph
Elliott, Mrs. J. C.....111 Chippewa, Buchanan
Emery, Mrs. Clayton S.....1329 Lake Blvd., St. Joseph
Emery, Mrs. William.....2932 Lakeview, St. Joseph
Faber, Mrs. Michael.....176 W. Napier, Benton Harbor
Fattic, Mrs. G. R. Jr.....806 S. 3rd St., Niles
Feeley, Mrs. Marshall....2930 Lake View Ave, St. Joseph
Galles, Mrs. James....1819 Heath Court, Benton Harbor
Garrett, Mrs. E. L.....M-40, R. No. 3, Niles

Hassan, Mrs. Kent.....606 Rynearson, Buchanan
Hayes, Mrs. T. P.....1614 Forres Ave., St. Joseph
Hershey, Mrs. N. J.....1648 Broadway, Niles
Howard, Mrs. Frank.....808 Columbus, Benton Harbor
Irgens, Mrs. E. R.....910 Kingsley, St. Joseph
Johnston, Mrs. W.....514 Sutherland, St. Joseph
Kelsall, Mrs. Harvey I.....900 Wolcott Ave., St. Joseph
Kennedy, Mrs. Francis....368 Vineyard, Benton Harbor
King, Mrs. B. B.....1290 Seneca, Benton Harbor
Klos, Mrs. Henry.....2121 Niles Ave., St. Joseph
Landgraf, Mrs. Robert L.....527 W. Main, Niles
Lindenfeld, Mrs. Fred H.....443 S. St. Joseph, Niles
Lininger, Mrs. Richard....1639 Shawnee Drive, Benton Harbor
Manning, Mrs. John.....1611 Forres Ave., St. Joseph
Moore, Mrs. Scott.....1649 Broadway, Niles
Padelford, Mrs. Wm. J.....2725 Thayer Drive, St. Joseph
Parker, Mrs. L. B.....614 N. Main, Berrien Springs
Porter, Mrs. Charles.....1589 Colfax, Benton Harbor
Pritchard, Mrs. H. M.....1603 Ferry, Niles
Rague, Mrs. Paul.....1287 Seneca, Benton Harbor
Ray, Mrs. Dean.....2019 Langley, St. Joseph
Reagan, Mrs. Robert.....232 Windsor, Benton Harbor
Rice, Mrs. Franklin, Jr.....324 N. 4th St., Niles
Richmond, Mrs. Dean....218 Sunnybank Road, St. Joseph
Ruth, Mrs. J. Griswold....507 E. Britian, Benton Harbor
Skinner, Mrs. James.....2716 Thayer, St. Joseph
Sowers, Mrs. B. F.....Higman Park, Benton Harbor
Strayer, Mrs. J. C.....103 Moccasin, Buchanan
Strayer, Mrs. John W.....553 Grant St., Niles
Strick, Mrs. M. H...1759 Commonwealth, Benton Harbor
Swingle, Mrs. Alvin J.....252 Elvern Dr., North Shore, Benton Harbor
Thorup, Mrs. D. W.....1160 Miami Rd., Benton Harbor
Vastine, Mrs. R. J.....430 W. Chicago, Buchanan
Westervelt, Mrs. Herbert O.....539 Pearl St., Benton Harbor
Winegar, Mrs. Alvin C.....797 Pipestone, Benton Harbor
Woodford, Mrs. Hackley E.....255 Oden, Benton Harbor

BRANCH COUNTY

Aldrich, Mrs. N. S.....162 Marshall St., Coldwater
Bailey, Mrs. J. E.....291 E. Chicago St., Coldwater
Beck, Mrs. P. C.....253 N. Walker, Bronson
Coates, Mrs. Carl.....R. R. No. 1, Quincy
Culver, Mrs. Bert W.....72 Division St., Coldwater
Culver, Mrs. D. T.....78 Division St., Coldwater
Fraser, Mrs. Robert J.....156 E. Chicago, Coldwater
Gist, Mrs. Lemuel I.....300 E. Chicago St., Coldwater
Gomley, Mrs. Henry G.....435 W. Chicago, Bronson
Harris, Mrs. D. M.....25 N. Fremont St., Coldwater
Heffelfinger, Mrs. J. C.....106 N. Hanchett St. Coldwater
Leitch, Mrs. Robert M.....Union City
Mitchell, Mrs. H. C.....State Home & Training School Coldwater
Mooi, Mrs. H. Roy.....120 Fairfield, Coldwater
Moss, Mrs. H. L.....86 W. Clarke Ave., Coldwater
Nettleman, Mrs. William....22 S. Jefferson St., Coldwater
Rennell, Mrs. E. J.....State Home & Training School Coldwater
Rick, Mrs. John.....63 N. Hudson St., Coldwater
Smith, Mrs. Robert.....Union City
Thomas, Mrs. J. A.....390 E. Chicago, Coldwater
Wade, Mrs. R. L.....144 E. Chicago, Coldwater
Walton, Mrs. N. J.....61 E. Chicago, Quincy
Weidner, Mrs. Harold.....16 S. Fremont, Coldwater

CALHOUN COUNTY

Albright, Mrs. A. A.....Evergreen Hills, Bellevue
Anderson, Mrs. Harold....1461 E. Michigan, Battle Creek
Amos, Mrs. N. H.....191 Waubascon Rd, Battle Creek
Barden, Mrs. Stewart.....Rt. 6, Box 912, Battle Creek
Baribeau, Mrs. Roy.....1003 Capital Ave. S. W. Battle Creek
Becker, Mrs. H. F.....Rt. No. 3, Box 303A, Battle Creek
Berghorst, Mrs. John.....89 S. La Vista, Battle Creek
Beuker, Mrs. Herman.....501 N. Kalamazoo, Marshall
Bodine, Mrs. Harold.....634 Country Club Dr., Battle Creek
Bonifer, Mrs. Philip.....93 Clinton Drive, Battle Creek
Brainard, Mrs. Clifford.....612 Jennings Landing Battle Creek
Brown, Mrs. Robert W.....106 Circle Drive, Battle Creek
Byland, Mrs. N. O.....107 Greenwood, Battle Creek
Campbell, Mrs. Jack....203 Highland Ave., Battle Creek
Campbell, Mrs. R. J.....209 Emmet St., Battle Creek
Capron, Mrs. M. J.....102 Ann Ave., Battle Creek
Chandler, Mrs. Edward.....55 N. Broad, Battle Creek
Chynoweth, Mrs. W. R.....88 Ann Ave., Battle Creek
Colquhoun, Mrs. Graham F.....6 Country Club Dr., Battle Creek
Diamante, Mrs. Paul.....26 Maryland Dr., Battle Creek
Finch, Mrs. D. L.....72 Jennings Rd., Battle Creek
Fraser, Mrs. Robt. H.....198 Fremont St., Battle Creek
Graubner, Mrs. F. L.....707 N. Linden, Marshall
Hansen, Mrs. Harvey C.....Country Club Blvd. Battle Creek
Heald, Mrs. C. W.....67 Oaklawn, Battle Creek
Herman, Mrs. L...Veteran's Administration, Battle Creek
Hibbs, Mrs. Don.....117 Sunnyside, Battle Creek
Hills, Mrs. C. R.....210 Chestnut St., Battle Creek
Holtom, Mrs. B. G.....78 Merwood Dr., Battle Creek
Hubly, Mrs. James.....203 Fremont St., Battle Creek
Humphrey, Mrs. Arthur.....Country Club Dr., Battle Creek
Jeffrey, Mrs. J. R.....62 Ann Ave., Battle Creek
Jones, Mrs. E. F.....Ft. Custer, Battle Creek
Jones, Mrs. T. K.....513 W. Michigan, Marshall
Keagle, Mrs. L. R.....41 Garrison, Battle Creek
Kelleher, Mrs. Geo. T.....65 Sherman Rd., Battle Creek
Kimball, Mrs. Arthur S.....196 Capital Ave., N. E. Battle Creek
Kinde, Mrs. M. R.....48 Merwood Dr., Battle Creek
Kingsley, Mrs. A. F.....33 Byrand, Battle Creek
Kingsley, Mrs. Paul.....29 Merwood Dr., Battle Creek
Kolvoord, Mrs. Theodore....47 Minges Rd., Battle Creek
LaFrance, Mrs. N. F..... Veterans Administration Battle Creek
Lam, Mrs. Francis L.....Sunnyside Drive, Battle Creek
Lancaster, Mrs. Vance B.....119 Ridgeway Dr., Battle Creek
Leitch, Mrs. Robert.....Union City
Levy, Mrs. Joseph Jr.....343 Orchard Ave., Battle Creek
Lowe, Mrs. K. H.....R. No. 1, Box 381, Augusta
Lowe, Mrs. Stanley.....12 Hiawatha Dr., Battle Creek
Marino, Mrs. S. G.....Veterans Administration Battle Creek
Martin, Mrs. W. F.....608 The Inn, Battle Creek
McCuaig, Mrs. Alfred.....145 Pleasantview Dr., Battle Creek
Meister, Mrs. Franklin O.....315 Orchard Ave., Battle Creek
Melges, Mrs. Fred J.....314 N. Orchard St., Battle Creek
Morrison, Mrs. D. B.....199 Chestnut, Battle Creek
Mullenmeister, Mrs. Hugh F.....99 Fremont, Battle Creek
Olsen, Mrs. A. L...Veterans Administration, Battle Creek
Parkinson, Mrs. C. E.....1485 North Ave., Battle Creek
Patrick, Mrs. Gilbert T...16 Hiawatha Hts., Battle Creek
Pearson, D. J.....32 Hiawatha Hts., Battle Creek
Powers, Mrs. John.....206 Orchard Ave., Battle Creek
Robbert, Mrs. John.....164 Francis Drive, Battle Creek
Robins, Mrs. Hugh.....237 Fremont, Battle Creek

Rosenfeld, Mrs. Jos.....70 Elizabeth St., Battle Creek
Royer, Mrs. Clark.....Sunnyside Drive, Battle Creek
Sandy, Mrs. W. A...Veterans Administration, Fort Custer
Schwarz, Mrs. Frank.....31 Orchard, Battle Creek
Shellenberger, Mrs. H. M.....131 W. Hanover, Marshall
Sharp, Mrs. W. T.....Veterans Administration, Battle Creek
Shipp, Mrs. Leland P.....611 Jennings Landing, Battle Creek
Simpson, Mrs. Robert S.....135 Shadywood Lane Battle Creek
Slagle, Mrs. Geo. W.....1702 Capitol, S. W. Battle Creek
Smith, Mrs. J. S.....Ft. Custer, Battle Creek
Stadle, Mrs. W. H.....607 Jennings Landing, Battle Creek
Stifel, Mrs. R. A...260 Wahwahtaysee Way, Battle Creek
Tazelaar, Mrs. Myron A.....219 N. Madison, Marshall
Verity, Mrs. L. E.....64 St. Joseph Lane, Battle Creek
Walters, Mrs. J. F.....63 East Ave. N., Battle Creek
Way, Mrs. Kenneth.....315 N. Madison, Marshall
Wemmer, Mrs. Keith S.....94 Barney, Battle Creek
Wencke, Mrs. Carl G.....127 Park Place, Country Club Hills, Battle Creek
Winslow, Mrs. Sherwood.....Hiawatha Dr, Battle Creek
Worgess, Mrs. Duane.....45 W. Territorial Rd. Battle Creek
Yannitelli, Mrs. S. A.....132 W. Hamilton Lane Battle Creek
Zindler, Mrs. George.....RFD No. 2, Lacy Rd., Battle Creek

CASS COUNTY

Clary, Mrs. R. I.....403 Main St., Dowagiac
Hickman, Mrs. John K.....514 Green St., Dowagiac
Zwergal, Mrs. E. H.....122 S. Fulton St., Cassopolis

CHIPPEWA - MACKINAC - LUCE COUNTIES

Allott, Mrs. H. R.....607 Sheridan Dr., Sault Ste. Marie
Blain, Mrs. James G.....130 Park Place, Sault Ste. Marie
Blair, Mrs. H. M.....811 Summitt St., Sault Ste. Marie
Clausen, Mrs. C. H.....300 Court St., Sault Ste. Marie
Cowan, Mrs. D. A.....Riverside Dr., Sault Ste. Marie
Finlayson, Mrs. Donald D.....903 Prospect St. Sault Ste. Marie
Gibson, Mrs. R. E.....Newberry
Goddard, Mrs. G. B.....Pickford
Hague, Mrs. Howard.....St. Ignace
Hamel, Mrs. H.....1012 Medora St., St. Ignace
Howe, Mrs. D. C.....1139 E. Portage Ave., Sault Ste. Marie
Koptik, Mrs. George.....Camp Lucas, Sault Ste Marie
Mackie, Mrs. T. B.....Mission Rd., Sault Ste. Marie
Montgomery, Mrs. B. T.....U. S. No. 2, Sault Ste. Marie
Porter, Mrs. Bruce.....1514 Ashmun, Sault Ste. Marie
Purmort, Mrs. Wm. Jr.....Newberry
Rhind, Mrs. Earl, 604 Johnstone.....Sault Ste. Marie
Scott, Mrs. D. F.....506 Ravine St. Sault Ste. Marie
Taylor, Mrs. Robert.....Sault Ste. Marie
Thompson, Mrs. T. W.....Newberry
Trapasso, Mrs. T. J.....208 Mission Rd., Sault Ste. Marie
Yale, Mrs. I. V.....408 Carrie, Sault Ste. Marie

CLINTON COUNTY

Cook, Mrs. Bruno.....Westphalia
Elliott, Mrs. B. R.....Ovid
Fillinger, Mrs. W. B.....Ovid
Geib, Mrs. O. P.....Carson City
Grost, Mrs. James.....303 E. Walker, St. Johns
Henthorn, Mrs. A. C.....R. R. 3, St. Johns
Kirker, Mrs. L. G.....Fowler
McWilliams, Mrs. Wm. P.....210 S. Maple, Maple Rapids
Russell, Mrs. Sherwood.....104 N. Oakland, St. Johns
Sheline, Mrs. V. L.....Ashley
Stephenson, Mrs. W. F.....St. Johns
Stoller, Mrs. P. F. .....St. Johns

DELTA - SCHOOLCRAFT COUNTIES

Anderson, Mrs. Francis.....1012 S. 11th St., Escanaba
Boyce, Mrs. D. H.....1401 First Ave. So., Escanaba
Defnet, Mrs. H. G.....250 Lake Shore, Escanaba
Dehlin, Mrs. J. R.....1225 Minnesota Ave., Gladstone
Fyvie, Mrs. Jas. H.....Range Street, Manistique
Groos, Mrs. Harold.....421 Ogden, Escanaba
Groos, Mrs. Louis.....1015 S. 1st Ave., Escanaba
Harrison, Mrs. William.....403 S. 7th Ave, Escanaba
Jensen, Mrs. Carrol.....Manistique
LeMire, Mrs. D. F.....1813 Lakeshore Dr., Escanaba
LeMire, Mrs. W. A. Jr.....318 Lakeshore, Escanaba
Lindquist, Mrs. N. L.....1815 Lakeshore Dr., Escanaba
McInerney, Mrs. T. A.....1029 S. 13th St., Escanaba
Olson, Mrs. Carl.....623 Michigan Ave., Gladstone
Ryde, Mrs. R. E.....815 Lake Shore, Escanaba
Walch, Mrs. John J.....800 Lake Shore Dr., Escanaba
Wehner, Mrs. Merle D.....540 Cherry, Manistique

DICKINSON - IRON COUNTIES

Addison, Mrs. E. R.....601 State St., Crystal Falls
Alexander, Mrs. Wm. H.....411 East "C" Street Iron Mountain
Anderson, Mrs. D. T.....408 Hamilton, Kingsford
Boyce, Mrs. George H.....408 East "D" St. Iron Mountain
Carlson, Mrs. Ralph E.....615 E "C" St., Iron Mountain
Carpenter, Mrs. Gilbert V.....403 E. Ludington, Iron Mountain
Cooper, Mrs. C. A.....407 Third, Stambaugh
Crowell, Mrs. J. A.....403 E. Ludington, Iron Mountain
Gladstone, Mrs. William.....626 Saginaw, Norway
Huron, Mrs. W. H.....215 W. "E" St., Iron Mountain
Irvine, Mrs. L. E.....308 Sixth, Iron River
McEachran, Mrs. H. D.....401 East "C" St., Iron Mountain
Palm, Mrs. E. T.....609 Marquette, Crystal Falls
Retallack, Mrs. R. C.....621 W. Genesee, Iron River
Schmutzler, Mrs. W. A.....373 Woodward, Kingsford
Schroeder, Mrs. J. M...1111 Stockbridge, Iron Mountain
Smith, Mrs. D. R.....817 W. Brown, Iron Mountain
Steinke, Mrs. Charles.....600 Hamilton, Iron Mountain

EATON COUNTY

Arner, Mrs. Fred L.....Bellevue
Brown, Mrs. B. Phillip.....339 S. Cochran, Charlotte
Carothers, Mrs. Daniel F.....243 S. Sheldon, Charlotte
Cook, Mrs. J. Maxwell.....404 W. Harris, Charlotte
DeLand, Mrs. C. L.....Bellevue
Engle, Mrs. Paul.....Olivet
Hannah, Mrs. Harry W.....Clinton Trail, Charlotte
Landick, Mrs. Robert.....138 S. Bostwick, Charlotte
Meinke, Mrs. A. H. Jr.....Eaton Rapids
Moyer, Mrs. H. A.....Charlotte
Myers, Mrs. A. W.....Potterville
Sevener, Mrs. Lester G.....608 W. Stoddard, Charlotte
Van Ark, Mrs. Bert.....Eaton Rapids
Van Ark, Mrs. Herman.....Eaton Rapids
Willits, Mrs. C. O.....127 Upland, Charlotte

GENESEE COUNTY

Adams, Mrs. Burnell.....609 S. Lynch, Flint
Adams, Mrs. Chester.....610 E. Grand Blanc Rd., Grand Blanc
Anderson, Mrs. Harley....11820 N. Saginaw, Mt. Morris
Andrews, Mrs. N. A. C.....310 E. Main St., Flushing
Anthony, Mrs. George.....912 Beard, Flint
Backus, Mrs. Glenn.....3131 Westwood Parkway, Flint
Baird, Mrs. C.....1818 Ramsey Blvd., Flint
Barbour, Mrs. Fleming.....2015 Lincoln Dr., Flint
Baske, Mrs. Franklin.....923 Maxine, Flint
Bateman, Mrs. L. G.....1708 E. Second, Flint
Benson, Mrs. John Jr.....1410 E. Court, Flint
Bernstein, Mrs. Eli.....3211 Westwood Pkwy., Flint
Beyer, Mrs. George.....3329 Elmwood, Clio
Bird, Mrs. W. G.....133 Odette, Flint
Bishop, Mrs. D. L.....1024 Woodside Dr., Flint
Bogart, Mrs. Leon.....1125 South Drive, Flint
Boles, Mrs. William.....1407 Woodcroft, Flint
Bonathan, Mrs. A. T.....3002 Parkside Dr., Flint
Botsdorf, Mrs. John.....10114 Hegel, Goodrich
Branch, Mrs. Hira.....1014 Woodside, Flint
Brasie, Mrs. Donald.....310 Josephine, Flint
Bruce, Mrs. William.....5397 Miller Rd., Swartz Creek
Bryant, Mrs. Donald.....405 W. Witherbee, Flint
Buchanan, Mrs. William.....902 S. Leroy, Fenton
Burkett, Mrs. L. V.....618 Dougherty Place, Flint
Chambers, Mrs. Myrton....3402 Westwood Prkwy., Flint
Charters, Mrs. John.....311 E. 4th, Flint
Chase, Mrs. William.....1318 N. Ballenger Rd., Flint
Clark, Mrs. Robert.....2602 Thomas, Flint
Collins, Mrs. James.....902 Stockdale, Flint
Colwell, Mrs. Clifford W.....2011 Briar Hill, Flint
Connell, Mrs. J. T.....Coldwater Road, R. F. D. No. 1 Flint
Conover, Mrs. George.....G-1152 N Dye Rd., Flint
Conover, Mrs. McClellan.....724 East, Flint
Conover, Mrs. Sidney.....G-4349 Fenton Rd., Flint
Cook, Mrs. Henry.....1825 Chelsea Circle, Flint
Credille, Mrs. Barney.....2020 E. Second, Flint
Currey, Mrs. G.....3021 Westwood Prkwy., Flint
Curtin, Mrs. John.....915 E. Court St., Flint
Cutler, Mrs. Campbell.....1502 Lavender, Flint
Davis, Mrs. Robert C.....407 Fremont, Flint
Del-Zingro, Mrs. Nicholas.....Davison
Dickstein, Mrs. Bernard.....1110 W. Hamilton, Flint
Dimond, Mrs. E. G.....G-5046 McCandlish Rd., Grand Blanc
Dodds, Mrs. Fred....1291 Kearsley Park Blvd., Flint
Dodds, Mrs. Max.....708 Fremont, Flint
Dorsey, Mrs. Philip.....6492 Flushing Rd., Flushing
Drewyer, Mrs. Glen....5237 W. Reid Rd., Swartz Creek
Eichhorn, Mrs. Ernest.....1301 Riverdale Rd., Flint
Eickhorst, Mrs. Thomas.....951 Welch Blvd., Flint
Elliott, Mrs. H. B.....2380 Nolen Dr., Flint
Ettinger, Mrs. Ralph.....409 South East, Fenton
Farhat, Mrs. Maynard.....1901 Hampden Rd., Flint
Fee, Mrs. Manson.....1002 Maxine, Flint
Finkelstein, Mrs. T.....1633 Seminole St., Flint
Flynn, Mrs. Southard.....2354 Nolen Dr., Flint
Gellenger, Mrs. Stephen.....2125 Detroit, Flint
Gleason, Mrs. N. A.....1309 Blanchard, Flint
Golden, Mrs. H. M.....1511 Woodcroft, Flint
Gorne, Mrs. S. S.....1009 Woodside Dr., Flint
Grady, Mrs. Donald.....1515 Woodslea, Flint
Griffin, Mrs. Ernest, Jr.....1713 Welch Blvd., Flint
Grover, Mrs. H. F.....3509 Norwood Dr., Flint
Guile, Mrs. Gurdon.....1621 Dupont, Flint
Gundry, Mrs. George....11736 S. Saginaw, Grand Blanc
Gutow, Mrs. I. H.....3020 Westwood Parkway, Flint
Gutow, Mrs. J. J.....3759 Sunset Drive, Flint
Hackley, Mrs. Richard.....422 Grace St., Flint
Hague, Mrs. Robert.....8231 River Rd., Flushing
Hamilton, Mrs. A. J.....14292 Dart's Landing, Fenton
Harper, Mrs. A. W.....712 Thomson St., Flint
Harper, Mrs. Homer.....713 Thomson St., Flint
Hauser, Mrs. Fred.....1027 Manning Court, Flint
Hennesey, Mrs. Charles.....3515 Sherwood, Flint
Hiscock, Mrs. Harold.....2021 Briar Hill, Flint
Hooper, Mrs. Kendall.....348 Bradley, Flint
Hubbard, Mrs. Wm.....1205 Maxine, Flint
Hufton, Mrs. W. L.....2546 Nolen Dr., Flint
Hurd, Mrs. Clayton.....300 Robert St., Fenton
Jaarsma, Mrs. Raymond.....928 Woodside Dr., Flint
Jermstad, Mrs. Robert.....623 Third Ave., Flint
Johnson, Mrs. Frank.....235 Hamilton, W., Flint
Johnson, Mrs. Raymond.....5173 W. Reid Rd., Swartz Creek
Judd, Mrs. Alvin.....1184 Kra 'Nur Dr., Davison
Kaufman, Mrs. L. D.....1617 Neome Dr., Flint
Knapp, Mrs. Don.....712 Mann Ave., Flint
Knapp, Mrs. Wm.....921 E. Ninth St., Flint
Kretchmar, Mrs. Arthur.....1135 Dye Road, Flint
Kurtz, Mrs. John J.....G-2391 Reid Rd., Flint
Lewis, Mrs. Thomas.....4047 Mitchell Dr., Flint
Limbach, Mrs. David.....308 W. Shiawassee, Fenton
Livesay, Mrs. Jackson.....702 Blanchard St., Flint
Lukens, Mrs. John.....1317 W. Genesee, Flint
Lyttle, Mrs. Sydney.....2442 Thomas St., Flint
MacGregor, Mrs. Delbert....722 W. Hamilton Ave., Flint
Macksood, Mrs. Joseph.....3340 Parkside Dr., Flint
Marsh, Mrs. Elizabeth.....312 Buckingham, Flint
Marshall, Mrs. Sophia....P.O. Box 885, Olympia, Wash.
McLeod, Mrs. Kenneth.....1001 Welch Blvd, Flint
McTaggart, Mrs. David.....2401 Windemere, Flint
Michael, Mrs. Robert....409 N. McKinley Rd., Flushing
Michael, Mrs. Sidney.....922 Welch Blvd, Flint
Miltich, Mrs. Anthony.....2222 Colfax, Flint
Miner, Mrs. F. B.....1000 E. Seventh St., Flint
Moore, Mrs. Kenneth.....2717 Circle Drive, Flint
Morrison, Mrs. William....205 Perry Road, Grand Blanc
Morrissey, Mrs. Vaughn.....101 Stockdale, Flint
Morton, Mrs. Joseph.....1648 Euclid, Flint
Mosier, Mrs. Edward.....1730 Overhill Dr., Flint
Murphy, Mrs. Grant.....1201 Kensington, Flint
Neiswander, Mrs. Paul.....2552 Thomas, Flint
Odle, Mrs. I. D.....201 Welch, Flint
Orr, Mrs. Walter.....13396 Enid Blvd., Fenton
Osher, Mrs. Seymour.....915 E. Court, Flint
Pfeifer, Mrs. A. C.....12,205 N. Saginaw Rd., Mt. Morris
Phelps, Mrs. Lynn.....c-o Goodrich Hospital, Goodrich
Phillips, Mrs. Robert.....2613 Thomas, Flint
Pickering, Mrs. Woodrow.....1602 N. Ballenger, Flint
Preston, Mrs. Otto.....1315 Maxine, Flint
Purcell, Mrs. Francis.....State St., Goodrich
Rapport, Mrs. Richard.....2306 Miller Rd., Flint
Rawling, Mrs. John.....2561 Tyrone, Flint
Rawlings, Mrs. J. Mott.....1601 Neome Dr., Flint
Richeson, Mrs. V. N.....702 W. Hamilton, Flint

Rieth, Mrs. George F.....G-6452 Davison Rd., Flint
Rowe, Mrs. John.....1601 Lyon, Flint
Rulney, Mrs. Max.....323 Ferndale Pl., Flint
Rundles, Mrs. Walter.....G-6573 Flushing Rd., Flushing
Rundles, Mrs. W. Z. Jr.....607 Rome Court, Flint
Sandberg, Mrs. Russell.....230 W. Genesee St., Flint
Sandy, Mrs. Kenneth.....2701 Detroit, Flint
Scavarda, Mrs. Charles.....2101 E. Court, Flint
Schiff, Mrs. Benton.....340 Parkside Dr., Flint
Schultz, Mrs. J. S.....3327 Fleming Rd., Flint
Schwartz, Mrs. John.....2920 Dupont St., Flint
Shantz, Mrs. Layton.....2026 Calumet, Flint
Sheeran, Mrs. Dan.....610 S. Vernon, Flint
Shipman, Mrs. Charles.....25 E. First St., Flint
Simoni, Mrs. Lewis.....4001 Circle Dr., Flint
Sirna, Mrs. Anthony.....2709 Thomas, Flint
Smith, Mrs. D. C.....811 Thompson, Flint
Smith, Mrs. E. C.....565 Welch, Flint
Smith, Mrs. Harold.....1952 Miller Rd., Flint
Smith, Mrs. M. J.....422 Odette, Flint
Sniderman, Mrs. Ben.....3738 Norwood, Flint
Sorkin, Mrs. Sam.....1919 Miller Rd., Flint
Sparks, Mrs. Harvey.....2749 Thomas, Flint
Steffe, Mrs. Ralph.....1617 Brookwood, Flint
Steinman, Mrs. Floyd.....2418 Nolen Drive, Flint
Stevens, Mrs. Philip K.....468 Commonwealth, Flint
Stevenson, Mrs. Wm.....1901 Ramsay, Flint
Stroup, Mrs. Clayton.....G-5208 E. Court, Flint
Thompson, Mrs. Alvin.....1607 Cromwell, Flint
Thompson, Mrs. Jack.....3031 Westwood Prkwy., Flint
Tuuri, Mrs. Arthur.....1707 Greenway, Flint
Van Harn, Mrs. Ray.....3102 Westwood Prkwy, Flint
Varney, Mrs. Howard.....2564 Thomas St., Flint
Vary, Mrs. Edwin.....2472 Nolen Dr., Flint
Ware, Mrs. Frank.....902 Woodside Dr., Flint
Wark, Mrs. D. R.....1315 Detroit, Flint
Wentworth, Mrs. John.....1651 Chevrolet Ave., Flint
White, Mrs. Herbert.....1620 Mason, Flint
Williams, Mrs. W. S...5216 S. Genesee Rd., Grand Blanc
Willoughby, Mrs. Gordon.....5013 N. Saginaw, Flint
Willoughby, Mrs. L. L.....1017 Woodlawn Parkway, Flint
Wills, Mrs. T. W.....608 Welch Blvd., Flint
Winchester, Mrs. Walter.....801 E. 9th St., Flint
Woughter, Mrs. Harold.....2123 Radcliff, Flint
Wright, Mrs. Don R.....403 W. Court St., Flint
Wyatt, Mrs. William.....1317 Riverdale Rd., Flint

GOGEBIC COUNTY

Albert, Mrs. S. G.....221 E. Coolidge, Ironwood
Davidson, Mrs. Donald L.....Ramsey
Eisele, Mrs. D. C.....120 W. Francis, Ironwood
Franck, Mrs. J. R.....525 Harrison, Wakefield
Gorilla, Mrs. A. C.....516 N. Lawrence, Ironwood
Gingrich, Mrs. W. A.....Lake Road, Ironwood
Harrington, Mrs. R. R.....104 E. Ridge, Ironwood
Keskey, Mrs. T. J.....205 W. Coolidge, Ironwood
McEnroe, Mrs. Jack.....Newport Heights, Ironwood
O'Brien, Mrs. A. J.....419 E. Vaughn, Ironwood
Pinkerton, Mrs. H. A.....9 Newport Heights, Ironwood
Santini, Mrs. F. J.....615 N. Lowell, Ironwood
Stevens, Mrs. C. E.....414 N. Lowell, Ironwood
Tashiro, Mrs. Kiyo.....Grand View Hosp., Ironwood
Tressel, Mrs. H. A.....Bessemer
Wacek, Mrs. Wm. H.....809 Sunset Rd., Ironwood

GRAND TRAVERSE - LEELANAU - BENZIE COUNTIES

Beall, Mrs. J. G.....P. O. Box 283, Traverse City
Bolan, Mrs. E. J.....Sutton's Bay
Brownson, Mrs. J. J.....Kingsley
Brownson, Mrs. K. M.....Peninsula Dr., Traverse City
Bushong, Mrs. B. B...318 Wellington Ave., Traverse City
Carrow, Mrs. Fleming....Park Place Hotel, Traverse City
Clarke, Mrs. Charles D.....Peninsula Drive — Box 36 Traverse City
Dunn, Mrs. S.....Box C, Traverse City
Ellis, Mrs. Claude.....Sutton's Bay
Ferguson, Mrs. J.....Box C, Traverse City
Gallagher, Mrs. Wm.....Box C, Traverse City
Haberlein, Mrs. Charles.....701 Monroe, Traverse City
Hall, Mrs. James.....Peninsula Dr., Traverse City
Hamilton, Mrs. E. E.....Ahgosa, Traverse City
Huene, Mrs. Nevin.....508 State St., Traverse City
Jerome, Mrs. J. T.....609 6th St., Traverse City
Kyselka, Mrs. Harry.....E. Long Lake, Traverse City
Lemen, Mrs. C. E.....521 Washington Ave., Traverse City
Lawton, Mrs. F. P.....540 West 7th Street, Traverse City
Lossman, Mrs. Robert.....Deepwater Point, R. F. D. Traverse City
Miller, Mrs. C. S.....State Hospital, Box C Traverse City
Milliken, Mrs. John.....Peninsula Dr., Traverse City
Merritt, Mrs. Harry E.....727 S. Union, Traverse City
Nickels, Mrs. M. M.....Box C, Traverse City
Noyes, Mrs. Guy.....Traverse City
Osterhagen, Mrs. Harold.....West Bay Shore Road, Traverse City
Osterlin, Mrs. Mark.....Peninsula Drive, Traverse City
Pike, Mrs. D. G.....E. Bay Shore Drive, Traverse City
Power, Mrs. Frank.....521 Sixth St., Traverse City
Salon, Mrs. D.....216 S. Elmwood Ave., Traverse City
Sladek, Mrs. E. F.....224 Seventh Street, Traverse City
Stokes, Mrs. George.....425 Sixth St., Traverse City
Sweeney, Mrs. Bernard....Grandview Pky., Traverse City
Thirlby, Mrs. E. L.....520 Sixth Street, Traverse City
Thirlby, Mrs. Richard....1315 Wayne St., Traverse City
Weitz, Mrs. Harry.....529 Monroe St., Traverse City
Wieh, Mrs. J. E.....U. S. 31 North, Traverse City
Wilcox, Mrs. Paul H.....526 W. 10th St., Traverse City
Zielke, Mrs. I. H.....515 N. Elmwood Ave, Traverse City
Zimmerman, Mrs. J. G...606 N. Elmwood, Traverse City

GRATIOT - ISABELLA - CLARE COUNTIES

Barstow, Mrs. William.....318 W. Center, St. Louis
Bergin, Mrs. J. H.....604 Woodworth, Alma
Chamberlain, Mrs. Ray.....Chamberlain Clinic, Mt. Pleasant
Hammerburg, Mrs. Kuno.....622 McEwan, Clare
Hedges, Mrs. F. W.....Edmore
Hoogerland, Mrs. C. L.....514 Iowa St., Alma
Rottschaffer, Mrs. John.....715 W. Center, Alma
Wallman, Mrs. Harry.....901 N. State, Alma
Waggoner, Mrs. Richard.....313 E. Saginaw, St. Louis

HILLSDALE COUNTY

Hodge, Mrs. C. L.....415 Main St., Reading
Sawyer, Mrs. Walter W.....61 N. Howell St., Hillsdale
Trapp, Mrs. Donald G.....32 S. Broad St., Hillsdale

HOUGHTON - BARAGA - KEWEENAW COUNTIES

Aldrich, Mrs. A. B.....325 Harris Ave., Hancock
Aldrich, Mrs. A. D.....U. S. 41, Chassel
Aldrich, Mrs. L. C.....1609 E. Houghton, Houghton
Bourland, Mrs. P. D.....134½ Calumet Ave., Calumet
Brewington, Mrs. G. F.....Mohawk
Burke, Mrs. J. J.....10 Duncan Avenue, Hubbell
Hillmer, Mrs. R. E.....1 Algomah, Painesdale
Hosking, Mrs. Frederick.....328 Florida, Laurium
Janis, Mrs. A. F.....200 East St., Hancock
King, Mrs. S.....218 Harris Ave., Hancock
Kolb, Mrs. F. E.....128 Calumet St., Calumet
LaBine, Mrs. Alfred....1019 College Avenue, Houghton
Larson, Mrs. F.....1400 Houghton, Houghton
Lepisto, Mrs. Victor....515 Lake Linden Ave., Laurium
Levin, Mrs. Simon.....1209 College, Houghton
Manthei, Mrs. W. A.....5426 Calumet, Lake Linden
Murphy, Mrs. P. J.....130 Calumet, Calumet
Repolo, Mrs. K.....338 S. Iroquois, Laurium
Roche, Mrs. A. C.....242 Iroquois St., Calumet
Roche, Mrs. A. M.....204 Pewabic, Laurium
Rupprecht, Mrs. Lee.....117 Fifth St., Calumet
Schochet, Mrs. Sidney.....Hotel Scott, Hancock
Sloan, Mrs. P. S.....214 Clark St., Houghton
Smith, Mrs. Chas.....E. White St., Hancock
Stern, Mrs. I. D.....220 Hubbell, Houghton
Wickliffe, Mrs. Chas. D.....Calumet
Wickliffe, Mrs. T. P.....1167 Calumet Ave., Calumet
Winkler, Mrs. H. J.....L'Anse

HURON COUNTY

Bash, Mrs. Theodore.....Kinde
Dixon, Mrs. Ralph.....Pigeon
Elliott, Mrs. E. S.....Pigeon
Gettel, Mrs. Roy.....634 W. Huron Drive, Bad Axe
Herrington, Mrs. Willet.....120 N. Hanselman, Bad Axe
Oakes, Mrs. C. W.....831 Resort Rd., Harbor Beach
Ritsema, Mrs. John.....Sebewaing
Scheurer, Mrs. Clare.....Pigeon
Steinhardt, Mrs. Edward.....Elkton
Thompson, Mrs. J. E.....Caseville
Turner, Mrs. Phillip.....Harbor Beach
Wible, Mrs. C.....Sebewaing

INGHAM COUNTY

Alexander, Mrs. Reuben G. .....Laingsburg
Altland, Mrs. J. K.....West Mt. Hope Rd., Rt. 3 Lansing
Asselin, Mrs. David.....1001 Glenhaven, East Lansing
Badgley, Mrs. W. O.....1523 W. Ionia St., Lansing
Baker, Mrs. Thomas.....1524 Boston Blvd., Lansing
Bates, Mrs. R. D.....1820 E. Michigan Ave., Lansing
Bauer, Mrs. T. I.....839 Wildwood Dr., East Lansing
Bevez, Mrs. F. L.....1322 Cooper Ave., Lansing
Bingham, Mrs. B. Wayne....1317 W. Ottawa St., Lansing
Bowersox, Mrs. R. J.....627 Whitehills Dr., East Lansing
Breakey, Mrs. Robert.....520 Westmoreland, Lansing
Bradford, Mrs. C. W.....832 Westlawn St., East Lansing
Brown, Mrs. F. W. Jr.....706 Britten, Lansing
Brubaker, Mrs. Earl.....404 S. Jenison, Lansing
Brucker, Mrs. K. B.....610 S. Walnut, Lansing
Bruni, Mrs. John R.....301 W. Barnes St. Lansing
Burhans, Mrs. Robert.....973 Rosewood, East Lansing
Cairns, Mrs. Donald A.....300 S. Washington, Mason
Calomeni, Mrs. A. D.....1523 W. Michigan Avenue, Lansing
Cameron, Mrs. W. J.....920 N. Capitol, Lansing
Carr, Mrs. E. I.....1915 Moores River Drive, Lansing
Cheney, Mrs. W. D..... Route No. 2, Okemos
Christian, Mrs. L. G.....400 Everett Drive. Lansing
Clark, Mrs. W. E..... 809 Ash St., Mason
Clinton, Mrs. George R.....618 S. Jefferson, Mason
Combs, Mrs. Robert G.....427 Orchard, East Lansing
Comstock, Mrs. Howard C...512 Division, East Lansing
Cook, Mrs. R. J.....105 S. Jenison, Lansing
Cope, Mrs. H. E.....605 Wesermoreland, Lansing
Cordes, Mrs. Jerome F.....2290 Shawnee Trail, Okemos
Cowan, Mrs. John A.....825 Touraine, East Lansing
Cross, Mrs. F. S.....432 Highland, East Lansing
Cummings, Mrs. G. D.....511 Westmoreland Ave Lansing
Cushman, Mrs. J. F.....408 N. Sycamore, Lansing
Darling, Mrs. L. H.....431 S. Verlinden Ave., Lansing
Dawe, Mrs. C. Douglas.....1541 Ann St., East Lansing
Dean, Mrs. Carleton.....152 Maplewood Drive, East Lansing
DeVries, Mrs. C. F.....Delta River Road, Lansing
Doyle, Mrs. C. P.....215 N. Logan, Lansing
Drolett, Mrs. Don.....2408 Arlington Rd., Lansing
Drolett, Mrs. L. A.....228 S. Jenison, Lansing
Drolett, Mrs. F. C.....1623 Inverness, Lansing
Dunn, Mrs. F. M.....614 Whitehills Dr., East Lansing
Feeney, Mrs. K. J.....822 Durant, Lansing
Finch, Mrs. R. L.....2227 Pembroke, Lansing
Folkers, Mrs. Leonard.....991 Rosewood, East Lansing
Fortino, Mrs. S. P.....444 West Street, Lansing
Fosget, Mrs. Wilbur.....210 E. Hillsdale, Lansing
Freeland, Mrs. Orrin H.....602 N. Hogsback Rd., Mason
French, Mrs. H. L.....Delta River Rd., Lansing
Fryer, Mrs. Douglas L.....726 Touraine, East Lansing
Gardner, Mrs. C. B.....1815 Moores Diver Dr., Lansing
Goldner, Mrs. R. E.....744 Verlinden Ave., Lansing
Harris, Mrs. H. W.....2535 Clifton, Lansing
Harrison, Mrs. Wm. H.....1306 Hyland, Lansing
Harrold, Mrs. J. F.....1713 Osborn Rd., Lansing
Hart, Mrs. L. C.....119 W. Lenawee, Lansing
Hayes, Mrs. Robert E.....1020 Britten, Lansing
Hayford, Mrs. W. D.,..1006 Wildwood Dr., East Lansing
Hayter, Mrs. Robert.....2707 S. Washington, Lansing
Haze, Mrs. H. A.....Hotel Olds, Lansing
Heald, Mrs. Gordon....345 Whitehills Dr., East Lansing
Heckert, Mrs. F. B.....Delta River Rd., Lansing
Heckert, Mrs. J. K.....E. Grand River at Hagadorn East Lansing
Heerdt, Mrs. Mark.....2195 Kent, Okemos
Henderson, Mrs. Norman....220 W. Madison St., Lansing
Hermes, Mrs. E. J., 604 W. Willow Street, Lansing
Heustis, Mrs. A. E. 410 Cowley Avenue, East Lansing
Himmelberger, Mrs. R. J.....227 West, Lansing
Hodges, Mrs. Kenneth.....421 West St., Lansing
Hogg, Mrs. Raymond.....964 S. Cedar, Holt
Holland, Mrs. Charles F. ....166 Orchard, East Lansing
Holm, Mrs. M. L.....913 W. Allegan, Lansing
Holt, Mrs. Stephen.....4251 Glendale Ave, Detroit 38
Huggett, Mrs. C. C.....1531 Osborn Rd., Lansing
Hurth, Mrs. M. S.....1717Jerome, Lansing
Isbister, Mrs. J. L.....104 S. Jenison, Lansing
Jacob, Mrs. S. S.....1044 Wildwood Dr., East Lansing
Johnson, Mrs. David B.....1426 Sherwood, East Lansing
Johnson, Mrs. K. H.....1539 Spencer, Lansing
Johnson, Mrs. H. T.....817 N. Foster, Lansing
Jones, Mrs. Francis, Sr. 1025 Roxburgh Rd., E. Lansing
Jones, Mrs. F. A. Jr., 1025 Roxburgh Rd., E. Lansing
June, Mrs. R. C.....2902 Timber Dr., Lansing
Kahn, Mrs. David.....1519 Pershing Ave., Lansing
Kalmbach, Mrs. R. E.....1600 Wellington Rd., Lansing
Keim, Mrs. C. D.....1415 W. Kalamazoo St., Lansing
Kiefer, Mrs. Guy L.....834 Rosewood, East Lansing

Klunzinger, Mrs. Willard.....810 Roxburgh Road, East Lansing
Kraft, Mrs. Lester.....209 S. Main St., Leslie
Landy, Mrs. G. R.....1023 North Jenison, Lansing
Lange, Mrs. Philip F.....1510 Sunnyside, Lansing
LeDuc, Mrs. Don.....405 University Drive, East Lansing
Leshock, Mrs. J. C.....249 Milford, East Lansing
Le Vett, Mrs. H. L.....431 Kedzie Drive, East Lansing
Lewis, Mrs. Clayton.....1107 N. Capitol, Lansing
Loree, Mrs. Maurice.....1615 Abbott Rd., East Lansing
Lucas, Mrs. T. A.....2829 Creston, Lansing
Ludlum, Mrs. L. C.....1126 W. Saginaw, Lansing
Martin, Mrs. Wayne.....4765 Nakoma Dr., Okemos
McCorvie, Mrs. C. R.....12A Hillcrest Village, East Lansing
McCrumb, Mrs. R. R.....1216 Parkdale, Lansing
McElmurry, Mrs. L. R.....1610 W. Michigan Avenue, Lansing
McGillicuddy, Mrs. O. B.....820 Roxburgh Road, East Lansing
McGillicuddy, Mrs. Robert.....528 E. Oakwood Drive, East Lansing
McIntyre, Mrs. J. E.....600 S. Grand Avenue, Lansing
McNamara, Mrs. B. E.....804 W. Ottawa Street, Lansing
Meade, Mrs. William.....535 Ardson Rd., East Lansing
Meade, Mrs. Robert.....520 Ann St., East Lansing
Melick, Mrs. Richard C.....1616 W. Michigan, Lansing
Menzies, Mrs. Clifford.....734 Linden St., East Lansing
Mercer, Mrs. W. E.....909 Glenhaven, East Lansing
Miller, Mrs. Harold.....1600 Roseland, Royal Oak
Monfort, Mrs. Robert....900 Audubon Rd., East Lansing
Morrow, Mrs. R. J.....411 W. Ottawa Street, Lansing
Neering, Mrs. Jas. C.....517 Carey, Lansing
Ochsner, Mrs. P. J.....3129 Cambridge Rd., Lansing
Osborn, Mrs. S.....528 W. Ottawa St., Lansing
Paine, Mrs. William G.....724 Rosewood Ave., East Lansing
Palmer, Mrs. R. E.....535½ S. Capitol, Lansing
Philips, Mrs. David.....715 W. Washtenaw, Lansing
Phillips, Mrs. Robert W.....1259 W. Grand River, East Lansing
Pinkham, Mrs. R. A.....535 N. Capitol Avenue, Lansing
Place, Mrs. E. H.....Detroit
Plesscher, Mrs. W. H.....6293 Reynolds Rd., East Lansing
Pomeroy, Mrs. R. W.....504 Division, East Lansing
Prall, Mrs. H. J.....214 W. Main St., Lansing
Randall, Mrs. O. M.....1805 Moores River Drive, Lansing
Robson, Mrs. E. J.....728 Audubon Road, East Lansing
Rozan, Mrs. J. S.....600 N. Capitol, Lansing
Rulison, Mrs. J.....2100 Colonial Plaza, Lansing
Ruhmkorff, Mrs. Ralph H.....1060 Glenhaven, East Lansing
Russell, Mrs. Claude V.....3813 W. Willow, Lansing
Rutledge, Mrs. S.....1035 Northlawn, East Lansing
Sander, Mrs. John.....4275 Dobie Rd., Okemos
Schultz, Mrs. Arthur.....4646 Ottawa Dr., Okemos
Shapiro, Mrs. Hyman D.....615 S. Capitol, Lansing
Sharp, Mrs. Mahlon.....950 Audubon Rd., East Lansing
Shaw, Mrs. Milton.....415 West Street, Lansing
Sherman, Mrs. George.....504 Cowley, East Lansing
Sichler, Mrs. Harper.....443 Clifton Blvd., East Lansing
Silverman. Mrs. I. E.....1602 Clifton, Lansing
Sleight, Mrs. J. L.....1426 Vine St., Lansing
Smith, Mrs. A. V.....116 Sycamore, Mason
Snell, Mrs. Dana M...312 N. Harrison Rd., East Lansing
Snyder, Mrs. LeMoyne.....727 Audubon Road, East Lansing
Spagnuolo, Mrs. A. J.....2304 Marion Avenue, Lansing
Spencer, Mrs. Chas. T.....1134 Southlawn, East Lansing
Spencer, Mrs. P. C.....602 Northlawn, East Lansing
Stanley, Mrs. A. L.....408 Whitehills Drive, East Lansing
Steiner, Mrs. A. A.....R.F.D. No. 3, Grand Ledge
Steiner, Mrs. S. D.....413 Clarendon Street, East Lansing
Stiles, Mrs. Frank.....615 Northlawn, East Lansing
Stilwell, Mrs. George D.....518 Sunrise Ct., East Lansing
Stimson, Mrs. Paul R.....1841 Clark, Lansing
Stone, Mrs. Ben J.....2411 Fairfax, Colonial Village, Lansing
Stow, Mrs. Robert M.....1063 Rosewood, East Lansing
Strauss, Mrs. P. C.....1514 Osborn Rd., Lansing
Stringer, Mrs. C. J.....1701 W. Kalamazoo St., Lansing
Stucky, Mrs. G. C.....624 W. Ottawa St., Lansing
Sundell, Mrs. Edwin C.....338 Marshall, East Lansing
Swartz, Mrs. F. C.....500 Kedzie Dr., East Lansing
Tamblyn, Mrs. F. W.....Waverly Rd., R. 3, Lansing
Toothaker, Mrs. K. W...1609 W. Michigan Ave., Lansing
Towne, Mrs. L. C.....701 Britten, Lansing
Trescott, Mrs. R. F.....218 Chesterfield Pkwy, East Lansing
Trimby, Mrs. Robert.....850 N. Foster, Lansing
Troost, Mrs. F. L.....4395 W. Delhi, Holt
VanderZalm, Mrs. T. P.....1452 Cambridge Rd., Lansing
Venier, Mrs. J. H.....812 Sparrow Avenue, Lansing
Von Lackum, Mrs. Leroy.....Alma
Wadley, Mrs. Ralph.....930 Roxburgh, East Lansing
Walker, Mrs. L.....1652 Sunnyside, Lansing
Warford, Mrs. J. T.....215 S. Butler, Lansing
Webb, Mrs. Roy.....2176 Hamilton Rd., Box No. 3, Okemos
Weinburg, Mrs. H. B.....520 Butterfield, East Lansing
Wellman, Mrs. John.....1809 W. Hillsdale, Lansing
Wilensky, Mrs. Thomas....527 W. Oakwood, East Lansing
Wiley, Mrs. H. W.....402 N. Jenison, Lansing
Willson, Mrs. Howard.....435 McPherson St., Lansing
Wilson, Mrs. H. A.....222 Strathmore, Lansing
Wolcott, Mrs. Lester E.....2377 Seminole Dr., Okemos
Worthington, Mrs. R.....717 Britten Street, Lansing

IONIA COUNTY

Buck, Mrs. Jack.....118 N. Jefferson St., Ionia
Campbell, Mrs. R. E.....340 E. Main, Ionia
Cook, Mrs. George.....649 Riverside Dr., Ionia
Foust, Mrs. J. C.....Baldie St., Ionia
Hoffs, Mrs. M. A.....Eagle Pt., Lake Odessa
Kopchick, Mrs. Joseph.....Muir
Minick, Mrs. Wm. G.....Belding
Slagh, Mrs. M. E.....188 Main, Saranac
Smith, Mrs. Robert.....Roselawn Terrace, Ionia
Socha, Mrs. Edmund.....217 East Main St., Ionia
Tannheimer, Mrs. John F.....4 Lovell, Ionia
Trinca, Mrs. Peter J.....236 E. Washington, Ionia
Van Loo, Mrs. J. A.....Belding

JACKSON COUNTY

Abraham, Mrs. A. O.....Hudson
Adams, Mrs. E. W.....7390 Oakridge Dr., Jackson
Ahronheim, Mrs. J. H.....1410 Greenwood Ave., Jackson
Alter, Mrs. R. H.....1805 Kibbe, Jackson
Anderson, Mrs. W. B.....815 Briarcliff Road, Jackson
Appel, Mrs. Saul.....808 S. Durand, Jackson
Baker, Mrs. G. M.....Parma
Bartholic, Mrs. F. W.....R. No. 1, Rives Junction
Beckwith, Mrs. S. A.....Stockbridge
Brashares, Mrs. Z. A.....Brooklyn
Bullen, Mrs. G. R.....418 Third Street, Jackson
Clarke, Mrs. C. S.....1046 Fourth Street, Jackson
Cooley, Mrs. Charles W.....315 S. Wisner, Jackson
Cooley, Mrs. R. M.....141 E. Robinson, Jackson
Corley, Mrs. Cecil.....504 Wildwood, Jackson
Corley, Mrs. R. W.....1104 W. Michigan, Jackson

Corley, Mrs. E. H.....1211 W. Franklin, Jackson
Cox, Mrs. Ferdinand.....1601 Fourth Street, Jackson
Culver, Mrs. G. D.....Stockbridge
DeMay, Mrs. C. E.....410 DeMay Street, Jackson
DeMay, Mrs. J. D.....1204 Third, Jackson
Deming, Mrs. R. C.....764 Union Street. Jackson
Dengler, Mrs. C. R.....504 Third Street, Jackson
Dickman, Mrs. H. M.....Hudson
Douglas, Mrs. E. W.....924 Cooper, Jackson
Filip, Mrs. H. K.....755 W. Michigan, Jackson
Finton, Mrs. R. E.....1812 Grovedale, Jackson
Finton, Mrs. Walter L.....1502 Carlton Blvd., Jackson
Hackett, Mrs. T. E.....1124 Burr Street, Jackson
Hackett, Mrs. T. L.....3160 Reynolds Road. Jackson
Hanft, Mrs. C. F.....Springport
Hardie, Mrs. G. C.....218 Fourth, Jackson
Harris, Mrs. L. J.....607 W. Washington, Jackson
Hart, Mrs. Vernon L.....518 S. Brown St., Jackson
Hicks, Mrs. G. C.....1009 Wildwood Ave., Jackson
Holcomb, Mrs. William.....Grass Lake
Holst, Mrs. J. B.....1437 Wickwire Road, Jackson
Hunt, Mrs. M. E.....160 Pierce, Vandercook Lake
Hurley, Mrs. H. L.....734 Bloomfield Blvd., Jackson
Joerin, Mrs. W. A.....734 Griswold, Jackson
Karr, Mrs. J. P.....844 Woodbine, Jackson
Keefer. Mrs. A. H.....Concord
Kempton, Mrs. George.....748 Crescent Rd.. Jackson
Kline, Mrs. Starr.....3525 Jefferson Rd., Clark Lake
Kraft, Mrs. L. C.....Leslie
Kudner, Mrs. D. F.....1300 W. Franklin, Jackson
Lake, Mrs. Ed.....786 Bloomfield Blvd., Jackson
Lake, Mrs. W. H.....109 S. Elm, Jackson
Landron, Mrs. Daniel.....4633 Page Avenue, Jackson
Lathrop, Mrs. W. W.....231 West Washington, Jackson
Leahy, Mrs. E. O.....1826 Grovedale Avenue, Jackson
Lenz, Mrs. C. R.....1833 Shoemaker Drive, Jackson
Leonard, Mrs. C. A.....1116 S. Bowen, Jackson
Lewis, Mrs. E. F.....609 S. Wisner, Jackson
Linden, Mrs. V. E.....5712 Brown's Lake Rd.. Jackson
Ludwick, Mrs. J. E.....6220 Brooklyn Road, Jackson
Ludwick, Mrs. John P.....8921 Matthews Rd.. Horton
McGarvey, Mrs. W. E.....319 S. Higby, Jackson
McLaughlin, Mrs. John.....1609 W. Franklin, Jackson
McLaughlin, Mrs. M. J.....R.F.D. No. 1 Brown's Lake Road, Jackson
McLauthlin, Mrs. H. B.....200 S. Higby, Jackson
Meads, Mrs. J. B.....1714 Fourth Street, Jackson
Medlar, Mrs. B. E.....407 S. Wisner, Jackson
Miller, Mrs. J. L.....805 S. Durand, Jackson
Morelli, Mrs. Lorenzo.....514 S. Brown St., Jackson
Munro, Mrs. C. D.....740 W. Michigan, Jackson
Munro, Mrs. N. D.....407 Edward, Jackson
Murphy, Mrs. B. M.....729 Oakdale, Jackson
Myers, Mrs. J. H.....1902 Grovedale, Jackson
Newton, Mrs. R. E.....3124 Horton Road, Jackson
Oleksy, Mrs. S. P.....744 W. Michigan, Jackson
Otis, Mrs. Grant L.....922 Oakgrove Rd., Jackson
Parker, Mrs. E. E.....Leslie
Payne, Mrs. A. K.....914 S. Brown Street, Jackson
Phillips, Mrs. G. H.....326 W. Cortland St., Jackson
Porter, Mrs. H. W.....1008 Carlton Blvd., Jackson
Pray, Mrs. F. F.....310 Steward Avenue, Jackson
Pray, Mrs. G. R.....404 S. Jackson, Jackson
Rice, Mrs. J. W.....705 Bloomfield Blvd., Jackson
Ries, Mrs. R. G.....824 Brown's Lake Rd., Jackson
Riley, Mrs. Philip.....205 W. Franklin St., Jackson
Sargent, Mrs. L. E.....114 N. Thompson, Jackson
Sautter, Mrs. W. A.....Horton
Schepler, Mrs. C. W.....Brooklyn
Schuerer, Mrs. P. A.....Manchester
Schmidt, Mrs. T. E.....1414 W. Washington, Jackson
Scott, Mrs. J. A.....119 S. Bowen, Jackson
Shaeffer, Mrs. A. M.....120 S. Durand, Jackson
Shaeffer, Mrs. Dale.....206 S. Wisner St., Jackson
Sher, Mrs. D. B.....956 Cooper, Jackson
Sill, Mrs. H. W.....214 S. Durand, Jackson
Sirhal, Mrs. Alfred M.....5660 N. Shore Dr., Clark Lake
Smith, Mrs. D. W.....1205 Washington, Jackson
Smith, Mrs. J. C.....204 Steward Ave., Jackson
Southwick, Mrs. Wayne A.....948 Cooper St., Jackson
Stewart, Mrs. L. L.....308 Edgewood St., Jackson
Stewart, Mrs. Lewis L.....220 Summitt St., Jackson
Stolberg, Mrs. Carl A.....754 Oakridge Drive, Jackson
Stone, Mrs. E. L.....1011 S. Brown Street, Jackson
Susskind, Mrs. M. V.....707 S. Durand, Jackson
Taylor, Mrs. R. V.....800 S. Grinnell, Jackson
Thalner, Mrs. L. F.....609 W. Michigan, Jackson
Thayer, Mrs. E. A.....2018 Spring Arbor Road, Jackson
Thompson, Mrs. Tom.....200 Fourth, Jackson
Torwick, Mrs. E. T.....600 S. Grinnell, Jackson
Townsend, Mrs. J. W.....108 Hague, Jackson
Van Schoick, Mrs. Frank.....1301 Greenwood Avenue, Jackson
Van Schoick, Mrs. John.....Hanover
Van Wagnen, Mrs. F. I.....1232 First Street, Jackson
Vivirski, Mrs. E. E.....603 S. Elm, Jackson
Wallace, Mrs. W. S.....816 Second St., Jackson
Weddon, Mrs. Edward R.....Stockbridge
Wholihan, Mrs. John.....602 W. Michigan, Jackson
Wickham, Mrs. W. A.....1902 Fourth Street, Jackson
Winter Mrs. George E.....1102 First St., Jackson

KALAMAZOO COUNTY

Aach, Mrs. Hugo.....33232 Bronson Blvd., Kalamazoo
Alexander, Mrs. C. A.....8312 Gull Rd., Kalamazoo
Andrews, Mrs. Sherman..2326 Springhill Dr., Kalamazoo
Appel, Mrs. Ben.....516 Montrose, Kalamazoo
Appel, Mrs. William.....1826 Paddington Rd., Kalamazoo
Balch, Mrs. R. E.....Melbourne, Fla.
Banner, Mrs. L. R.....Hickory Corners
Barak, Mrs. Herbert.....2122 Chevy Chase, Kalamazoo
Barnabee, Mrs. James.....503 S. Burdick, Kalamazoo
Barry, Mrs. Manley.....R.F.D. No. 3, Kalamazoo
Bennett, Mrs. Keith....2338 Tipperary Road, Kalamazoo
Betz, Mrs. Eldean.....1521 Timberlane Dr., Kalamazoo
Birch, Mrs. W.....1539 Grand Ave., Kalamazoo
Borgman, Mrs. Wallace.....106 Thompson, Kalamazoo
Boys, Mrs. C. E.....145 Prospect, Kalamazoo
Breneman, Mrs. James.....25 Pearl St., Galesburg
Brown, Mrs. I. W.....1628 Cambridge Rd.. Kalamazoo
Brue, Mrs. Peter Paul....1009 Cambridge Dr., Kalamazoo
Burbidge, Mrs. Earl.....359 Park Ave., Parchment
Burrell, Mrs. Robert....2017 Hillandale Ave.. Kalamazoo
Callander, Mrs. C. G...4418 Lake Forest Dr., Kalamazoo
Chrest, Mrs. C. P.....2740 Bronson Blvd., Kalamazoo
Cobb, Mrs. H. R.....3403 Knox Ave., Kalamazoo
Collins, Mrs. W. E.....447 W. Walnut, Kalamazoo
Conrad, Mrs. Maynard..1509 Timberlane Dr., Kalamazoo
Cook, Mrs. R. G.....615 Clinton, Kalamazoo
Cooper, Mrs. Paul.....4326 Oakland Dr., Kalamazoo
Crane, Mrs. Bart.....420 S. Rose, Kalamazoo
Crawford, Mrs. Kenneth....1532 Grand Ave., Kalamazoo
Creager, Mrs. F. A.....907 Wheaton, Kalamazoo
Cretsinger, Mrs. Francis.....2012 Chevy Chase Blvd., Kalamazoo
Crum, Mrs. Lee.....Galesburg
Currier, Mrs. K.....1223 Kilgore Rd., Kalamazoo
Dana, Mrs. Robert.....2240 Sheffield Dr., Kalamazoo
DeGroat, Mrs. A. F.....406 Fairfax, Kalamazoo
Delbert, Mrs. Stewart G.....410 Edgemoor, Kalamazoo
DeLong, Mrs. Robert....110 W. Crescent Dr., Kalamazoo
DenBlyker, Mrs. Walter.....513 S. Burdick, Kalamazoo
DePree, Mrs. H. E.....708 Whites Rd., Kalamazoo
Dew, Mrs. Robert.....2253 Sheffield Dr., Kalamazoo
DeWitt, Mrs. Leslie.....1417 Academy, Kalamazoo
DeWitt, Mrs. Norman....161 S. Prospect St., Kalamazoo
Dick, Mrs. Leo.....428 Stuart, Kalamazoo
Doezema, Mrs. Edward.....802 Grand Pre, Kalamazoo
Dowd, Mrs. B. J.....1415 Henderson Dr., Kalmazoo
Doyle, Mrs. Fred.....3240 Bronson Blvd., Kalamazoo
Endrei, Mrs. Arisztid....Box A, State Hospital, Kalamazoo

Fast, Mrs. Ralph.....1425 Low Road, Kalamazoo
Fath, Mrs. August.....5029 Angling Rd., Kalamazoo
Finton, Mrs. Max.....1418 Kilgore Road, Kalamazoo
Fopeano, Mrs. John.....2121 Sheffield Dr., Kalamazoo
French, Mrs. M.....1128 Miles, Kalamazoo
Fuller, Mrs. Paul.....115 Carmel, Kalamazoo
Gerstner, Mrs. Louis.....410 Edgemoor, Kalamazoo
Gladstone, Mrs. William.....4696 Sunnybrook Dr., Kalamazoo
Green, Mrs. William.....2622 Alta Vista, Kalamazoo
Grekin, Mrs. Robert.....1522 Southern, Kalamazoo
Haddock, Mrs. D. A.....4426 Lake Forest Dr., Kalamazoo
Hammer, Mrs. John.....121 Monroe, Kalamazoo
Hanson, Mrs. Curtis.....1207 Maple, Kalamazoo
Harrelson, Mrs. W. D.....3625 Old Colony Rd., Kalamazoo
Hayner, Mrs. Russell....1404 Cambridge Dr., Kalamazoo
Heersma, Mrs. H. S.....1924 Winchell, Kalamazoo
Herbert, Mrs. Walter.....2777 Highland Park, Richland
Hersey, Dr. Margaret....4407 Bronson Blvd., Kalamazoo
Hildreth, Mrs. Roscoe.....226 Grandview, Kalamazoo
Hodgman, Mrs. A. B.....1601 Grand Ave., Kalamazoo
Hoebeke, Mrs. W. G.....1408 Long Road, Kalamazoo
Holder, Mrs. C. O.....1207 Oakland Dr., Kalamazoo
Howard, Mrs. Grant.....2025 Chevy Chase Blvd., Kalamazoo
Hubbell, Mrs. R. J.....3538 Bronson Blvd., Kalamazoo
Irwin, Mrs. Wm.....2333 Sheffield Drive, Kalamazoo
Jackson, Mrs. H.....1224 Hillcrest, Kalamazoo
Jennings, Mrs. Robert.....814 Oakland Dr., Kalamazoo
Jennings, Mrs. W. O.....1136 Long Road, Kalamazoo
Kavanaugh, Mrs. Wm.....1412 Vale View, Kalamazoo
Kilgore, Mrs. Robert..5140 Morningside Dr., Kalamazoo
Klerk, Mrs. Wm.....2421 Waite, Kalamazoo
Koestner, Mrs. P.....742 Norton Dr., Kalamazoo
Lavender, Mrs. Howard....605 Norton Drive, Kalamazoo
Lawrence, Mrs. James....1409 Henderson Dr., Kalamazoo
Lemmer, Mrs. Richard....2933 Bronson Blvd., Kalamazoo
Light, Mrs. R. U.....1212 Long Rd., Kalamazoo
Locklin, Mrs. W.....4444 Lake Forest Drive, Kalamazoo
Loynd, Mrs. James.....4041 Hillandale, Kalamazoo
MacDonald, Mrs. Marshall.....2824 Hill'N'Brook, Kalamazoo
MacGregor, Mrs. John.....226 Church, Parchment
Machin, Mrs. Harold....2348 Tipperary Rd., Kalamazoo
Malone, Mrs. James.....3809 Bronson Blvd., Kalamazoo
Margolis, Mrs. Fred.....2134 Waite Ave., Kalamazoo
Marshall, Mrs. Don.....2344 Sheffield Dr., Kalamazoo
Marshall, Mrs. William.....160 Edgemoor, Kalamazoo
Martens, Mrs. Irvin.....1305 Waverly, Kalamazoo
May, Mrs. Donald.....1327 Maple, Kalamazoo
McCarthy, Mrs. J. S.....1005 Oakland Drive, Kalamazoo
Moe, Mrs. Rex.....4015 Hillandale Dr., Kalamazoo
Morter, Mrs. R. A.....2421 Sheffield, Kalamazoo
Nibbelink, Mrs. Benjamin....6838 N. 25th St., Kalamazoo
Nook, Mrs. E. J.....2327 Sheffield Drive, Kalamazoo
Overbey, Mrs. Chas. Jr.....Kal. State Hospital, Kalamazoo
Patmos, Mrs. Martin.....1207 Cherry, Kalamazoo
Pearson, Mrs. Edwin.....1026 Dwillard Dr., Kalamazoo
Peelen, Mrs. Matthew.....156 Monroe, Kalamazoo
Peelen, Mrs. Wm.....943 W. Inkster, Kalamazoo
Perry, Mrs. C. W.....2030 Waite, Kalamazoo
Pullon, Mrs. Alton.....3114 Bronson Blvd., Kalamazoo
Rasmussen, Mrs. Leo.....205 N. Michigan, Vicksburg
Rigterink, Mrs. Gerald.....2424 S. Park, Kalamazoo
Roberts, Mrs. M. S.....118 Bulkley, Kalamazoo
Rockwell, Mrs. D.....1227 Jefferson, Kalamazoo
Rogers, Mrs. R. J.....108 Mill St., Vicksburg
Ryan, Mrs. F. P.....2511 Glenwood Dr., Kalamazoo
Scholten, Mrs. Roger.....930 W. Inkster, Kalamazoo
Schrier, Mrs. C. M.....1223 Oakland Dr., Kalamazoo
Scott, Mrs. Wm.....R.R. No. 7, Box 486, Kalamazoo
Shook, Mrs. Ralph.....2211 Benjamin, Kalamazoo
Siemsen, Mrs. W. J.....1009 Roseland, Kalamazoo
Sisk, Mrs. W. M.....2421 Outlook, Kalamazoo
Slatmeyer, Mrs. Karel.....118 S. Prairie, Kalamazoo
Smith, Mrs. T. C.....1215 Oakland Dr., Kalamazoo
Sofen, Mrs. M. B.....903 Edgemoor, Kalamazoo
Southworth, Mrs. Maynard.....Schoolcraft
Stewart, Mrs. William.....2945 Duke St., Kalamazoo
Stiller, Mrs. Anthony.....1235 N. Hillandale Dr., Kalamazoo
Stryker, Mrs. Homer.....448 W. Inkster, Kalamazoo
Upjohn, Mrs. E. Gifford.....2230 Glenwood Ave., Kalamazoo
Vander Velde, Mrs. Kenneth.....1910 Waite, Kalamazoo
Verhage, Mrs. M. D.....1748 Greenlawn Ave., Kalamazoo
Volderauer, Mrs. John....905 Edgemoor Ave., Kalamazoo
Warnke, Mrs. R. D.....3012 Kenilworth, Kalamazoo
Weadon, Mrs. P.....2255 Tipperary, Kalamazoo
Williamson, Mrs. Edwin.....6343 Douglas, Kalamazoo
Wu, Mrs. Jack Foy.....3719 Duke St., Kalamazoo
Youngs, Mrs. C. A.....416 S. Burdick, Kalamazoo

KENT COUNTY

Aitken, Mrs. Geo. T.....936 Santa Lucia Dr., S.E., Grand Rapids
Albers, Mrs. G. Donald.....1838 Argentina Dr., S.E., Grand Rapids
Aldridge, Mrs. Charles.....1574 Mackinaw Rd., S.E., Grand Rapids
Andre, Mrs. Harvey M.....1121 Giddings Ave., S.E. Grand Rapids
Baert, Mrs. Geo. H.....631 Prospect Ave., S.E., Grand Rapids
Ballard, Mrs. M. S.....9 College, N.E., Grand Rapids
Barofsky, Mrs. Gerald F.....653 Griswold, S.E., Grand Rapids
Balyeat, Mrs. Gordon W.....150 Morningside Dr., S.E., Grand Rapids
Batts, Mrs. Martin.....246 Aurora, S.E., Grand Rapids
Beaton, Mrs. James H.....1556 Pontiac Rd., S.E., Grand Rapids
Beeman, Mrs. Carl B.....3040 Bonnell S.E., Grand Rapids
Beets, Mrs. W. C.....2221 Jefferson Dr., S.E., Grand Rapids
Bell, Mrs. C. M.....3121 Oakhollow Dr., S.E., Grand Rapids
Benjamin, Mrs. Howard.....957 Maxwell S.E., Grand Rapids
Benson, Mrs. R. R.....1138 Chippewa Dr., S.E., Grand Rapids
Bergsma, Mrs. Stuart..1942 Sherman, S.E., Grand Rapids
Bignall, Mrs. Rex.....2637 Belfast S.E., Grand Rapids
Blackburn, Mrs. H. M.....2401 Breton Rd., S.E., Grand Rapids
Blocksma, Mrs. Ralph....739 Prospect, S.E., Grand Rapids
Boelkins, Mrs. Richard C.....834 Giddings, S.E., Grand Rapids
Boersma, Mrs. Donald.....920 Chippewa Dr., S.E., Grand Rapids
Boet, Mrs. John T.....551 Fountain, N.E., Grand Rapids
Bonzelaar, Mrs. Marvin.....1612 Woodward, S.E., Grand Rapids
Booher, Mrs. Craig..2609 Albert Dr., S.E., Grand Rapids
Boyce, Mrs. David C.....2310 Estelle Dr., S.E., Grand Rapids
Brace, Mrs. Fred C.....2311 Academy Dr., N.E., Grand Rapids
Brink, Mrs. J. Russell.....1901 Argentina Dr., S.E., Grand Rapids
Brook, Mrs. J. D.....65 S. Wilson Avenue, Grandville
Buist, Mrs. Samuel J.....1115 Santa Barbara, S.E., Grand Rapids
Bull, Mrs. Frank.....65 S. State St., Sparta
Burroughs, Mrs. Frank Jr.....159 S. Ottawa, Grandville
Butler, Mrs. Wm. J...327 Briarwood, S.E., Grand Rapids
Caukin, Mrs. Howard.....2451 Richard Dr., S.E., Grand Rapids

Carpenter, Mrs. Luther C.....1818 Argentina Dr., S.E., Grand Rapids
Cayce, Mrs. William....640 Kent Hills Rd., Grand Rapids
Chandler, Mrs. Donald.....3347 E. Belt Line, N.E., Grand Rapids
Chase, Mrs. R. Jack....849 Maxwell, S.E., Grand Rapids
Clahassey, Mrs. Erwin.....427 Mulford Dr., S.E., Grand Rapids
Clement, Mrs. Duane M.....213 Hampton, S.E., Grand Rapids
Colvin, Mrs. Walter G.....48 Bel Air Dr., N.E. Grand Rapids
Corbus, Mrs. Burton R.....325 Union, S.E., Grand Rapids
Crane, Mrs. Harold....2221 Madison, S.E., Grand Rapids
Cuncannon, Mrs. Edward M.....1745 Eastern, S.E., Grand Rapids
Currier, Mrs. Fred P.....955 Floral Dr., S.E., Grand Rapids

Damstra, Mrs. Harold J.....1022 Santa Cruz Dr., S.E., Grand Rapids
Davis, Mrs. David B.....1050 San Lucia Dr., S.E., Grand Rapids
Davis, Mrs. Roy A.....1420 Berkshire Dr., S.E., Grand Rapids
Dawson, Mrs. W. Douglas.....1021 Iroquois Dr., S.E., Grand Rapids
DeBoer, Mrs. C. J.....191 Elwood, Grandville
DeBoer, Mrs. Guy W.....41 Maryland N.E., Grand Rapids
DeMaagd, Mrs. Gerald.....185 S. Monroe, Rockford
DeMol, Mrs. Richard J.....2425 College, S.E., Grand Rapids
Denham, Mrs. Robert H.....535 Plymouth Dr., S.E., Grand Rapids
DePree, Mrs. Joe.....849 Pinecrest, S.E., Grand Rapids
DeVel, Mrs. Leon.....739 Plymouth Dr., S.E., Grand Rapids
DeVries, Mrs. Daniel....82 Maryland, S.E., Grand Rapids
Dewey, Mrs. K. A.....3205 Bonnell Dr., S.E., Grand Rapids
DeYoung, Mrs. Thies.....35 E. Division, Sparta
Diskey, Mrs. Donald G.....1911 Lake Michigan Dr., N.W., Grand Rapids
Dixon, Mrs. Willis L.....7088 Weller Dr., Rockford
Dixon, Mrs. W. L.....233 Boston, S.E., Grand Rapids
Doctor, Mrs. Luebert.....3496 Lake Dr., S.E., Grand Rapids
Doyle, Mrs. John L.....875 Elliott, SE.., Grand Rapids
Droste, Mrs. James C.....1545 Seminole Rd., S.E., Grand Rapids
Dyer, Mrs. David.....550 Morris, S.E., Grand Rapids

Eaton, Mrs. Robert M...243 Aurora, S.E., Grand Rapids
Eggleston, Mrs. H. R.....117 Page N.E., Grand Rapids

Failing, Mrs. John F.....2617 Lake Michigan Dr., N.W., Grand Rapids
Farber, Mrs. Charles E.....2550 Maplewood Dr., Grand Rapids
Faust, Mrs. Lawrence W.....405 Manhattan Rd., S.E., Grand Rapids
Fellows, Mrs. Kenneth F.....3341 Ashton Rd., S.E., Grand Rapids
Ferguson, Mrs. James.....2230 Hall, S.E., Grand Rapids
Ferguson, Mrs. Lynn A.....635 Cambridge, S.E., Grand Rapids
Ferguson, Mrs. Ward S.....2117 Hall, S.E., Grand Rapids
Ferrand, Mrs. Louis G.....119 N. Monroe, Rockford
Fitts, Mrs. Ralph L.....1930 Michigan Rd., N.E., Grand Rapids
Fitzgerald, Mrs. Erwin L...2005 Hall, S.E., Grand Rapids
Flintoff, Mrs. William.....720 Ethel, S.E., Grand Rapids
Foshee, Mrs. J. C.....315 Madison, S.E., Grand Rapids
Frantz, Mrs. Charles H.....1860 Lake Dr., S.E., Grand Rapids
Fuller, Mrs. E. H.....260 Paris, S.E., Grand Rapids
Fuller, Mrs. William J.....2633 Frederick Drive, S.E., Grand Rapids

Gamm, Mrs. Kenneth E.....456 Morris, S.E., Grand Rapids
Gibbs, Mrs. Floyd.....155 Maryland, S.E., Grand Rapids
Gilbert, Mrs. R. H.....1125 San Jose, S.E., Grand Rapids
Gillett, Mrs. F. S.....1928 Sherman, S.E., Grand Rapids
Grant, Mrs. Lee O.....2730 Bonnell Rd., S.E., Grand Rapids
Grass, Mrs. E. J.....858 Pinecrest, S.E., Grand Rapids
Gray, Mrs. Fred B.....2333 Oakwood, S.E., Grand Rapids
Griffith, Mrs. Lucian S.....1934 Sherman, S.E., Grand Rapids
Gunning, Mrs. R. E. Lee,.....1960 Michigan, N.E., Grand Rapids

Haeck, Mrs. William..1225 Franklin, S.E., Grand Rapids
Hagerman, Mrs. David B.....1551 Seminole, S.E., Grand Rapids
Hamp, Mrs. A.....1059 Eastwood, S.E., Grand Rapids
Heetderks, Mrs. Dewey R.....240 Edgehall Dr., S.E., Grand Rapids
Hill, Mrs. Morgan.....534 Dogwood Rd., Ada
Hodgen, Mrs. John T.....2320 Fulton Rd., E. Grand Rapids
Hoekstra, Mrs. A. L.....1812 Kreiser, S.E., Grand Rapids
Holcomb, Mrs. J. Winslow.....1441 Breton Rd., S.E., Grand Rapids
Hollander, Mrs. Stephan.....2027 Godwin, S.E., Grand Rapids
Hoogerhyde, Mrs. Jack.....3355 Ashton Rd., S.E., Grand Rapids
Houghton, Mrs. R. C.....525 Glenwood, S.E., Grand Rapids
Hudson, Mrs. H.....1540 Woodlawn, S.E., Grand Rapids
Hufford, Mrs. Alvin R.....2660 Oakwood, S.E., Grand Rapids
Humphrey, Mrs. James C.....1134 Cambridge, S.E., Grand Rapids
Hydrick, Mrs. Robert.....2013 Hamstead, N.W., Grand Rapids
Hyland, Mrs. William A.....2833 Bonnell, S.E., Grand Rapids

Ireland, Mrs. H. D.....700 Fuller, N.E., Grand Rapids
Irwin, Mrs. Thomas C.....325 Morris, S.E., Grand Rapids

Jack, Mrs. William..2201 Breton Rd., S.E., Grand Rapids
Jameson, Mrs. Fred.....2706 Oakwood Dr., S.E., Grand Rapids
Jaracz, Mrs. Walter J., Sr.....36 Valley, S.E., Grand Rapids
Jaracz, Mrs. Walter J., Jr.....430 Morris, S.E., Grand Rapids
Jarvis, Mrs. Chas.....218 Sligh Blvd., N.E., Grand Rapids
Jellema, Mrs. John F.....Maple Beach, Holland
Jensen, Mrs. William B.....2825 Oakwood, S.E., Grand Rapids
Johns, Mrs. D.....639 Hoyt, S.E., Grand Rapids
Johnston, Mrs. W. L.....1047 Gladstone, S.E., Grand Rapids
Jones, Mrs. Horace.....3004 Oakwood Dr., S.E., Grand Rapids

Kelley, Mrs. Edward F.....903 Orchard Ave., S.E., Grand Rapids
Klaus, Mrs. C. D.....214 Bristol, N.W., Grand Rapids
Kniskern, Mrs. Paul W.....1555 Edgewood, S.E., Grand Rapids
Kooistra, Mrs. Henry P.....1564 Pontiac Road, S.E., Grand Rapids
Kool, Mrs. Bernard P.....1486 Burke, N.E., Grand Rapids
Kreulen, Mrs. Henry....2452 Godwin Ave., Grand Rapids
Kruse, Mrs. William....2225 Wilshire, S.E., Grand Rapids

Lamberts, Mrs. Austin....2253 Union, S.E., Grand Rapids
Lanning, Mrs. Nicholas.....1050 Gladstone, S.E., Grand Rapids
Lentini, Mrs. Joseph R.....2059 Anderson Dr., S.E., Grand Rapids
Lester, Mrs. Vern....1029 San Juan, S.E., Grand Rapids
Lewis, Mrs. G.....120 Celia, S.E., Grand Rapids
Lieffers, Mrs. Harry.....331 Aurora, S.E., Grand Rapids
Lillie, Mrs. Walter....1038 Pinecrest, S.E., Grand Rapids
List, Mrs. Carl F.....401 Lakeside Dr., S.E., Grand Rapids

MacDonell, Mrs. James.....619 Gladstone, S.E. Grand Rapids

MacIntyre, Mrs. Dugald.....562 Plymouth, S.E., Grand Rapids
Marsh, Mrs. John P.....1231 Sigsbee, S.E., Grand Rapids
Martinus, Mrs. Martin.....525 Overbrook Lane, S.E., Grand Rapids
Mattson, Mrs. Roger.....2692 Frederick Dr., S.E., Grand Rapids
McCormick, Mrs. John K.....401 Cheshire Dr., N.E., Grand Rapids
McDougal, Mrs. William J.....639 Kent Hills, N.E., Grand Rapids
McKenna, Mrs. Joseph L.....1525 Edgewood Dr., S.E., Grand Rapids
Meade, Mrs. Richard H., Jr.....750 San Jose, S.E., Grand Rapids
Meeuwsen, Mrs. Bernard.....664 Winchell, S.E., Grand Rapids
Miller, Mrs. J. Duane.....2565 Frederick Dr., S.E., Grand Rapids
Miller, Mrs. J. J.....1580 Water, Marne
Moleski, Mrs. Joseph V.....1911 Hall, S.E., Grand Rapids
Moleski, Mrs. Leo T.....1462 Milton, S.E., Grand Rapids
Moleski, Mrs. Stanley.....1701 Pontiac Rd., S.E., Grand Rapids
Moll, Mrs. A. M.....3383 Fulton Rd., S.E., Grand Rapids
Moore, Mrs. Douglas.....1766 Breton Rd., S.E., Grand Rapids
Morley, Mrs. John....1505 Mackinaw, S.E., Grand Rapids
Mouw, Mrs. Dirk.....2352 Jefferson Dr., S.E., Grand Rapids
Mulder, Mrs. G. Arthur.....2047 Jefferson Dr., S.E., Grand Rapids
Mulder, Mrs. Jacob D.....6850 Division, S., Grand Rapids
Murphy, Mrs. Miles.....1628 Pontiac Rd., S.E., Grand Rapids
Nanzig, Mrs. Reinard.....821 Chippewa Dr., S.E., Grand Rapids
Nickel, Mrs. Kenneth.....1535 Groton Rd., S.E., Grand Rapids
Northouse, Mrs. Peter B.....1524 Pontiac Rd., S.E., Grand Rapids
Notier, Mrs. Victor A.....2601 Maplewood Dr., S.E., Grand Rapids
Oates, Mrs. Sam M.....518 Morris, S.E., Grand Rapids
Oliver, Mrs. W. W.....7241 Belding Rd., N.E., Rockford
Paalman, Mrs. Russel.....497 Marywood Dr., N.E., Grand Rapids
Patterson, Mrs. P. W...2032 Godwin, S.E., Grand Rapids
Payne, Mrs. C. Allen....1289 Perkins, N.E., Grand Rapids
Pearson, Mrs. Glenn.....519 Greenwood, S.E., Grand Rapids
Pedden, Mrs. John.....230 El Centro Blvd., S.E., Grand Rapids
Plekker, Mrs. J. D.....1115 Cadillac Dr., S.E., Grand Rapids
Pool, Mrs. J. D.....518 Morris, S.E., Grand Rapids
Porter, Mrs. Howard..949 Floral Dr., S.E., Grand Rapids
Posthuma, Mrs. Albert.....2247 College, S.E., Grand Rapids
Pott, Mrs. Abraham L.....612 Kent Hills Rd., N.E., Grand Rapids
Prothro, Mrs. Winston.....465 Cheshire Dr., N.E., Grand Rapids
Pyle, Mrs. Henry J.....1016 Waltham, S.E., Grand Rapids
Ragsdale, Mrs. L. V.....720 Plymouth Blvd., S.E., Grand Rapids
Ralph, Mrs. L. Paul....953 Rosewood, S.E., Grand Rapids
Rasmussen, Mrs. R. A.....737 Cambridge, S.E., Grand Rapids
Reed, Mrs. Torrance.....565 Morris, S.E., Grand Rapids
Reus, Mrs. Wm. F.....334 Hobart, S.E., Grand Rapids
Riekse, Mrs. James M.....437 Hoyt, S.E., Grand Rapids
Rigterink, Mrs. John W.....1291 Cambridge, S.E., Grand Rapids
Riley, Mrs. George L.....1651 Stoddard, N.E., Grand Rapids
Ringenberg, Mrs. J. C.....1736 Cambridge Blvd., S.E., Grand Rapids
Robb, Mrs. Charles....433 Rosewood, S.E., Grand Rapids
Rodgers, Mrs. William L.....2865 Lake Drive, S.E., Grand Rapids
Rooks, Mrs. Wendell....1158 Nixon N.W., Grand Rapids
Roosenberg, Mrs. William.....2903 Colt Rd., N.E., Grand Rapids
Rosenzwieg, Mrs. Leonard.....315 Benjamin, S.E., Grand Rapids
Roth, Mrs. Emil M.....319 Morris, S.E., Grand Rapids
Ryan, Mrs. John.....1707 Wealthy, S.E., Grand Rapids
Sanders, Mrs. Jack F.....1184 Griswold, S.E., Grand Rapids
Schermerhorn, Mrs. L. J.....40 College, N.E., Grand Rapids
Schneider, Mrs. Geo. R.....934 Rosewood, S.E., Grand Rapids
Schumacher, Mrs. Earle E.....532 Gladstone, S.E., Grand Rapids
Scott, Mrs. William B.....538 Union, S.E., Grand Rapids
Seime, Mrs. Ruben.....R.R. No. 1, Box 65, Ada
Sevey, Mrs. L. E.....1145 Benjamin, S.E., Grand Rapids
Sevensma, Mrs. E. S.....2255 Riverside Dr., N.E., Grand Rapids
Sevensma, Mrs. E. S.....2114 Anderson Dr., S.E., Grand Rapids
Shellman, Mrs. M. W.....1412 Mackinaw Rd., S.E., Grand Rapids
Sidell, Mrs. Richard H.....927 Princeton, S.E., Grand Rapids
Siebers, Mrs. B. H.....1431 Burke, N.E., Apt. A, Grand Rapids
Slemons, Mrs. C. C.....1324 Logan, S.E., Grand Rapids
Sluyter, Mrs. J. S.....839 Iroquois, S.E., Grand Rapids
Smith, Mrs. A. B.....1434 Byron, S.E., Grand Rapids
Smith, Mrs. R. E.....129 Lafayette, S.E., Grand Rapids
Smith, Mrs. R. B.....1529 Burton, S.E., Grand Rapids
Snapp, Mrs. C. F.....1058 Orchard, S.E., Grand Rapids
Snyder, Mrs. C. H.....3250 O'Brien Rd., S.W., Grand Rapids
Southwick, Mrs. Christopher.....760 San Jose Dr., S.E., Grand Rapids
Southwick, Mrs. G. H.....1935 SanLuRae, S.E., Grand Rapids
Steffensen, Mrs. W. H.....443 Plymouth, S.E., Grand Rapids
Stonehouse, Mrs. G. G.....208 Pioneer Rd., S.E., Grand Rapids
Stoneman, Mrs. Fernley.....40 E. Prairie, Grandville
Stover, Mrs. V. E.....860 Gladstone, S.E., Grand Rapids
Sugiyama, Mrs. T...1006 Hollywood, N.E., Grand Rapids
Summer, Mrs. John E.....1401 Bemis S.E., Grand Rapids
Swanson, Mrs. Alfred B...1722 Breton S.E., Grand Rapids
Swenson, Mrs. H. C.....501 Elliott S.E., Grand Rapids
Ten Have, Mrs. John.....3515 Briggs Blvd. NE, Grand Rapids
Tesseine, Mrs. A. J.....425 Cambridge Blvd., S.E., Grand Rapids
Teusink, Mrs. Harry....39 W. Beech St., Cedar Springs
Thompson, Mrs. Edward C.....1401 Breton Rd., S.E., Grand Rapids
Thompson, Mrs. F. D.....333 Gladstone, S.E., Grand Rapids
Thomson, Mrs. John W.....2029 Hall S. E. Grand Rapids
Tidey, Mrs. M. B.....261 College, S.E., Grand Rapids
Tiffany, Mrs. Joseph C.....2322 Jefferson, S.E. Grand Rapids
Torgerson, Mrs. William R.....530 Belvedere Dr., S.E., Grand Rapids
Truog, Mrs. Clarence P.....1470 Briarcliff Drive, S.E. Grand Rapids
Uthoff, Mrs. Carl.....2253 Foster, N.E., Grand Rapids
Van Belois, Mrs. H. J.....2524 Union, S.E., Grand Rapids
Van Bree, Mrs. Raymond.....1521 Ridgewood, S.E. Grand Rapids
VanDenBerg, Mrs. Allison....1120 Cambridge Blvd., S.E. Grand Rapids

VanderPloog, Mrs. William.....1343 Fuller, S.E. Grand Rapids
VanderVeer, Mrs. Corwin G.....1511 Sylvan, S.E. Grand Rapids
Van Duine, Mrs. H. J.....414 Brookside Dr., S.E. Grand Rapids
Van Noord, Mrs. G. A.....6850 Division, S. Grand Rapids
Van Portfliet, Mrs. Paul.....555 Mulford, S.E. Grand Rapids
Van Solkema, Mrs. Andrew.....20 Baynton, N.E. Grand Rapids
Van Woerkom, Mrs. Daniel....1946 Lake Michigan Dr., N.W., Grand Rapids
Van Zwalenburg, Mrs. B. R.....2054 Anderson Dr., S.E., Grand Rapids
Veldman, Mrs. H. E.....2447 Oakwood, N.E., Grand Rapids
Venema, Mrs. Jay R...540 Overbrook, S.E. Grand Rapids
Vining, Mrs. Keats K., Jr.....934 Princeton, S.E., Grand Rapids
Wahby, Mrs. Elmer F.....1108 Kenneberry Way S.E. Grand Rapids
Waterman, Mrs. D. F.....1425 Burke N. E., Grand Rapids
Wells, Mrs. Merrill....3346 Colt Rd., N.E., Grand Rapids
Weller, Mrs. Keith E. 1125 Orchard, N.E., Grand Rapids
Wenger, Mrs. A. Verne..132 Grand, N.E., Grand Rapids
Wenger, Mrs. John N.....Coopersville
Whittenberger, Mrs. Robert.....1164 Griswold, S.E., Grand Rapids
Wiese, Mrs. John.....3188 Bonnell S.E., Grand Rapids
Wilkes, Mrs. John B.....311 Aurora, S.E., Grand Rapids
Williams, Mrs. John R.....2059 College, S.E., Grand Rapids
Willits, Mrs. P. W.....337 Manhattan, S.E., Grand Rapids
Winter, Mrs. G. E.....2316 Jefferson Dr., S.E., Grand Rapids
Wurz, Mrs. J. F.....201 Norwood, S.E., Grand Rapids
Yared, Mrs. J. A.....1901 Lake Dr., S.E., Grand Rapids
Yegge, Mrs. John.....Kent City

LAPEER COUNTY

Bishop, Mrs. Clare.....Almont
Burley, Mrs. David.....Almont
Chapin, Mrs. Clarence.....Columbiaville
Conaway, Mrs. Charles....746 N. Monroe St., Lapeer
Dorland, Mrs. Clarke.....211 Lincoln St., Lapeer
Doty, Mrs. James R.....1335 N. Monroe, Lapeer
Hunter, Miss Frances.....1091 Pine St., Lapeer
Hunter, Miss Mary Ellen.....1091 Pine St., Lapeer
Kay, Mrs. W. J.....307 Washington St., Lapeer
Kiehle, Mrs. Anna.....706 N. Main St., Lapeer
McBride, Mrs. John R.....914 Liberty, Lapeer
Merz, Mrs. Henry G.....1242 Clark Road, Lapeer
Smith, Mrs. Glenn.....Imlay City
Snowman, Mrs. Lynna.....306 N. Main St., Lapeer
Thomas, Mrs. Orville.....North Branch
Thompson, Mrs. May.....243 Clay Street, Lapeer
Zemmer, Mrs. Harry.....Hannamon Rd., Columbiaville
Zolliker, Mrs. Carl.....State Home, Lapeer

LENAWEE COUNTY

Abraham, Mrs. A. O.....305 S. Church, Hudson
Allen, Mrs. Russell A.....177 N. Charles St., Adrian
Balice, Mrs. Francis W.....3800 Westwood Dr., Adrian
Benz, Mrs. Carl A.....145 Budlong St., Adrian
Blanchard, Mrs. L. E.....224 Seward, Hudson
Blanden, Mrs. Merwin R.....5140 E. Monroe Rd., Tecumseh
Claxton, Mrs. W. T.....136 W. Chicago St., Britton
Cook, Mrs. Lynette.....740 N. Union St., Tecumseh
Dickman, Mrs. Harry M.....120 N. Church, Hudson
Dustin, Mrs. R. E.....309 N. Union St., Tecumseh
Eddy, Mrs. H. E. C.....349 S. Main St., Adrian
Hammel, Mrs. Richard T.....739 N. Union St., Tecumseh
Heffron, Mrs. Charles.....748 W. Maumee St., Adrian
Heffron, Mrs. Howard H.....R No. 1, Adrian
Helzerman, Mrs. Ralph F.....612 W. Chicago Blvd., Tecumseh
Hewes, Mrs. William H.....11 Oregon Rd., Adrian
Hinshaw, Mrs. Warren.....950 Riverside, Adrian
Huebner, Mrs. Robert.....Devil's Lake Rd., Addison
Howland, Mrs. Frank.....563 S. Winter, Adrian
Hunter, Mrs. T. Bailey....114 E. Michigan St., Adrian
Marsh, Mrs. R. C. B.....610 W. Logan St., Tecumseh
Miller, Mrs. P. Lynford.....17 Westwood Dr., Adrian
Parker, Mrs. Donald A.....454 S. Main St., Adrian
Pasternacki, Mrs. A. S.....20 Oregon Rd., Adrian
Patmos, Mrs. Bernard.....16 Maumee Court, Adrian
Phelan, Mrs. Alvin J.....405 Seneca St., Tecumseh
Rogers, Mrs. John D.....1232 W. Maple Ave., Adrian
Sayre, Mrs. P. P.....228 S. Main St., Onsted
Stafford, Mrs. L. J.....8 Westwood Dr., Adrian
Thompson, Mrs. John R.....529 Dennis St., Adrian
Whitehouse, Mrs. Keith H.....128 Summit, Morenci
Whitney, Mrs. Oat.....443 State St., Adrian
Wilson, Mrs. George.....108 Jackson Rd., Clinton
Wynn, Mrs. George H.....1115 W. Maumee St., Adrian

LIVINGSTON COUNTY

Barton, Mrs. T. A.....4300 E. Grand River, R. No. 3 Howell
Clarke, Mrs. Niles .....723 Spencer Rd., Brighton
Duffy, Mrs. Ray.....250 Main St., Pinckney
Gentles, Mrs. Ernest.....Mich. State Sanitorium, Howell
Hauer, Mrs. R. F. .....434 E. Grand River, Fowlerville
Hendren, Mrs. J. J.....Fowlerville
Hill, Mrs. H. C.....320 Madison St., Howell
Huntington, Mrs. H. G.....219 S. Walnut St., Howell
May, Mrs. Lewis E.....924 W. Grand River, Howell
McGregor, Mrs. A. J.....995 E. Main St., Brighton
Polack, Mrs. Robert.....416 S. Michigan, Howell
Sigler, Mrs. Hollis.....809 N. Michigan, Howell
Walker, Mrs. E. G.....4485 Cordley Lake Rd., Lakeland
Woodworth, Mrs. Edwin.....422 E. Lake St., Howell

MACOMB COUNTY

Banting, Mrs. Oswald F.....Richmond
Barker, Mrs. J. G.....22420 Statler Blvd., St. Clair Shores
Bower, Mrs. Allen B.....Armada
Brady, Mrs. Milo J.....60002 Gunston, Detroit
Bryce, Mrs. James W.....24830 Landon, Centerline
Buckley, Mrs. Daniel.....160 S. Walnut St., Mt. Clemens
Croman, Mrs. J. M.....131 Market, Mt. Clemens
Dudzinski, Mrs. E. J.....New Baltimore
Engels, Mrs. John A.....Richmond
Harrington, Mrs. Clark.....629 Chippewa, Mt. Clemens
Hartmann, Mrs. Waldemar B.....3221 N. Gratiot, Mt. Clemens
Heine, Mrs. Austin.....Riverside Drive, Mt. Clemens
Kane, Mrs. W. J.....171 North Ave, Mt. Clemens
Maguire, Mrs. Andrew H. 45463 Van Dyke, Utica
Matthews, Mrs. Chris.....135 Riverside, Mt. Clemens

Mulligan, Mrs. P. T.....59 Ahrens Ave., Mt. Clemens
Peltier, Mrs. Stanley J.....151 North, Mt. Clemens
Persson, Mrs. G. A.....198 S. Gratiot, Mt. Clemens
Reichman, Mrs. J. J.....70 Gallup, Mt. Clemens
Reitzel, Mrs. R. H.....1 Breitmeyer Pl., Mt. Clemens
Revere, Mrs. J. O.....192 S. Gratiot, Mt. Clemens
Rivard, Mrs. C. L.....32926 Jefferson, St. Clair Shores
Rousseau, Mrs. Daniel J.....863 Harrington, Mt. Clemens
Salot, Mrs. R. F.....11 Breitmeyer Pl.. Mt. Clemens
Siegfried. Mrs. E. G.....77 Scott, Mt. Clemens
Smith, Mrs. M. C.....117 Lodewyck, Mt. Clemens
Stryker, Mrs. Oscar.....31032 Jefferson Ave. St. Clair Shores
Stubbs, Mrs. Clayton.....126 S. Gratiot, Mt. Clemens
Stubbs, Mrs. Harold W.....29240 Grandview Ave. Mt. Clemens
Thompson, Mrs. A. A.....35 Miller St., Mt. Clemens
Ullrich, Mrs. R. W.....316 N. Gratiot, Mt. Clemens
Wellard, Mrs. Henry C.....204 Alfred St., New Baltimore
Whitley, Mrs. A.....22935 Raymond St., St. Clair Shores
Wiley, Mrs. D. B.....45223 Cass Avenue, Utica
Wolfson, Mrs. V. H.....64 Riverside Drive, Mt. Clemens
Wyte, Mrs. William C.....170 Eastman, Mt. Clemens

MANISTEE COUNTY

Dart, Mrs. Estella.....515 Maple St., Manistee
Grant, Mrs. Chas. T.....5990 Lake Shore Rd., Manistee
Hansen, Mrs. E. C.....700 Cedar St., Manistee
Konopa, Mrs. John.....440 Cedar, Manistee
Loughrin, Mrs. John.....90 Maple St., Manistee
Miller, Mrs. E. B.....434 Elm St., Manistee
Oakes, Mrs. E. A.....576 Bryant Ave., Manistee
Ogilvie, Mrs. Gordon.....434 Third Street, Manistee
Ramsdell, Mrs. Homer.....514 Oak Street, Manistee
Schwarz, Mrs. M. L.....4848 Main St., Onekama
Warren, Mrs. Lewis T.....432 Fourth St., Manistee

MARQUETTE-ALGER COUNTIES

Acocks, Mrs. James.....Morgan Heights, Marquette
Amolsch, Mrs. Arthur L.....321 Pine St., Marquette
Baron, Mrs. B. C.....514 Superior, W., Munising
Bennett, Mrs. Matthew C.....409 E. Ohio, Marquette
Bertucci, Mrs. J. P.....517 N. Pine, Ishpeming
Bolitho, Mrs. T. B.....425 E. Mich. Ave., Marquette
Bottom, Mrs. C. N.....624 N. Third, Marquette
Burke, Mrs. R. A.....Ishpeming
Casler, Mrs. Wilbur L.....127 East Ridge, Marquette
Cooperstock, Mrs. M.....402 E. Ridge, Marquette
Erickson, Mrs. A. N.....621 N. 4th, Ishpeming
Hornbogen. Mrs. D. P.....320 Cedar St., Marquette
Howe, Mrs. Lloyd W.....431 E. Ridge, Marquette
Jaedecke, Mrs. R. G.....127 N. 2nd St., Ishpeming
Knutson, Mrs. George O.....120 Main Street, Negaunee
Kronschnabel, Mrs. E. J.....Gwinn
Lambert, Mrs. W. C.....347 Ridge, Marquette
Lyons, Mrs. James.....Lakewood, Marquette
Matthews, Mrs. Norman.....123 E. Park, Marquette
Moore, Mrs. Bert.....U. S. 41, Negaunee
Narotzky, Mrs. A. S.....628 E. Ridge Street, Ishpeming
Swinton, Mrs. A. L.....430 E. Arch, Marquette
Wickstrom, Mrs. G. B.....223 Lynn St. Munising

MASON COUNTY

Bacon, Mrs. Herbert.....125 W. State St., Scottville
Boldyreff, Mrs. E. E.....Custer
Boon, Mrs. Floyd.....Court St., Ludington
Hoffman. Mrs. H. B.....201 N. Washington Avenue Ludington
Martin, Mrs. W. S.....316 N. Gaylord, Ludington
Paukstis, Mrs. Chas.....502 N. Lakeshore Dr., Ludington
Scott. Mrs. R. R.....806 E. Brother St., Ludington
Spencer, Mrs. C. M.....Scottville
Switzer, Mrs. G. A.....302 Lake Shore Drive, Ludington

MECOSTA-OSCEOLA-LAKE COUNTIES

Bruggema, Mrs. Jacob.....Evart
Campbell, Mrs. J. B.....320 Division Street, Big Rapids
Chess, Mrs. Leo.....417 W. Upton, Reed City
Franklin, Mrs. Ben.....Remus
Haldeman, Mrs. J.....228 S. Warren, Big Rapids
Hickox, Mrs. Leland.....211 Rose Ave., Big Rapids
Ivkovich, Mrs. Paul.....335 West Upton, Reed City
Kazmers, Mrs. E.....Lakeview
Kelsey, Mrs. Lee F.....Lakeview
Kilmer. Mrs. David.....401 Osceola, Reed City
Kilmer, Mrs. Paul B.....350 W. Upton, Reed City
Kowaleski, Mrs. Edward.....Remus
Marston, Mrs. L. L.....Lakeview
Merlo, Mrs. F. A. .....206 S. Michigan, Big Rapids
Nelson, Mrs. Lorenzo.....Baldwin
Treynor, Mrs. Thomas P.....107 Ives Ave., Big Rapids
Tyson, Mrs. J. A.....124 Mecosta, Big Rapids
Van Auken, Mrs. Edw.....121 Sanborn Avenue, Big Rapids
Walters, Mrs. James E...201 Sanborn Avenue, Big Rapids
White, Mrs. J. A.....123 Cedar Street, Big Rapids
Yeo, Mrs. Gordon.....209 Rust St., Big Rapids

MENOMINEE COUNTY

Agneberg, Mrs. N.....221 1st St., Menominee
Brukhardt, Mrs. H. R.....714 14th Ave., Menominee
Clay, Mrs. Joel W.....1031 First St., Menominee
Dewane, Mrs. F. J.....1409 7th Street, Menominee
Flanagan, Mrs. C. B.....915 11th Ave., Menominee
Glickman, Mrs. L. G.....1359 Main Street, Marinette, Wisconsin
Gonty, Mrs. Arthur.....Frontenac Beach, Menominee
Heidenreich, Mrs. J. R.....Daggett
Jones, Mrs. W. S., Sr.....101 15th Ave., Menominee
Jones, Mrs. W. S., Jr.....1834 1st Street, Menominee
Kaye, Mrs. J. T.....1005 10th Avenue, Menominee
Kerwell, Mrs. K. C.....Stephenson
Peterson, Mrs. A. R.....Daggett
Sethney, Mrs. H. T.....1012 1st Ave., Menominee
Sweany, Mrs. S. K.....Powers
Towey, Mrs. J. W.....Powers
Whitmarsh, Mrs. Thomas.....Stephenson

MIDLAND COUNTY

Ballmer, Mrs. Robert.....1111 W. Sugnet Rd., Midland
Bernier, Mrs. Joseph.....Box 26, Sanford
Blackhurst, Mrs. Robert..306 W. Meadowbrook, Midland
Bowsher, Mrs. Robert.....901 St. Andrews, Midland
Bridge, Mrs. Robert.....409 E. St. Andrews, Midland
Bulmer, Mrs. Dan J.....3110 W. Nelson, Midland
Buskirk, Mrs. Maurice.....310 W. Nelson, Midland
Carsons, Mrs. Adah.....1414 Sugnet Road, Midland
Gay, Mrs. Harold.....4589 Ruhle Rd., Route 1, Coleman
Gordon, Mrs. Harold.....4113 Castle Dr., Midland
Gronemeyer, Mrs. Wm.....1009 St. Andrews, Midland
Holder, Mrs. B. B.....534 Woodcock, Midland
Howe, Mrs. Irvin.....R. 1, Sugnet Road, Midland
Howell, Mrs. Richard H.....710 Maple St., Midland
Ittner, Mrs. Martin.....509 W. Sugnet Road, Midland
Kaasa, Mrs. Laurin.....2011 Ashman, Midland
Lansborough, Mrs. Hester.....127 W. Nelson, Midland
Linsenmann, Mrs. Karl.....2604 Manor Drive, Midland
MacCallum, Mrs. Charles..1684 W. Sugnet Rd., Midland
Maynard, Mrs. William.....Coleman
Meisel, Mrs. Edward H.....413 Lingle Lane, Midland
Moench, Mrs. G. F.....2013 Jefferson St., Midland
Murphy, Mrs. J. E.....305 Federal St., Midland
O'Hora, Mrs. Bernard.....4105 Oak Court, Midland
Pike, Mrs. Melvin.....220 W. Nelson, Midland
Poznak, Mrs. Leonard.....1411 Crane Ct., Midland
Randolph, Mrs. S. H.....410 Jerome, Midland
Sherk, Mrs. Joseph.....161 Revere Street, Midland
Willison, Mrs. C. H.....3812 Greenfield Ct., Midland

MONROE COUNTY

Barker, Mrs. Vincent L.....104 W. Noble Ave., Monroe
Barrett, Mrs. Clarence D.....2133 Hollywood, Monroe
Blakey, Mrs. Leonard C.....330 Godfroy Ave., Monroe
Bond, Mrs. Wm. W.....475 Hollywood Dr., Monroe
Dusseau, Mrs. S. V.....Erie
Ewing, Mrs. Robt. T.....201 Macomb St., Monroe
Flanders, Mrs. L. P.....1434 Hurd Rd., Monroe
Frary, Mrs. R. A.....505 Strassbury Rd., Rt. 1, Monroe
Freud, Mrs. J. W.....212 Hollywood Dr., Monroe
Gelhaus, Mrs. W. J.....623 Scottwood, Monroe
Kelso, Mrs. S. N., Jr.....336 Cole Rd., Monroe
Laboe, Mrs. E. W.....424 Hollywood Dr., Monroe
Lammers, Mrs. J. P.....Ida
Lapp, Mrs. Chas.....Luna Pier
Loan, Mrs. George B.....50 Virginia Ct., Monroe
Long, Mrs. Edgar C.....715 Hollywood Dr., Monroe
McDonald, Mrs. T. A.....467 Hollywood Dr, Monroe
McMillan, Mrs. J. H.....417 E. Elm Ave., Monroe
Meier, Mrs. Walter.....306 S. Macomb, Monroe
Middleton, Mrs. Wm. J. S.....465 Borgess, Monroe
Newcomer, Mrs. S. R.....1536 Hollywood Dr., Monroe
Reisig, Mrs. A. H.....430 Hollywood Dr., Monroe
Sanger, Mrs. E. J.....716 Hollywood Dr., Monroe
Siffer, Mrs. J. H.....32 S. Macomb St., Monroe
Sisman, Mrs. Barnard.....524 Hollywood Dr., Monroe
Streicher, Mrs. R. G.....Colonial Drive, Monroe
Tomlinson, Mrs. Ledyard.....Newport
Wagar, Mrs. Spencer.....711 Hollywood Dr., Monroe
Weeks, Mrs. Vernon.....Sylvan Drive, Monroe
Williams, Mrs. R. J.....306 Godfroy Ave., Monroe

MUSKEGON COUNTY

Allen, Mrs. Richard.....2246 Estes St., Muskegon
August, Mrs. Ralph V.....Route 2, Spring Lake
Barnes, Mrs. James W.....5112 Osmun Rd., Montague
Beers, Mrs. Charles.....1428 Clinton St., Muskegon
Benedict, Mrs. Arthur.....1633 Clinton, Muskegon
Bolthouse, Mrs. Robert.....1641 Jefferson, Muskegon
Bond, Mrs. William.....1724 Peck St., Muskegon
Bradshaw, Mrs. Park....636 Ruddiman, North Muskegon
Busard, Mrs. J. Max.....3611 Henry St., Muskegon
Christopherson, Mrs. J. W.....1290 Dale Ave., Muskegon
Clapp, Mrs. Henry.....1639 Fifth St., Muskegon
Clark, Mrs. Harry.....1450 Leahy, Muskegon
Closz, Mrs. Harold.....1727 Jefferson St., Muskegon
DeLeeuw, Mrs. Henry.....2144 Peck St., Muskegon
Dykhuizen, Mrs. Harold.....110 E. Forest, Muskegon
Ellis, Mrs. Nicholas.....1883 Lakeshore Dr., Muskegon
Emerick, Mrs. R.....1714 Leahy, Muskegon
Engstrom, Mrs. Albert.....4954 Hunt, Montague
Fleischman, Mrs. Norman.....1310 Moulton Ave., North Muskegon
Fles, Mrs. Robert J.....1715 Peck St., Muskegon
Folsom, Mrs. John.....2488 Pine Grove, Muskegon
Gaikema, Mrs. E. W.....605 First St., North Muskegon
Garber, Mrs. Frank.....707 Ruddiman, North Muskegon
Gillard, Mrs. James.....1669 Peck St., Muskegon
Griffith, Mrs. Robert.....64 W. Larch, Muskegon
Hanley, Mrs. William.....2535 Pine Grove, Muskegon
Harryman, Mrs. James.....1694 Jefferson St., Muskegon
Hartwell, Mrs. Shattuck.....1665 Jefferson, Muskegon
Heneveld, Mrs. Edward.....82 W. Dale Ave., Muskegon
Heneveld, Mrs. Robert....1458 Montague St., Muskegon
Hill, Mrs. James K.....5463 Holton Rd., Twin Lakes
Holly, Mrs. Leland..3349 Scenic Drive, North Muskegon
Hornbeck, Mrs. Wm. J.....2510 Pine Grove, Muskegon
Joisted, Mrs. Arthur.....Mid Oak Dr., Interlaken, North Muskegon
Kane, Mrs. Thom.....1323 4th St., Muskegon
Kerr, Mrs. Howard....2378 Hadden, Glenside, Muskegon
Kleaveland, Mrs. Justin.....654 Wendover, Roodmont, Muskegon
Lapham, Mrs. Landon.....123 Colby, Whitehall
Lauretti, Mrs. Emil J.....1693 Jefferson St., Muskegon
LeFevre, Mrs. Louis.....500 Lake Dr., North Muskegon
LeFevre, Mrs. William....3033 Scenic Dr., Muskegon
Loder, Mrs. L. L.....1193 Ransom St., Muskegon
Maples, Mrs. Douglas.....814 Moulton, N. Muskegon
McNair, Mrs. John.....1395 Glen Ave., Muskegon
Medema, Mrs. Paul.....1661 Clinton St., Muskegon
Meengs, Mrs. Marvin.....972 Randall Rd., Muskegon
Morford, Mrs. Fred E.....Hamilton Apts, Muskegon
Mulder, Mrs. Lambertus.....1085 Apple, Muskegon
Mulligan, Mrs. A.....123 W. Larch, Muskegon
Myer, Mrs. Cliffton.....912 Lake, North Muskegon
Paterson, Mrs. Lester C.....2042 Seminole Rd., Muskegon
Pettinga, Mrs. Frank L.....834 E. Isabella Ave., Muskegon
Prentice, Mrs. Edwin....2325 Westwood Drive, Glenside, Muskegon
Price, Mrs. Leonard.....1182 Terrace St., Muskegon
Risk, Mrs. Robert D.....3980 Highgate Ave., Roodmont Muskegon
Scholle, Mrs. Norbert.....635 Cambridge Rd., Roodmont, Muskegon
Sears, Mrs. Richard.....1859 Spencer Dr., Muskegon
Shebesta, Mrs. E. M.....2342 Westwood Rd., Glenside, Muskegon
Stone, Mrs. M. E.....1541 Peck, Muskegon
Swenson, Mrs. Leland L.....3503 Scenic Dr., Muskegon
Teifer, Mrs. Charles.....1652 Peck St., Muskegon
Tellman, Mrs. H. C.....2417 Hadden, Glenside, Muskegon
Thornton, Mrs. Eugene S.....Circle Drive, Interlaken, North Muskegon
Tyler, Mrs. William.....1572 Jefferson, Muskegon
Vanderlaan, Mrs. J.....2200 Baker St., Muskegon Hts.

Vandervelde, Mrs. Clarence.....4042 Loomis, Muskegon
VanGelder, Mrs. William C.....948 Wendover Rd. Roodmont, Muskegon
Wagenaar, Mrs. Edward.....164 Catherine, Muskegon
White, Mrs. Warren G.....1567 Jiroch, Muskegon
Wiersema, Mrs. Silas.....1337 Peck, Muskegon
Wildgen, Mrs. Bernard..975 W. Seminole Rd., Muskegon
Wilson, Mrs. Pitt.....189 Houston, Muskegon

NEWAYGO COUNTY

Black, Mrs. Lulu.....Holton
Geerlings, Mrs. L. J.....Lake Drive, Fremont
Geerlings, Mrs. Willis.....28 East Oak Street, Fremont
Klein, Mrs. J. Paul.....40 East Pine Street, Fremont
Masters, Mrs. B. L.....415 E. Maple, Fremont
O'Neill, Mrs. John.....Whitecloud
VandenBerg, Mrs. Tunis.....413 E. Oak, Fremont

NORTH CENTRAL COUNTIES

Barstow, Mrs. Richard G.....220 E. Sheldon, Gaylord
Clippert, Mrs. C. G.....Lake Margrethe, Grayling
Coulter, Mrs. Keith D.....Gladwin
Crandell, Mrs. Clare H.....West Branch
Egle, Mrs. Joseph L...Northern Mich. T.B. San., Gaylord
Hasty, Mrs. Earl A.....115 Burgess, West Branch
Henig, Mrs. B. Elmore.....604 Peninsular, Grayling
Hornbeck, Mrs. Robert J.....Lewiston
Jardine, Mrs. Hugh M.....109 S. Third, West Branch
Libke, Mrs. Robert S.....E. Main, Gaylord
Martzowka, Mrs. M. A.....Roscommon
McKillop, Mrs. G. L.....303 E. Main, Gaylord
Oppy, Mrs. Charles L.....Roscommon
Rodda, Mrs. E. H.....Lake Margrethe, Grayling
Timreck, Mrs. Harold A.....Gladwin
Vilardo, Mrs. Ross.....West Branch

OAKLAND COUNTY

Abbott, Mrs. Vernon C.....111 Illinois, Pontiac
Albrecht, Mrs. Robert.....2925 Orchard Lk. Rd., Keego Harbor
Arnkoff, Mrs. Harry.....140 Illinois, Pontiac
Aulie, Mrs. Hal G.....1219 E. Dallas, Royal Oak
Baker, Mrs. Robert.....1129 Fairfax, Birmingham
Barker, Mrs. Chas.....5756 Franklin Rd., Birmingham
Bannow, Mrs. R. J.....23 Keswik, Bloomfield Hills
Bauer, Mrs. Ernest W.....48 W. Roberts, Hazel Park
Beattie, Mrs. W. G.....314 W. Maplehurst Ave., Ferndale
Belknap, Mrs. Warren F.....2020 Roseland, Royal Oak
Blackwell, Mrs. Leonard.....115 State, Pontiac
Blakeney, Mrs. James.....17 Utica, Pontiac
Boucher, Mrs. R. E.....5451 Brookdale, Birmingham
Bowers, Mrs. Chas.....213 Cedardale, Pontiac
Bradley, Mrs. E. L.....262 Josephine, Pontiac
Brown, Mrs. Arnold L.....2410 Cheltingham, Pontiac
Budd, Mrs. Alex.....440 Lake Park Dr., Birmingham
Bullard, Mrs. R. W.....8301 Foster Rd., Clarkston
Burgess, Mrs. Chas.....49 Oxford, Pleasant Ridge
Burke, Mrs. Chauncey G.....1123 Glengary Circle, Birmingham
Campbell, Mrs. M. D.....3 Sylvan Ave., Pleasant Ridge
Cefai, Mrs. A. F.....73 Miami Rd., Pontiac
Christie, Mrs. Edward.....632 Ardmore, Birmingham
Cobb, Mrs. Thomas.....4415 Motorway Dr., Pontiac
Collins, Mrs. Edward F.....453 W. Iroquois Rd., Pontiac
Darling, Mrs. C. G.....Lone Pine Ct., Pontiac
DeLawter, Mrs. H. H.....1298 Brookwood Lane, Birmingham
Deutsch, Mrs. Wm. L.....26695 York, Huntington Woods
Dobski, Mrs. Edwin.....3350 Eastpoint Lane, Pontiac
Dunn, Mrs. Lewis E.....18760 San Diego, Birmingham
Durocher, Mrs. Norman E.....2880 Old Orchard Dr., Pontiac
Dustin, Mrs. Robert.....1800 Graefield Rd., Birmingham
Elder, Mrs. Edward, Jr.....230 Starr, Pontaic
Evseef, Mrs. Geo.....4506 Cooper, Royal Oak
Fink, Mrs. L. J.....9 Ottawa Drive, Pontiac
Foust, Mrs. E. W.....28145 Lathrup, Birmingham
Fox, Mrs. Ralph M.....230 Westwood, Birmingham
Gaensbauer, Mrs. Ferd.....127 Illinois, Birmingham
Gates, Mrs. Edward.....16980 Birwood, Birmingham
Gatley, Mrs. C. R.....111 Oneida, Pontiac
Gehringer, Mrs. N. F.....326 W. Iroquois, Pontiac
Geist, Mrs. E.....2035 Pontiac Rd., Rochester
Gerls, Mrs. Frank.....536 W. Huron, Pontiac
Gibson, Mrs. Richard.....1011 Hazel, Birmingham
Gill, Mrs. Mathew J.....3115 Franklin Rd., Pontiac
Goode, Mrs. Norman J., Jr.....302 E. Maryland, Royal Oak
Hackett, Mrs. Daniel J.....782 Oswego Dr., Pontiac
Haddock, Mrs. Douglass..5700 Pontiac Trail, RFD No. 5, Pontiac
Hardy, Mrs. Geo. C.....240 Oak Lane R No. 2, Rochester
Hendron, Mrs. Owen.....Pembroke Drive, Bloomfield Hills
Hershey, Mrs. Lynn N.....31275 Franklin Road, Birmingham
Hoekman, Mrs. A.....1740 Hamilton Dr., Pontiac
Hosner, Mrs. Robert.....1712 Sycamore, Royal Oak
Howlett, Mrs. E. V.....1029 James K. Blvd., Pontiac
Hoyt, Mrs. D. F.....7530 Maceday Lake Rd., Clarkston
Ignatius, Mrs. A. A.....3017 Oakman Blvd., Detroit
Keeffe, Mrs. E.....468 Williamsbury, Birmingham
Kemp, Mrs. F. J.....85 Barrington Rd., Pontiac
Kemp, Mrs. Lloyd.....1055 Yarmouth, Birmingham
Kendrick, Mrs. H. F.....630 East Bennett Rd., Pontiac
Koehler, Mrs. Wm.....1907 W. Houstonia, Royal Oak
LaMarche, Mrs. Norman.....4139 Wakefield, Berkley
Levine, Mrs. Bernard.....25101 Coolidge, Oak Park
Ling, Mrs. Theodore W.....33221 Shiawassee, Farmington
Lyons, Mrs. R. T.....200 Oneida, Pontiac
Markle, Mrs. John.....8 Fairwood, Pleasant Ridge
Marra, Mrs. John J.....1430 Nakomis, Lake Orion
Mason, Mrs. Robert.....564 Overhill, Birmingham
Maxim, Mrs. Edward.....2635 Hickory Ct., Pontiac
McConkie, Mrs. J. P.....768 Larchlea, Birmingham
Mehas, Mrs. Constantine....150 Dorchester, Birmingham
Mercer, Mrs. Frank.....87 Ottawa Dr., Pontiac
Meisner, Mrs. H. E.....12910 Oak Pk., Oak Park
Miller, Mrs. H. L.....1832 Greenleaf, Royal Oak
Monroe, Mrs. John.....55 Neome, Pontiac
Nalepa, Mrs. Eugene.....2332 Rutherford Rd., Pontiac
Naz, Mrs. John N.....2726 Orange Grove, R. No. 7, Pontiac
Neafie, Mrs. C. A.....493 Orchard Lake Rd., Pontiac
Norup, Mrs. John.....1772 Edgewood, Berkley
Olsen, Mrs. R. E.....3325 Franklin Rd., Pontiac
Palmer, Mrs. Hayden.....269 Ottawa, Pontiac
Patrick, Mrs. Charles.....4350 Pontiff, Waterford
Pearce, Mrs. James F.....10855 Hart, Huntington Woods
Petroff, Mrs. George N.....219 Cherokee, Pontiac
Porritt, Mrs. Ross.....131 Chippewa, Pontiac
Prather, Mrs. F. W.....701 E. Liberty, Milford
Prosser, Mrs. M. G.....2854 Orange Grove, Pontiac

Quinn, Mrs. James R., Jr.....223 Marlboro, Pontiac
Raynale, Mrs. Geo. P.....423 Tooting Lane, Birmingham
Reid, Mrs. Fred T.....47 Broadacre, Clawson
Riggs, Mrs. Harry L.....234 S. Johnson, Pontiac
Rupp, Mrs. E. C.....202 Crane Ave., Royal Oak
Russell, Mrs. V. P.....9 Elm Park, Pleasant Ridge
Ruva, Mrs. Joseph.....1280 Club Dr., Pontiac
Schuneman, Mrs. Howard....1312 Vinsetta, Royal Oak
Segula, Mrs. Robert.....1407 Avondale, Pontiac
Sempere, Mrs. Chas.....2225 Avondale, Pontiac
Sheridan, Mrs. Michael.....10415 Lincoln, Royal Oak
Shadley, Mrs. Maxwell.....94 Ottawa Dr., Pontiac
Smith, Mrs. D. S.....135 Wenonah Dr., Pontiac
Spencer, Mrs. L. H.....26039 Huntington, Huntington Woods
Spoehr, Mrs. Eugene.....17 Elm Park, Pleasant Ridge
Spohn, Mrs. Earl.....414 Hendrie Blvd., Royal Oak
Stageman, Mrs. John.....6065 Middle Lake Road, Clarkston
Stahl, Mrs. Harold.....850 Lapeer Rd., Oxford
Stanley, Mrs. William.....24 Cambridge, Pleasant Ridge
Steffes, Mrs. E. M.....17724 Beverly Blvd., Berkley
Steinberg, Mrs. Norman N.....26550 Dundee Road, Huntington Woods
Sutton, Mrs. Palmer E.....1617 Vinsetta, Royal Oak
Swickle, Mrs. Edward.....2643 Burnham, Clawson
Vanden Berg, Mrs. K.....4045 Lakewood, Pontiac
Virga, Mrs. Geo. M.....1602 Cedar Hill, Royal Oak
Von Haltern, Mrs. Harold.....3670 Erie Dr., Pontiac
Van Zoren, Mrs. Jay.....2057 E. Maple, Birmingham
Wake, Mrs. Douglas....1307 S. Washington, Royal Oak
Webber, Mrs. Lynn.....Oak City T. B. San., Pontiac
White, Mrs. R. Hamilton....552 Monhegan, Birmingham
Whitehouse, Mrs. J.....3054 Edgewater Drive, Pontiac
Wigent, Mrs. Ralph.....101 Mohawk, Pontiac
Williams, Mrs. John.....6570 Commerce Lake Rd., Pontiac
Zujko, Mrs. Alphonse J.....132 Illinois Rd., Pontiac

OTTAWA COUNTY

Arendshorst, Mrs. Wm.....131 E. 31st St., Holland
Beernink, Mrs. E.....430 Duncan Ct., Grand Haven
De Vries, Mrs. Herk.....Waukazoo, Holland
DeYoung, Mrs. F.....216 N. Buchanan, Spring Lake
Frieswyck, Mrs. Melvin.....148 So. Division St., Zeeland
Groat, Mrs. Frank.....633 Franklin, Grand Haven
Kemme, Mrs. G. J.....R No. 3, Zeeland
Kools, Mrs. Willis.....194 W. 11th St., Holland
Kuipers, Mrs. W. W.....616 North Shore, Holland
Rottschaefer, Mrs. Wm.....993 W. 32nd St., Holland
Rypkema, Mrs. W.....1523 Sheldon, Grand Haven
Ten Have, Mrs. R.....1016 Sheldon, Grand Haven
Timmerman, Mrs. E. C.....Coopersville
Van Appledorn, Mrs. Chester.....1067 South Shore, Holland
Wells, Mrs. Kenneth.....117 E. Savidge, Spring Lake
Westrate, Mrs. Wm., Jr.....50 E. 10th St., Holland
Yff, Mrs. John.....511 E. Central, Zeeland

SAGINAW COUNTY

Ackerman, Mrs. G. L.....316 Brockway Place, Saginaw
Albers, Mrs. M. J.....220 Ardussi, Saginaw
Alger, Mrs. George.....1057 Brockway Ct., Saginaw
Anderson, Mrs. W. K.....935 St. Andrews Rd., Saginaw
App, Mrs. Robert.....2203 State St., Saginaw
Bass, Mrs. V. B.....916 Adams St., Saginaw
Bellinger, Mrs. Don H.....215 Garden Lane, Saginaw
Bishop, Mrs. H. M.....405 Superior St., Saginaw
Brender, Mrs. F. P.....101 Hubinger, Frankenmuth
Bruggers, Mrs. Lawrence....2543 N. Woodbridge, Saginaw
Bruton, Mrs. Martin F.....1815 Passolt, Saginaw
Bucklin, Mrs. R. V.....2112 Adams Blvd., Saginaw
Bullington, Mrs. B. M.....1924 Handley, Saginaw
Busch, Mrs. F. J.....40 E. Hannum Blvd., Saginaw
Butler, Mrs. M. G.....1440 Hemmeter Rd., Saginaw
Cady, Mrs. F. J.....20 W. Hannum Blvd., Saginaw
Cady, Mrs. F. J. Jr.....1527 Vermont, Saginaw
Cambridge, Mrs. V. W.....1219 Fitzhugh, Saginaw
Cameron, Mrs. Allan K.....1602 Howard St., Saginaw
Campbell, Mrs. L. A.....335 Brockway Place, Saginaw
Caumartin, Mrs. Hugh T...1537 S. Washington, Saginaw
Chisena, Mrs. P. R.....6227 Dixie Hwy., Bridgeport
Claytor, Mrs. A. A.....603 N. Third, Saginaw
Comer, Mrs. Walter H.....120 Alice St., Saginaw
Cortopassi, Mrs. A. J.....326 S. Washington, Saginaw
Cortopassi, Mrs. V. E.....221 Ardussi, Saginaw
Cory, Mrs. C. W.....4 Ardmore Place, Saginaw
Curts, Mrs. J. H.....1 E. Hannum Blvd., Saginaw
Durman, Mrs. D. C.....1530 Ottawa Blvd., Saginaw
Ely, Mrs. Cecil W.....1820 Janes Ave., Saginaw
Farley, Mrs. A. W.....1506 State St., Saginaw
Feeheley, Mrs. Robert.....411 S. Porter St., Saginaw
Fleschner, Mrs. Thos. E.....7444 W. Birch Run Road Birch Run
Gage, Mrs. D. P.....134 Borland St., Saginaw
Galsterer, Mrs. E. C.....417 Brockway Place, Saginaw
Gamon, Mrs. Adam E.....905 N. Michigan, Saginaw
Gardner, Mrs. J. H.....416 Ann Street, Saginaw
Gerard, Mrs. Roy.....2210 N. Madison, Saginaw
Gomon, Mrs. L. D.....16 Edgewood Rd., Saginaw
Goodsell, Mrs. John.....132 Graham St., Saginaw
Grigg, Mrs. A. P.....1015 Gratiot, Saginaw
Hand, Mrs. Eugene.....1487 S. Washington St., Saginaw
Harvie, Mrs. L. C.....417 Ardussi, Saginaw
Heavenrich, Mrs. R. N.....225 Garden Lane, Saginaw
Helmkamp, Mrs. H. O.....2311 Mershon, Saginaw
Hester, Mrs. E. G.....2525 N. Court, Saginaw
Hill, Mrs. V. L.....1270 Hemmeter Rd., Saginaw
Hutchison, Mrs. John W.....521 Madison, Saginaw
Hyslop, Mrs. William T.....2008 Harry, Saginaw
Jaenichen, Mrs. Robert.....419 S. Weadock, Saginaw
James, Mrs. J. W.....253 Snow, Saginaw
Jarvi, Mrs. Rudolph.....3051 Congress, Saginaw
Jiroch, Mrs. R. S.....722 S. Warren, Saginaw
Johnstone, Mrs. K. T.....1050 Fischer Dr., Saginaw
Kemp, Mrs. J. N.....1322 S. Michigan, Saginaw
Kempton, Mrs. R. M.....415 Hayden St., Saginaw
Kerr, Mrs. W. B.....1903 Bond St., Saginaw
Keyes, Mrs. James.....8152 Main St., Birch Run
Kickham, Mrs. Edward.....2525 Mershon St., Saginaw
Kowals, Mrs. F. V.....1280 Glendale, Saginaw
Kramer, Mrs. Charles.....1721 Brenner, Saginaw
Kretschmer, Mrs. T. V.....700 Remington, Saginaw
Kruger, Mrs. Harold.....402 Ricoma Beach, Bay City
Lassignal, Mrs. Jules C.....1312 State St., Saginaw
Ling, Mrs. Kenneth C.....Hemlock
Lohr, Mrs. O. W.....614 Madison, Saginaw
Luger, Mrs. Fred I.....1970 N. River Rd., Saginaw
Lurie, Mrs. Robert I.....58 Davis Rd., Saginaw
Lyle, Mrs. R. C.....3821 State St., Bridgeport
MacKinnon, Mrs. E. D.....1616 Court St., Saginaw
MacMeekin, Mrs. J. W.....Center Woods, Saginaw
Manning, Mrs. J. Edward.....1627 Brown St., Saginaw
Manning, Mrs. John W. III.....821 Congress, Saginaw
Markey, Mrs. F. L.....2011 Brockway, Saginaw
Markey, Mrs. J. P.....2425 Adams Blvd., Saginaw
Martzowka, Mrs. W. P.....2330 Delaware Blvd., Saginaw
Matthews, Mrs. H. C.....14 Benton Rd., Saginaw
Mayne, Mrs. Harold E.....1585 Glendale, Saginaw
McEwen, Mrs. Wm.....820 Orchard Ct., Saginaw
McKinney, Mrs. A. R.....1403 Howard St., Saginaw
Meyer, Mrs. H. J.....6243 Dixie Hwy., Bridgeport
Miller, Mrs. Glen F.....1803 N. Michigan, Saginaw
Morgrette, Mrs. L. J.....1820 Stark St., Saginaw

Mudd, Mrs. R. D.....1001 Hoyt St., Saginaw
Murphy, Mrs. A. P.....201 Superior, Saginaw
Murray, Mrs. C. R.....183 Glendale, Saginaw
Murray, Mrs. M. J.....1925 Coolidge Rd., Saginaw
Nelson, Mrs. O. A.....1654 Lathrup, Saginaw
Northway, Mrs. Robert O.....12 Edgewood Rd., Saginaw
Novy, Mrs. F. O.....420 S. Jefferson, Saginaw
Olson, Mrs. C. P.....2505 Court, Saginaw
Phillips, Mrs. H. A.....2420 Adams Blvd. Saginaw
Pietz, Mrs. Frederick.....2139 Gratiot, Saginaw
Potvin, Mrs. C. D.....206 S. Carolina, Saginaw
Powers, Mrs. Robt.....142 Wylie Court, Saginaw
Prather, Mrs. Perry.....519 Liberty, Saginaw
Richards, Mrs. N. W.....2111 Brockway, Saginaw
Richter, Mrs. H. J.....2305 Adams Blvd., Saginaw
Ruskin, Mrs. David B.....246 Lockwood, Saginaw
Ryan, Mrs. R. S.....623 S. Park St., Saginaw
Sample, Mrs. J. T.....602 Rust St., Saginaw
Sargent, Mrs. D. V.....1632 Stark St., Saginaw
Schaiberger, Mrs. Elmer.....1520 N. Michigan, Saginaw
Schneider, Mrs. A. N.....1902 No. Bond, Saginaw
Schultz, Mrs. Frank.....Chesaning
Sharp, Mrs. M. C.....2202 Barnard St., Saginaw
Sheldon, Mrs. S. A.....2 Holland Court, Saginaw
Siler, Mrs. D. E.....47 Ardmore Pl., Saginaw
Skowronski, Mrs. C. A.....1401 E. Genesee, Saginaw
Slack, Mrs. W. K.....625 S. Washington, Saginaw
Smith, Mrs. Chandler.....1920 Stone, Saginaw
Stahly, Mrs. E. H.....1900 Coolidge Ave., Saginaw
Stander, Mrs. A. C.....1411 Court St., Saginaw
Stewart, Mrs. G. W.....4343 State Rd., Saginaw
Sulfridge, Mrs. Hugh, Jr.....1485 N. River Rd., Saginaw
Thompson, Mrs. A. B.....2144 Ottawa, Saginaw
Tiedke, Mrs. G. E.....2339 Delaware Blvd., Saginaw
Toshach, Mrs. Clarence.....3655 Schust Rd., Saginaw
Volk, Mrs. V. K.....3340 Hospital Rd., Saginaw
Watson, Mrs. R. S.....730 N. Mason, Saginaw
Weeks, Mrs. E. G.....1413 Howard St., Saginaw
Weidner, Mrs. Garland.....1801 Brenner, Saginaw
Weiss, Mrs. Arno.....4945 Dundale Ct., Saginaw
Westlund, Mrs. Norman.....131 S. Charles, Saginaw
Wright, Mrs. E. M.....128 Lynn Court, Saginaw
Yntema, Mrs. Stuart.....3 E. Hannum Blvd., Saginaw

ST. CLAIR COUNTY

Bailey, Mrs. Robert.....4579 Lake Shore, Port Huron
Banting, Mrs. Kenneth....3540 Gratiot Ave., Port Huron
Battley, Mrs. J. C. S.....2038 Military, Port Huron
Beck, Mrs. F. K.....2902 Military St., Port Huron
Beer, Mrs. J. F.....711 N. Riverside Dr, St. Clair
Benjamin, Mrs. C. C.....3023 Gratiot Ave., Port Huron
Borden, Mrs. Charles....4520 Lake Shore Rd., Port Huron
Bottomley, Mrs. T. H.....4440 Gratiot Ave., Port Huron
Boughner, Mrs. W. F.....Algonac
Bowden, Mrs. Wm. S.....551 Maple, Marine City
Carrie, Mrs. Robt.....Algonac
Cleland, Mrs. W. D.....1320 Court St., Port Huron
Clifford, Mrs. Robert P.....910 N. Riverside, St. Clair
Clyne, Mrs. B. C.....Yale
Coury, Mrs. J. J.....4254 Gratiot Ave., Port Huron
Davison, Mrs. Wm.....2920 Military, Port Huron
Douvas, Mrs. Nicholas.....1712 Court St., Port Huron
Fitzgerald, Mrs. E. W.....4129 Gratiot Ave, Port Huron
Gholz, Mrs. Anthony C.....1407 Court St., Port Huron
Hazledine, Mrs. H. J.....2918 Forest, Port Huron
Holcomb, Mrs. R. J.....141 S. Main St., Marine City
Hoyt, Mrs. C. N.....67 Gratiot Blvd., R 2, Port Huron
Kirker, Mrs. F. O.....St. Clair
Koch, Mrs. Donald A.....4802 Lake Shore Road, Port Huron
Lauridsen, Mrs. James....2833 Gratiot Ave., Port Huron
Licker, Mrs. R. R.....215 Gratiot Blvd., Rt. 2 Marysville
Ludwig, Mrs. Claude.....3550 Stone St., Port Huron
Ludwig, Mrs. Fred.....2864 Military, Port Huron
Martin, Mrs. Clyde.....3786 Gratiot Ave., Port Huron
McCoy, Mrs. Leslie F...4673 Lake Shore Rd., Port Huron
Meredith, Mrs. E. W.....4380 Gratiot Ave., Port Huron
Novak, Mrs. Walter.....2651 Military St., Port Huron
Patterson, Mrs. D. W...4240 Keewahdin Dr., Port Huron
Rowe, Mrs. John.....3360 W. Water St., Port Huron
Schaefer, Mrs. W. A.....2551 Military St., Port Huron
Selby, Mrs. C. S.....1916 Military, Port Huron
Serniak, Mrs. John....5014 Lake Shore Rd., Port Huron
Sites, Mrs. Edgar C. ....2704 Military Ave., Port Huron
Tomsu, Mrs. Glenn.....3180 Gratiot Ave., Port Huron
Townley, Mrs. Chas. O.....2815 Military, Port Huron
Treadgold, Mrs. Douglas....3205 Armour St., Port Huron
Ulmer, Mrs. Arthur H.....4476 Gratiot Ave., Port Huron
Van Rhee, Mrs. George....3137 Conger St., Port Huron
Walker, Mrs. Sidney....5090 Lake Shore Rd., Port Huron
Wass, Mrs. Henry C.....923 N. Riverside, St. Clair
Wilson, Mrs. Norman.....Marine City

ST. JOSEPH COUNTY

Berg, Mrs. L. A.....106 E. Chicago Rd., Sturgis
Blood, Mrs. J. V.....617 S. Main St., Three Rivers
Braham, Mrs. W. G.....105 N. Lakeview, Sturgis
Brunson, Mrs. A. E.....Mortimer St., Sturgis
Evans, Mrs. Robert H.....105 S. Lakeview, Sturgis
Fiegel, Mrs. A. S.....500 Michigan Ave., Sturgis
Fortner, Mrs. R. J.....RFD #1, Constantine
Jacobwitz, Mrs. J. W.....222 West St., Three Rivers
Lepard, Mrs. O. L.....606 E. Chicago Rd., Sturgis
O'Dell, Mrs. Chas.....302 East St., Three Rivers
O'Dell, Mrs. John.....721 Elm, Three Rivers
Penzotti, Mrs. Stanley.....402 South Constantine, Three Rivers
Porter, Mrs. C. G.....196 E. Michigan, Three Rivers
Shaw, Mrs. G. D.....R.R. #2, Three Rivers
Sheldon, Mrs. John.....610 Cherry St., Sturgis
Smith, Mrs. Robert D.....234 S. Main, Colon
Tesar, Mrs. Frank J.....104 W. Market, Centreville
Weisheit, Mrs. Hans.....200 Michigan, Sturgis
Zimont, Mrs. R. D.....435 White Pigeon Rd., Constantine

SANILAC COUNTY

Blanchard, Mrs. Ernest.....Deckerville
Gift, Mrs. Weldon.....Marlette
Hart, Mrs. Robert K.....21 S. Howard Ave., Croswell
Jayson, Mrs. Michael.....Marlette
McCrea, Mrs. John.....Marlette
McGunegle, Mrs. K. T.....Sandusky
Muir, Mrs. Neil.....269 Howard Ave., Croswell
Tweedie, Mrs. S. M.....Sandusky
Tweedie, Mrs. G. E.....Sandusky
Winfield, Mrs. Raymond.....Marlette

SHIAWASSEE COUNTY

Arnold, Mrs. A. L.....RR. 1, Ovid
Austin, Mrs. Eugene.....635 N. Ball St., Owosso
Bach, Mrs. Norman F.....
1201 N. Washington St., Owosso
Bennett, Mrs. George.....203 W. Main St., Elsie
Brenner, Mrs. Erwin.....500 E. Oliver, Owosso
Brown, Mrs. Richard C.....658 First St., Owosso
Brown, Mrs. R. J.....915 King St., Owosso
Chipman, Mrs. Elwood.....502 W. Williams St., Owosso
Graves, Mrs. James.....221 E. Oliver St., Owosso
Greene, Mrs. I. W.....515 N. Washington St., Owosso
Hoshal, Mrs. Verne L.....Durand
Hume, Mrs. H. A.....RFD #6, Owosso
Janci, Mrs. Julius.....213 E. Mason St., Owosso
MacGregor, Mrs. John.....202 Jennett St., Owosso
McKnight, Mrs. Edwin R.....
320 N. Washington St., Owosso
Merz, Mrs. W. T.....1018 N. Washington St. Owosso
Pochert, Mrs. R. C.....1254 N. Shiawassee St., Owosso
Richards, Mrs. Chester.....Durand
Sahlmark, Mrs. Joseph.....203 N. Cedar St., Owosso
Slagh, Mrs. Earl N.....Elsie
Wachtel, Mrs. Andrew S.....207 N. Cedar, Owosso
Weinkauf, Mrs. William.....415 W. Mark St., Corunna
Weston, Mrs. Claude....1226 N. Washington St., Owosso

TUSCOLA COUNTY

Ballard, Mrs. J. H.....Cass City
Dickerson, Mrs. W. W.....Caro
Donahue, Mrs. H. T.....Cass City
Elmendorf, Mrs. Edward.....Vassar
Flett, Mrs. Richard.....Millington
Gilbert, Mrs. Donald.....Mayville
Gugino, Mrs. Frank.....Reese
Howlett, Mrs. R. R.....Caro
Merrill, Mrs. E. H.....Caro
Miles, Mrs. Edward.....Caro
Morris, Mrs. F. L.....Cass City
Nigg, Mrs. H. L.....308 S. State St., Caro
Savage, Mrs. R. L.....Caro
Swanson, Mrs. E. C.....Vassar

VAN BUREN COUNTY

Boothby, Mrs. Carl F.....Hartford
Buckborough, Mrs. M. W...Ainsworth Dr., South Haven
Cooper, Mrs. Joseph.....Bangor
Copeland, Mrs. Evan L.....West Sherwood St., Decatur
Diephuis, Mrs. Bert.....42 Cass, South Haven
Dillon, Mrs. Thomas J...8210 E. Michigan Rd., Paw Paw
Gano, Mrs. Avison.....38 E. Monroe, Bangor
Itzen, Mrs. J. F.....1023 Phoenix, South Haven
Kleber, Mrs. John A.....228 Erie St., South Haven
Loomis, Mrs. F. J.....Paw Paw
McFadden, Mrs. R. I.....Bloomingdale
Millard, Mrs. David J.....Paw Paw
Morgan, Mrs. Dale....210 Michigan Ave., South Haven
Penoyar, Mrs. C. L.....South Haven
Spalding, Mrs. R. W.....Gobles
Staggs, Mrs. Adelbert.....Box 38, Hartford
Steele, Mrs. Arthur H.....Paw Paw
Ten Houten, Mrs. Chas.....Paw Paw
Terwilliger, Mrs. Edwin H.....
216 Michigan Ave., South Haven
Urist, Mrs. Martin.....South Haven
Young, Mrs. William R.....Lawton

WASHTENAW COUNTY

Alexander, Mrs. John....788 Arlington Blvd., Ann Arbor
Alford, Mrs. Barry.....14001 Beck Rd., Plymouth
Allen, Mrs. Arthur.....5 Harvard Place, Ann Arbor
Atchinson, Mrs. R. M.....332 Rogers St., Northville
Barlow, Mrs. R. Craig.....1305 Arbor View, Ann Arbor
Barr, Mrs. A. S.....2701 Brockman Blvd., Ann Arbor
Bassow, Mrs. Paul....2220 Washtenaw Ave., Ann Arbor
Bauer, Mrs. Gerhard.....1612 Granger, Ann Arbor
Baum, Mrs. William.....2016 Shadford Rd., Ann Arbor
Beebe, Mrs. Hugh M.....
1717 S. University Ave., Ann Arbor
Beierwaltes, Mrs. Wm.....1204 Bydding Rd., Ann Arbor
Belote, Mrs. G. H.....1710 Morton, Ann Arbor
Belser, Mrs. Walter.....2101 Woodside Rd., Ann Arbor
Bosch, Mrs. H.....206 W. Dunlap, Northville
Brown, Mrs. William.....1111 Miner St., Ann Arbor
Botch, Mrs. E. S.....906 Spring St., Ann Arbor
Campbell, Mrs. Darell.....1701 Shadford Rd., Ann Arbor
Carron, Mrs. D. P.....1707 Harding Rd., Ann Arbor
Clyde, Mrs. Ensign .....1298 Sheridan, Plymouth
Coller, Mrs. Frederick..2105 Wallingford Rd., Ann Arbor
Crook, Mrs. Clarence..2112 Wallingford Rd., Ann Arbor
Cross, Mrs. Thomas.....1311 Iroquois, Ann Arbor
Cummings, Mrs. H. H.....1020 Ferdon Rd., Ann Arbor
Curtis, Mrs. A. C.....2122 Melrose Avenue, Ann Arbor
Davenport, Mrs. Fred M.....1308 Martin Pl., Ann Arbor
DeJong, Mrs. R. N.....1526 Harding Rd., Ann Arbor
DeTar, Mrs. J. S.....Milan
DeWeese, Mrs. M.....20 Heatheridge, Ann Arbor
Dingman, Mrs. Reed O.....1407 Lincoln Ave., Ann Arbor
Dolfin, Mrs. W. E.....1507 Ottawa Rd., Ann Arbor
Doorn, Mrs. Henry.....1110 Miner, Ann Arbor
Droske, Mrs. Lloyd.....Ypsilanti State Hosp., Ypsilanti
Dryer, Mrs. C. K.....3033 Sophia, Wayne
Duff, Mrs. Ivan.....500 W. Beech St., Ann Arbor
Dukay, Mrs. Alexander....Ypsilanti State Hosp., Ypsilanti
Edmunds, Mrs. William.....6395 Rossback, Ypsilanti
Engleke, Mrs. Otto.....810 Hutchins Ave., Ann Arbor
Evans, Mrs. T. N.....707 Henry, Ann Arbor
Falls, Mrs. Harold.....1525 Harding Rd., Ann Arbor
Fink, Mrs. George.....411 Linda Vista, Ann Arbor
Fralick, Mrs. Bruce.....2101 Belmont, Ann Arbor
Francis, Mrs. Thomas....1015 Berkshire Rd., Ann Arbor
French, Mrs. A. J.....409 Mark Hannah, Ann Arbor
Frost, Mrs. Lyle.....309 N. Washington, Ypsilanti
Frye, Mrs. Carl.....2025 Hill, Ann Arbor
Furstenberg, Mrs. A. C.....2240 Belmont, Ann Arbor
Ganzhorn, Mrs. E. C.....2705 Whitmore Lake Rd., Ann Arbor
Gates, Mrs. John.....715 S. Forest, Ann Arbor
Getting, Mrs. V. A.....1200 Arlington, Ann Arbor
Gotz, Mrs. Alexander.....709 Sunset, Ann Arbor
Gould, Mrs. Stewart.....2309 Yost, Ann Arbor
Graves, Mrs. James.....Ypsilanti State Hosp., Ypsilanti
Grawn, Mrs. Frank.....605 Pearl, Ypsilanti
Haas, Mrs. Reynold....2200 Vinewood Blvd., Ann Arbor
Hagerman, Mrs. G. W.....2124 Tuomy Rd., Ann Arbor
Hammond, Mrs. Walter W., Jr.....302 Sunset St., Plymouth
Handorf, Mrs. H.....300 Wing Court, Northville
Hannum, Mrs. M. R.....Milan
Harrell, Mrs. R.....114 N. Division St., Ann Arbor
Harris, Mrs. Bradley.....206 S. Washington, Ypsilanti
Harris, Mrs. Scott.....220 Pearl, Ypsilanti
Henderson, Mrs. John....2113 Devonshire Rd., Ann Arbor

Himler, Mrs. Leonard E.....1225 Fair Oaks Parkway, Ann Arbor
Hodges, Mrs. F. J.....5 Geddes Heights, Ann Arbor
Holt, Mrs. John.....1041 Olivia, Ann Arbor
House, Mrs. F. B.....1240 Crosby Crescent, Ann Arbor
Howard, Mrs. S. C.....2009 Devonshire, Ann Arbor
Kabza, Mrs. Theodore.....2310 Fernwood, Ann Arbor
Kambly, Mrs. A. H.....1602 Leaird, Ann Arbor
Kemper, Mrs. John.....320 Juniper Lane, Barton Hills, Ann Arbor
Kennedy, Mrs. Ralph.....3416 Oakwood, Ann Arbor
Kern, Mrs. Wheeler.....24801 Fairmount Dr., Dearborn
Kretzschmar, Mrs. Norman R.....715 South Forest, Ann Arbor
LaFever, Mrs. S. L.....2121 Melrose, Ann Arbor
Lovell, Mrs. Robert.....725 Sunset, Ann Arbor
Lugg, Mrs. Robert.....1309 S. University, Ann Arbor
Magee, Mrs. Kenneth R...1349 Marlbore Dr., Ann Arbor
Magielski, Mrs. John E.....404 Westwood, Ann Arbor
Mallery, Mrs. O. Tod.....1611 Wells, Ann Arbor
Maher, Mrs. J. A.....419 North Ingalls, Ann Arbor
Marshall, Mrs. Mark.....918 S. Forest Ave., Ann Arbor
Martin, Mrs. D. W.....212 N. Mansfield, Ypsilanti
Mason, Mrs. S.....Box A. Ypsilanti
Mathews, Mrs. Kenneth.....322 N. State St., Ann Arbor
Maxwell, Mrs. J. H.....2139 Melrose, Ann Arbor
McWilliams, Mrs. John R.....2402 Brockman, Ann Arbor
Meyers, Mrs. Dean.....2220 Washtenaw, Ann Arbor
Milford, Mrs. A. F.....1203 Whittier Road, Ypsilanti
Muehlig, Mrs. G. F.....1520 White St., Ann Arbor
Nelson, Mrs. Roger....1400 Mark Hannah Pl., Ann Arbor
Newton, Mrs. C. W.....1250 Ferdon Rd., Ann Arbor
Nord, Mrs. Chas.....2409 Yost, Ann Arbor
Obenauf, Mrs. Walter....Ypsilanti State Hosp., Ypsilanti
O'Connor, Mrs. Sylvester....1660 Arlington, Ann Arbor
Overy, Mrs. Donald.....1125 Bydding Rd., Ann Arbor
Parnall, Mrs. Chris.....510 Onondaga, Ann Arbor
Peet, Mrs. Max M.....2030 Hill Street, Ann Arbor
Pitkin, Mrs. John.....1316 Forest Park, Ann Arbor
Pitts, Mrs. Kenneth.....Ypsilanti State Hosp., Ypsilanti
Pollard, Mrs. H. M.....2012 Vinewood, Ann Arbor
Rae, Mrs. James W.....580 Rock Creek Dr., Ann Arbor
Ratliff, Mrs. R. K.....231 Corrie Rd., Barton Hills, Ann Arbor
Reichert, Mrs. R. E.....3516 Edgewood, Ann Arbor
Rekshan, Mrs. Walter.....1562 McLain, Allen Park
Riecker, Mrs. Herman.....2109 Wallingford Rd., Ann Arbor
Riggs, Mrs. Harold.....2119 Devonshire Rd., Ann Arbor
Robinson, Mrs. Wm. D.....1810 Cayuga, Ann Arbor
Ross, Mrs. Howard....180 Underdown Rd., Barton Hills, Ann Arbor
Saunders, Mrs. Allen.....1514 White, Ann Arbor
Sayre, Mrs. George.....1208 Whittier Blvd., Ypsilanti
Schneider, Mrs. Richard C.....1003 Packard, Ann Arbor
Schoch, Mrs. Henry.....808 Princeton, Ann Arbor
Schumacher, Mrs. W. E.....1455 Stein Rd., Ann Arbor
Scovill, Mrs. Henry.....1313 W. Cross St., Ypsilanti
Seevers, Mrs. M. H.....620 Oxford Rd., Ann Arbor
Seime, Mrs. Reuben.....11 N. Hamilton St., Ypsilanti
Shaw, Mrs. John.....1900 Dexter Rd., Ann Arbor
Sheldon, Mrs. John.....2121 Tuomy Road, Ann Arbor
Sink, Mrs. Emory.....1546 Packard St., Ann Arbor
Spears, Mrs. Clarence.....1307 Pearl, Ypsilanti
Struthers, Mrs. J. N. P.....Box A, 3501 Willis Rd., Ypsilanti
Sturgis, Mrs. C. C.....609 Stratford Dr., Ann Arbor
Sundwahl, Mrs. John.....1520 White, Ann Arbor
Taylor, Mrs. William.....1244 Ferdon St., Ann Arbor
Thieme, Mrs. E. T.....3 Geddes Heights, Ann Arbor
Towsley, Mrs. Harry A.....1000 Berkshire Rd., Ann Arbor
Waggoner, Mrs. R. W.....3333 Geddes Rd., Ann Arbor
Weinbaum, Mrs. Jack.....2388 Yost Blvd., Ann Arbor
Westover, Mrs. Charles.....1375 West Ann Arbor Trail Plymouth
Wicht, Mrs. P. J.....1386 W. Michigan Ave., Ypsilanti
Williams, Mrs. H. R.....1508 Granger Avenue Ann Arbor
Williamson, Mrs. F. B.....922 Pleasant Avenue, Ypsilanti
Wilson, Mrs. James.....1801 Hermitage Rd., Ann Arbor
Woods, Mrs. J. J.....1900 Washtenaw, Ypsilanti
Wylie, Mrs. W. C.....3219 B. Street, Dexter
Zerbi, Mrs. Victor M.....315 N. Adams, Ypsilanti
Waldron, Mrs. Alexander..9 Geddes Heights, Ann Arbor

WAYNE COUNTY

Adams, Mrs. James R.....751 Morley Court, Dearborn
Adams, Mrs. Vincent B.....18437 Pelkey, Detroit 5
Akroyd, Mrs. C. A.....19635 Shrewsbury, Detroit 21
Albrecht, Mrs. Herman F.....877 Chicago Blvd., Detroit
Aldrich, Mrs. E. Gordon....14239 Chandler Park Dr., Detroit 13
Alexander, Mrs. Eugene J.....24140 Wilson, Dearborn
Allard, Mrs. Andrew J.....4350 Haverhill, Detroit 24
Amos, Mrs. T. Grover....2708 Woodstock Dr., Detroit 3
Andries, Mrs. Geo. H.....17365 Muirland Ave., Detroit 31
Arehart, Mrs. Burke.....534 Roslyn Rd., Grosse Pte. 36
Ashe, Mrs. Stilson R.....12 Byfield Lane, Dearborn
Ashley, Mrs. L. Byron....18050 Fairway Dr., Detroit 21
Asselin, Mrs. Dean.....151 Lewiston, Grosse Pointe 36
Athey, Mrs. Roland M.....630 Merrick, Detroit 2
August, Mrs. Harry E.....26081 Hendrie Blvd., Huntington Woods
Babcock, Mrs. Lloyd K.....13901 Ashbury Park Detroit 27
Babcock, Mrs. W. W.....18254 Oak Drive Detroit 21
Bagley, Mrs. Harry E.....7541 Oakman Blvd., Dearborn
Bailey, Mrs. C. C.....12824 Broadstreet Avenue Detroit 38
Barnett, Mrs. Morton.....18295 Oak Drive, Detroit 21
Barone, Mrs. Charles J.....51 Eason Avenue, Highland Park 3
Barone, Mrs. Jerry....19785 Mansfield Ave., Detroit 35
Barrett, Mrs. Wyman D.....91 Touraine Rd., Grosse Pointe Farms 36
Barry, Mrs. J. Wright....19150 Votrobeck Dr., Detroit 19
Bartemeier, Mrs. Leo.....Seton Institute, Baltimore, Md.
Bates, Mrs. W. M.....2587 W. Grand Blvd., Detroit 8
Bauer, Mrs. Lester E.....1317 Bishop Road Grosse Pointe 30
Baumgarten, Mrs. E. C.....1062 Lochmoor Grosse Pointe 36
Beach, Mrs. Watson.....281 Kenwood Court Grosse Pointe Farms 30
Beam, Mrs. Duane.....406 Lincoln Grosse Pointe 30
Beamer, Mrs. Geo.....15834 Longmeadow Ave., Dearborn
Behan, Mrs. Robert C.....8123 E. Lafayette, Detroit 14
Bell, Mrs. J. Kenner.....49 Rhode Island Ave., Highland Park 3
Bentley, Mrs. Neil.....1160 Chicago Blvd., Detroit 2
Berlien, Mrs. Ivan C.....1001 E. Jefferson Ave., Detroit 7
Best, Mrs. Edward.....1229 Three Mile Drive, Grosse Pointe 30
Bethea, Mrs. Hardee.....279 Kenwood Ct., Grosse Pointe Farms 36
Bicknell, Mrs. Edgar A.....13225 Birwood Ave., Detroit 4
Bielawski, Mrs. John G.....8124 East Morrow Circle, Detroit 4
Birkhill, Mrs. Frederick Ross.....19510 Roslyn Rd., Detroit 21
Bird, Mrs. Waldo..109 Moran Rd., Grosse Pte. Farms 36
Bittrick, Mrs. Norman.....7474 LaSalle Blvd., Detroit 6
Blain, Mrs. Alexander.....1028 Berkshire Road Grosse Pointe 30
Blodgett, Mrs. William H..... 535 Overhill Rd., Birmingham

Bolstad, Mrs. Donald.....1835 N. Melborn, Dearborn
Bookmyer, Mrs. Ralph H.....19305 Afton Road Detroit 3
Bracken, Mrs. Andrew H.....7540 Oakman Blvd., Dearborn
Brines, Mrs. Osborne A.....1415 Parker Ave., Apt. 266, Detroit 14
Bringard, Mrs. Elmer.....18110 Fairfield Avenue Detroit 21
Bristol, Mrs. Wm. R.....6142 Bishop Road Detroit 34
Brooks, Mrs. Clark D.....17196 Fairway Drive, Detroit 21
Brosius, Mrs. William L.....16150 Sorrento, Detroit 35
Brough, Mrs. Glen A.....25519 Meridian Road Grosse Ile
Brown, Mrs. A. G.....13991 Asbury Pk., Detroit 27
Brown, Mrs. Audrey O.....46 Oakdale Blvd., Pleasant Ridge
Brown, Mrs. Gordon T.....8355 E. Outer Drive, Detroit 13
Brush, Mrs. Brock E.....22313 Cherryhill, Dearborn
Bryan, Mrs. John B.....2181 Sunnyknoll, Berkley
Budd, Mrs. Alexander S.....440 Lake Park Dr., Birmingham
Buerki, Mrs. Robin.....201 Lake Shore, Grosse Pointe 36
Buesser, Mrs. Frederick.....8100 E. Jefferson Ave., Detroit 14
Burgess, Mrs. C. M.....49 Oxford, Pleasant Ridge
Burke, Mrs. Ralph M.....580 University Place Grosse Pointe 30
Burnham, Mrs. David C.....16167 Glastonbury Road, Detroit 19
Caldwell, Mrs. John R.....9580 Hemingway, Detroit 28
Calkins, Mrs. H. Neill.....14970 Robson Avenue, Detroit 27
Callaghan, Mrs. Thos. T.....201 E. Kirby, Detroit 23
Callery, Mrs. Albert L.....5959 Bishop Rd., Detroit 24
Campbell, Mrs. Mac D.....3 Sylvan Road Pleasant Ridge
Candler, Mrs. Clarence L.....1690 Faircourt Grosse Pte. Woods 36
Capano, Mrs. O. A.....26415 Meadowbrook Birmingham
Caputo, Mrs. Joseph M.....22575 Nona, Dearborn
Carpenter, Mrs. Claire H.....18701 Snowden Ave., Detroit 35
Carrick, Mrs. Lee.....506 Lakeshore Lane Grosse Pointe Woods 36
Carter, Mrs. John M.....18900 Fairway Drive Detroit 21
Carter, Mrs. Leland F.....750 Middlesex Rd., Grosse Pointe 30
Cavell, Mrs. R. W.....15604 Woodland Avenue, Dearborn
Chall, Mrs. Henry G.....2941 W. McNichols, Detroit 21
Chance, Mrs. Jos. H.....12731 Dartmouth, Oak Park 37
Chapin, Mrs. Sidney.....425 Golfcrest, Dearborn
Chester, Mrs. William.....2916 Seminole, Detroit 14
Chipman, Mrs. Willard A.....14613 Rutland Rd., Detroit 27
Christensen, Mrs. C. A.....7876 Hartwell Ave., Dearborn
Christopher, Mrs. James G.....9515 Outer Dr., Detroit 23
Clark, Mrs. Harold E.....10064 Ludlow Avenue Huntington Woods
Clarke, Mrs. Robert B.....4989 Fisher Rd., Grosse Pointe
Clifford, Mrs. T. P.....4355 Glendale Ave., Detroit 4
Cole, Mrs. Jas. E.....2747 Oakman Ct., Detroit 6
Colvin, Mrs. Leslie T.....18470 Scarsdale, Detroit 28
Connelly, Mrs. Richard C.....1360 Three Mile Drive Grosse Pointe 30
Connolly, Mrs. Paul J.....16778 Westmoreland Ave., Detroit 19
Connors, Mrs. John J.....17126 Muirland, Detroit 21
Cook, Mrs. James C.....5 Fairmount Ct., Dearborn
Cooksey, Mrs. Norton J.....62 West Kirby, Detroit 2
Cooksey, Mrs. Warren B.....19510 Stratford Drive, Detroit 21
Cooper, Mrs. Benjamin F.....1124 Berkshire Road Grosse Pointe 30
Cooper, Mrs. E. L.....914 Shirley, Birmingham
Corbett, Mrs. John J.....57 Merriweather Avenue, Grosse Pointe Farms 36
Costello, Mrs. Russell T.....2850 Pine Lake Drive Rte 3 Pontiac
Cotant, Mrs. John F.....15717 Rosemont, Detroit 23
Cotruro, Mrs. Louis D.....4410 Burns Ave., Detroit 14
Crook, Mrs. Charles L.....60 Colorado, Highland Park 3
Croushore, Mrs. James E.....2906 E. Jefferson, Detroit 7
Cusick, Mrs. Paul L.....17575 Oak Drive, Detroit 21
Darling, Mrs. Chas. E.....14401 Glastonbury Rd Detroit 23
Darling, Mrs. Milton A.....8100 LaSalle Blvd., Detroit 6
Davidson, Mrs. Harry O.....24 Elm Park Blvd., Pleasant Ridge
Davies, Mrs. Windsor.....1013 Audubon, Grosse Pointe 36
Dawson, Mrs. W. A.....25951 Avondale Road, Inkster
DeFever, Mrs. Cyril R.....1113 Kensington Road, Grosse Pointe 30
DeJongh, Mrs. Edwin.....3880 W. Lincoln, Birmingham
DeNike, Mrs. James A.....2906 E. Jefferson, Detroit 7
DeSpelder, Mrs. R. E.....1452 Yorkshire, Gross Pointe 30
Devine, Mrs. Herbert W.....1315 Harvard Grosse Pointe 30
Dill, Mrs. J. Lewis.....18615 Birchcrest Ave., Detroit 21
Dimond, Mrs. George C.....6853 Orchard, Dearborn
Dixon, Mrs. Robert K.....201 East Kirby Ave., Detroit 2
Doering, Mrs. Wendell R.....27489 Lathrup, Birmingham
Dolgoff, Mrs. Sidney.....3205 Roosevelt, Dearborn
Donald, Mrs. Douglas.....8120 E. Jefferson, Detroit 14
Dorian, Mrs. Alan.....3751 Brewster Rd., Dearborn
Dorsey, Mrs. John M.....65 Moss, Highland Park 3
Doub, Mrs. Howard P.....18234 Wildemere Avenue, Detroit 21
Downer, Mrs. Ira G.....435 Lodge Drive, Detroit 14
Drake, Mrs. Ellert H.....31650 Curtis Ave., Livonia
Draves, Mrs. Edward F.....14541 Grandmont, Detroit 27
Dubois, Mrs. P. W.....630 Merrick Avenue, Detroit 2
Dudek, Mrs. John J.....17166 Parkside Ave., Detroit 21
Dumke, Mrs. Paul R.....544 Middlesex Blvd., Grosse Pointe 30
Dunlap, Mrs. Henry.....505 Lake Pointe, Grosse Pointe 30
Dunn, Mrs. Cornelius E.....3496 Burns Ave., Detroit 14
Durham, Mrs. Everett W.....844 N. Highland, Dearborn
Dutcher, Mrs. Dwight J.....21742 Elkhart Grosse Pointe 36
Duwe, Mrs. Frank A.....15425 Manor, Detroit 21
Dwyer, Mrs. F. W.....740 Indianwood Rd., Lake Orion
Eldredge, Mrs. Edward F.....1156 Harvard, Grosse Pointe 30
Elvidge, Mrs. R. J.....29043 Milbrook Rd., Farmington Township
Ensign, Mrs. Dwight C.....Franklin
Ewing, Mrs. C. H.....526 University Place Grosse Pointe 30
Fallis, Mrs. L. S.....2474 Chicago Blvd., Detroit 6
Felcyn, Mrs. W. G.....2091 W. Grand Blvd., Detroit 8
Fellers, Mrs. R. L.....4984 Ridgewood Avenue, Detroit 4
Fenton, Mrs. Edwin.....14831 Warwick Rd., Detroit 23
Fenton, Mrs. Russell.....18469 Hillcrest Blvd., Birmingham
Fenton, Mrs. Stanley C.....5092 Yorkshire Ave., Detroit 24
Fentress, Mrs. Vance.....5103 Ridgewood, Detroit 4
Ferris, Mrs. Geo. N.....17196 Murray Hill, Detroit 19
Fisher, Mrs. C. L.....791 University Place Grosse Pointe 30
Fisher, Mrs. Geo. S.....594 Seyburn Ave., Detroit 14
Fisher, Mrs. James M.....754 Rivard Blvd., Grosse Pointe 30
Fitzgerald, Mrs. J. M.....16838 Huntington Rd., Detroit 19

Flaherty, Mrs. Norman W.....24315 Fairmount Dr., Dearborn
Flaherty, Mrs. Samuel A.....33550 N. Hampshire, Livonia
Flaherty, Mrs. H. F.....17404 Birchcrest, Detroit 21
Ford, Mrs. G. A.....18934 Fairfield Avenue, Detroit 21
Ford, Mrs. Sylvester.....20170 Litchfield Rd., Detroit 21
Fordell, Mrs. Frank....441 S. Oakwood Blvd., Detroit 17
Foster, Mrs. Wm. L.....15316 Piedmont, Detroit 23
Freeman, Mrs. Donald K.....926 University Place, Grosse Pointe 30
Freeman, Mrs. Michael W.....1810 Wellesley Drive, Detroit 3
Freitas, Mrs. Eugene L.....19914 Fairway Grosse Pointe Woods 36
Fritz, Mrs. George..80 Lochmoor Blvd., Grosse Pointe 36
Fryfogle, Mrs. James D.....17399 Edinborough Rd., Detroit 19

Ganschow, Mrs. John H.....10025 Nadine Huntington Woods
Gardner, Mrs. Lawrence W.....18782 Glenwood Birmingham
Gardner, Mrs. Max L.....17011 E. Jefferson Grosse Pointe 30
Gariepy, Mrs. L. J.....14590 Abington Road, Detroit 27
Gaston, Mrs. Herbert B.....7501 W. Morrow Circle, Dearborn
Gehring, Mrs. Harold.....17607 Magnolia Parkway Detroit 35
Geib, Mrs. L. O...1411 Berkshire, Grosse Pointe Park 30
Gerisch, Mrs. Robert....19441 Bretton Drive, Detroit 23
Gerondale, Mrs. E. J.....15000 Dexter Blvd., Detroit 21
Gigante, Mrs. Nicola.....1728 Seminole, Detroit 14
Gillespie, Mrs. Stephen M.....1638 DeCosta, Dearborn
Gittins, Mrs. Perry....20210 Renfrew Road, Detroit 21
Glowacki, Mrs. Ben F.....4753 W. Outer Drive Detroit 35
Gordon, Mrs. J. Whitlock.....12700 Mendota, Detroit 4
Gottschalk, Mrs. F. W.....1000 Whitmore Road, Apt. 15, Detroit 3
Gourley, Mrs. Eugene V.....27426 Morningside Pl., Birmingham
Goux, Mrs. Raymond S.....17566 Muirland Avenue, Detroit 21
Grace, Mrs. Joseph M.....17505 Parkside, Detroit 21
Grain, Mrs. Gerald O.....17556 Muirland Ave., Detroit 21
Granger, Mrs. George R.....2243 Iroquios Ave., Detroit 14
Gravelle, Mrs. L. J.....1156 Yorkshire Rd., Grosse Pointe Park 30
Greenlee, Mrs. W. T.....15239 Cedargrove, Detroit 5
Griffin, Mrs. Robert J.....20227 Lancaster Grosse Pointe 36
Grossman, Mrs. Sol C.....20015 Shrewsbury, Detroit 21
Guerrero, Mrs. J.....4285 Glendale, Detroit 4
Gurdjian, Mrs. E. S.....19385 Renfrew Rd., Detroit 21
Guyton, Mrs. Jack S.....402 University Pl., Grosse Pointe 30

Hall, Mrs. E. Walter....19210 Bretton Drive, Detroit 23
Haitinger, Mrs. Kalman S.....844 Whittier, Grosse Pointe 30
Hamil, Mrs. Brenton M.....12 Adams Lane, Dearborn
Hamilton, Mrs. Quentin P.....16287 Mendota, Detroit 21
Hansen, Mrs. Frederick E.....120 Glynn Court, Apt. 700, Detroit 2
Harm, Mrs. W. B.....16260 Cherrylawn Avenue Detroit 21
Harrington, Mrs. Frank L.....16821 Stout, Detroit 19
Harris, Mrs. Harold H.....7350 Oakman, Dearborn
Hartman, Mrs. Frank W.....7661 LaSalle Blvd., Detroit 6
Hasley, Mrs. Clyde K.....2490 Longfellow Avenue, Detroit 6
Hassig, Mrs. Walter W.....443 Maison, Grosse Pointe 36
Hastings, Mrs. Orville J.....10427 E. Outer Drive Detroit 24
Hauser, Mrs. T. Jerome.....1980 Strathcona Dr., Detroit 21
Hauser, Mrs. John E.....18243 Birchcrest, Detroit 21
Havers, Mrs. Howard.....271 Kenwood Court, Grosse Pointe 30
Hawkins, Mrs. Jas. W.....14180 Woodmont, Detroit 27
Heedman, Mrs. Louis.....18010 Roselawn.....Detroit 21
Heldt, Mrs. Richard.....18491 Ardmore, Detroit 35
Heldt, Mrs. T. J.....17 Poplar Park, Pleasant Ridge
Henderson, Mrs. Leslie T.....832 N. Renaud, Grosse Pointe 30
Herbst, Mrs. Harold B.....20482 Ardmore, Detroit 36
Herwick, Mrs. John T.....18731 Glenwood, Birmingham
Hess, Mrs. Murray W.....23860 Seneca, Oak Park
Heyner, Mrs. S. A.....3424 Oakman Blvd., Detroit 4
Hickey, Mrs. Joseph....24346 Fairmount Drive, Dearborn
Hillenbrand, Mrs. Alfred E.....675 Fisher Road Grosse Pointe 30
Hodges, Mrs. Frank J.....7407 Oakman Blvd., Dearborn
Hodges, Mrs. Jason.....1200 S. Oxford Rd. Grosse Pointe 36
Hodgkinson, Mrs. Paul C.....17546 Meadowwood, Birmingham
Hoffman, Mrs. Edwin S.....14877 Warwick, Detroit 23
Holt, Mrs. Charles.....8525 Ward, Detroit 28
Hoops, Mrs. Geo. B.....18415 Warrington, Detroit 21
Horley, Mrs. L. M.....17325 Fairfield, Detroit 21
Horton, Mrs. R. H.....17375 Fairfield Ave., Detroit 21
Horvath, Mrs. James.....15507 Ohio, Detroit 38
Howard, Mrs. Austin Z...15492 Ashton Road, Detroit 23
Howell, James T.....27907 E. California Dr., Birmingham
Howlett, Mrs. Howard T...20026 Shrewsbury, Detroit 21
H'Romadko, Mrs. Louis.....Martel Drive, Bloomfield Hills
Hull, Mrs. LeRoy W.....20115 Canterbury, Detroit 21
Huminski, Mrs. T. S.....1232 Devonshire, Grosse Pointe Park 30
Hummel, Mrs. A. R.....1020 Three Mile Drive Grosse Pointe 30
Hunt, Mrs. Theodore H.....10095 E. Outer Drive, Detroit 24
Hurd, Mrs. Brooks H.....20187 Schaefer Rd., Detroit 35
Husband, Mrs. Chas. W.....19450 Argyle Crescent, Detroit 3
Husband, Mrs. Raymond....18715 Prairie, Detroit 21
Hyde, Mrs. F. W.....14255 Faust, Detroit 23

Iacobell, Mrs. Peter H.....8080 E. Lanz, Detroit 34
Igna, Mrs. E. J.....12315 Broadstreet Ave., Detroit 4
Insley, Mrs. Stanley W.....12880 Archdale Ave Detroit 27
Irwin, Mrs. William A.....2130 Iroquois, Detroit 14

Jaekel, Mrs. C. N.....443 Lexington Avenue Grosse Pointe Farms 36
Jaffar, Mrs. Donald J.....630 Merrick, Detroit 2
Jahsman, Mrs. William E.....Box 131, Franklin,
Jarvis, Mrs. Harold F.....14066 Linnhurst, Detroit 5
Jaynes, Mrs. Richard V.....14871 Heyden, Detroit 23
Jeffries, Mrs. Benjamin.....1010 Harvard Place Grosse Pointe 30
Jennings, Mrs. E. R.....425 Chalfonte, Grosse Pointe 36
Jensen, Mrs. V. W.....8230 Littlefield, Detroit 28
John, Mrs. Hubert R.....31 Oakland Park Blvd. Pleasant Ridge
Johnson, Mrs. Ralph A.....2115 Iroquois Avenue Detroit 14
Johnson, Mrs. Thomas D.....16800 Stout, Detroit 19
Johnson, Mrs. Vernon P.....502 Pemberton Grosse Pointe 30
Johnson, Mrs. Vincent.....345 Lodge Drive, Detroit 14
Johnston, Mrs. Wm. E...Lee Plaza, 2240 W. Grand Blvd.. Detroit 8
Joinville, Mrs. E. V.....3879 Riverside Drive, Windsor, Ontario
Jones, Mrs. Roy D.....7747 West Seven Mile Rd., Detroit 21
Jordan, Mrs. R. G.....12791 E. Outer Drive, Detroit 24
Joyce, Mrs. Stanley J.....2040 W. McNichols, Detroit 3
Jury, Mrs. Donald B.....4 Oxford Blvd., Pleasant Ridge
Kalder, Mrs. Ned.....18270 Kirkshire, Birmingham

Kasper, Mrs. Joseph A.....1428 Buckingham Rd., Grosse Pointe 30
Kaump, Mrs. D. H.....16020 Warwick, Detroit 23
Keane, Mrs. William E.....1007 Harvard Road Grosse Pointe 30
Kehoe, Mrs. Henry J.....91 Renaud Rd., Grosse Pointe Farms 36
Keim, Mrs. Harther L.....369 University Place Grosse Pointe 30
Kelley, Mrs. Frank J.....440 Lothrop Rd., Grosse Pointe Farms 36
Kelly, Mrs. Lawrence J.....5315 Bedford Rd., Detriot 24
Kennary, Mrs. James.....2250 Iroquois, Detroit 14
Killins, Mrs. Chas.....7712 E. Jefferson Ave., Detroit 14
King, Mrs. Edward D.....2325 W. Grand Blvd., Detroit 8
King, Mrs. Melbourne J.....16021 Warwick, Detroit 23
Knaggs, Mrs. Charles W.....1209 Yorkshire Grosse Pointe 30
Knighton, Mrs. Robert S.....27486 Lathrup St., Birmingham
Knights, Mrs. Edwin M. Jr.....8430 Dexter Blvd., Detroit 6
Koebel, Mrs. R. H.....15701 Windmill Pointe Dr., Grosse Pointe Park 30
Kokowicz, Mrs. R. J.....1151 Buckingham Grosse Pointe 30
Kossayda, Mrs. Adam W.....2231 Wilson, Dearborn
Krabbenhoft, Mrs. Kenneth L.....481 E. Lewiston, Ferndale 20
Kretzschmar, Mrs. John C.....3060 Seminole, Detroit 14
Krynicki, Mrs. F. X.....17127 Muirland, Detroit 21
Kulaski, Mrs. Chester H.....7500 E. Robinwood Ave., Detroit 34
Kullman, Mrs. H. J.....Veterans Administration Hosp., Dearborn

LaHood, Mrs. M. J.....15331 Farrer, Detroit
LaMarche, Mrs. Norman O.....4139 Wakefield Rd., St. Johns Woods, Berkley
Lamberson, Mrs. F.....31435 Bingham Rd., Detroit
Lampman, Mrs. H. H.....42 Puritan Avenue, Highland Park 3
Lang, Mrs. Ernest F.....4502 Grayton, Detroit 24
Lange, Mrs. Anthony H.....2211 Burns Ave., Detroit 14
Laning, Mrs. George M.....2025 W. Six Mile Rd., Highland Park 3
Leibinger, Mrs. Henry R.....511 Barrington Rd., Grosse Pointe 30
Lemon, Mrs. Bruce K.....8259 Meyers Rd., Detroit 28
Lepley, Mrs. Fred O.....1125 Three Mile Dr., Grosse Pointe 30
Leszynski, Mrs. J. S.....8120 E. Jefferson Ave., Apt. 2N, Detroit 14
Levagood, Mrs. F.....14056 Artesian, Detroit 23
Liddicoat, Mrs. A. G.....18300 Bretton Drive, Detroit 23
Lightbody, Mrs. J. J.....195 Piper Blvd., Detroit 15
Lignell, Mrs. Rudolph W.....18109 San Juan, Detroit 21
Lilly, Mrs. Chas. J.....16649 Princeton, Detroit 21
Livingood, Mrs. Clarence S.....2950 Iroquois, Detroit 14
Lockwood, Mrs. Bruce....16911 Baylis Avenue, Detroit 21
Lofstrom, Mrs. Jas. E.....265 Williams Grosse Pointe Farms 36
Longo, Mrs. Salvatore.....918 Barrington Rd., Grosse Pointe 30
Longyear, Mrs. Harold W.....2082 W. Long Lake Rd., Bloomfield Hills
Loranger, Mrs. Clifford B.....888 Lakeshore Road Grosse Pointe 30
Loucks, Mrs. R. E.....29915 13 Mile Road, Farmington
Lovas, Mrs. W. S.....820 S. Lafayette, Dearborn
Lowrie, Mrs. William L.....548 Southfield, Birmingham
Luce, Mrs. Henry A.....3421 Seminole, Detroit 14
Lutz, Mrs. Earl F.....6178 Lantern Lane, Foxcroft, Birmingham
Lynn, Mrs. Harvey D.....18285 Birchcrest Dr., Detroit 21
MacFarlane, Mrs. Howard W.....3476 Seminole, Detroit 14
MacGregor, Mrs. W. W.....6320 W. Surrey, Foxcroft, Birmingham
Mackersie, Mrs. William.....18205 Roselawn, Detroit 21
MacQueen, Mrs. Malcolm D.....2165 Burns Ave., Detroit 14
Maczewski, Mrs. John.....1357 Sunningdale, Grosse Pointe Woods 30
Mainwaring, Mrs. R. L.....15705 Jonas, Allen Park
Malone, Mrs. Richard S.....16879 St. Paul Grosse Pointe 30
Maloney, Mrs. John A.....22635 W. 10½ Mile Rd., Route #3, Box 11, Birmingham
Mancuso, Mrs. Vincent S.....962 E. Grand Blvd., Detroit 7
Marecki, Mrs. Vincent.....9869 Chatham, Allen Park
Marsh, Mrs. A. R.....15696 Woodland Ave., Dearborn
Martin, Mrs. Peter A.....17185 Muirland Ave., Detroit 4
Martmer, Mrs. Edgar.....693 Washington Road Grosse Pointe 30
Mattson, Mrs. Theo. M.....16 Ridge Road, Pleasant Ridge
May, Mrs. Frederick T.....16637 Parkside, Detroit 21
McAlonan, Mrs. William T.....630 Merrick Avenue, Detroit 2
McCadie, Mrs. J. H.....14241 Artesian, Detroit 23
McClellan, Mrs. Gustave L.....2046 W. Boston Blvd., Detroit 6
McColl, Mrs. Clark.....19701 Chesterfield, Detroit 21
McCormick, Mrs. Colin C.....24352 Rockford Drive, Dearborn
McCormick, Mrs. Frank T.....859 Longfellow, Detroit 2
McDonald, Mrs. A. L...1247 Berkshire, Grosse Pointe 30
McDonald, Mrs. Allan.....15015 Ward Ave., Detroit 27
McDonald, Mrs. William G.....9347 Becker, Allen Park
McDowell, Mrs. Douglas B.....Wayne Co. Gen. Hospital, Eloise
McEvitt, Mrs. Wm. G.....1140 W. Boston Blvd., Detroit 2
McGraw, Mrs. Arthur B.....340 Lakeland Grosse Pointe 30
McIntyre, Mrs. Wm.....1233 Audubon Rd., Grosse Pointe 30
McKnight, Mrs. Robert E.....19818 Lesure, Detroit 35
McRae, Mrs. Donald H...259 W. Grand Blvd., Detroit 16
Meek, Mrs. Stuart F.....13020 Kilbourne, Detroit 13
Menagh, Mrs. Frank R.....4010 Columbus, Detroit 4
Merrill, Mrs. William O.....W. Long Lake Road Bloomfield Hills
Metes, Mrs. John S.....1261 Fairholme Rd., Grosse Pointe 36
Michael, Mrs. Michael J.....938 S. Renaud Rd., Grosse Pointe 36
Mitchell, Mrs. C. Leslie.....34 Hendrie Lane Grosse Pointe 36
Molnar, Mrs. J. G.....14890 Glastonbury Rd., Detroit 23
Molnar, Mrs. Stephen K.....434 S. Highland, Dearborn
Monson, Mrs. Robert C.....1070 N. Renaud Grosse Pointe 36
Monto, Mrs. Raymond W.....16845 Lauder, Detroit 35
Morley, Mrs. Harold V.....101 Elm Park Blvd., Pleasant Ridge
Moroun, Mrs. S. J.....203 Lakeland Grosse Pointe 30
Murphy, Mrs. Robert T.....19 Oakland Park Pleasant Ridge
Murray, Mrs. William A.....11841 Ohio, Detroit 4
Musselman, Mrs. Merle M.....Wayne Co. Gen. Hospital, Eloise
Myers, Mrs. Dan W.....1150 Bedford Rd., Grosse Pointe 30

Nahigian, Mrs. Russell.....17371 Annchester, Detroit
Nehra, Mrs. John....662 S. Renaud Rd., Grosse Pointe 36
Nelson, Mrs. Darwin M...63 Ridge Rd., Grosse Pointe 36
Nickerson, Mrs. I. D.....6245 Golfview Dr., Birmingham
Norton, Mrs. A. B.....18615 Muirland Avenue, Detroit 21
Noshay, Mrs. William C.....25505 Wareham Dr., Huntington Woods
Novy, Mrs. Robert L.....2910 Iroquois, Detroit 14
Oetting, Mrs. Edward.....2923 Iroquois, Detroit 14
Ohmart, Mrs. Galen B.....2150 Iroquios, Detroit 14
Olmsted, Mrs. George S.....19766 Steel, Detroit 35
Olson, Mrs. James A.....19 Norwich Rd., Pleasant Ridge

O'Rourke, Mrs. Paul V.....700 Seward, Detroit 2
Ostrowski, Mrs. Arthur Z.....20127 Sheffield, Detroit 21
O'Sullivan, Mrs. G. S.....18129 Sunnybrook, Birmingham
Owen, Mrs. Clarence I.....1544 Vinewood, Detroit 16
Parcells, Mrs. Frank H.....1014 Buckingham Grosse Pointe 30
Parsons, Mrs. John P.....808 Grand Marais, Grosse Pointe 30
Perkin, Mrs. Frank S.....1049 Yorkshire Rd., Grosse Pointe 30
Peterman, Mrs. Earl A.....19515 Cumberland Way Detroit 3
Peterson, Mrs. Robert A.....17581 Prest, Detroit 35
Pichette, Mrs. J. Walton....627 Morley Ct., Dearborn
Pickard, Mrs. O. W.....20208 Litchfield, Detroit 21
Pietra, Mrs. Alex W.....9405 E. Outer Drive, Detroit 13
Poirier, Mrs. R. A.....425 Bryn Mawr, Birmingham
Porretta, Mrs. F. S.....8156 Normile, Detroit 4
Posch, Mrs. Joseph L.....853 Brys Dr., Grosse Pointe Woods 36
Potter, Mrs. L. S.....287 Merriweather Grosse Pointe Farms 36
Pratt, Mrs. Jean P.....18910 Fairway Dr., Detroit 21
Priborsky, Mrs. Benamin H.....3005 Iroquois, Detroit 14
Price, Mrs. Hazen.....18605 Birchcrest, Detroit 21
Priest, Mrs. Robert J.....9312 Faust, Detroit 28
Procailo, Mrs. Alexander B.....4125 Seymour Ave., Dearborn
Purcell, Mrs. Frank H.....869 Edgemont Park, Grosse Pointe 30
Ratigan, Mrs. Carl S..... 16121 Longmeadow, Dearborn
Rebuck, Mrs. John W.....16955 Beverly Rd., Birmingham
Redding, Mrs. Lowell G.....1104 Claremont, Dearborn 7
Redfern, Mrs. Earl W.....17392 Kirkshire, Birmingham
Reed, Mrs. Jos. O. Jr., 434 St. Clair, Grosse Pointe 30
Reiff, Mrs. M. V.....10059 Crocuslawn, Detroit 4
Reive, Mrs. David L.....16002 Oak Drive, Detroit 21
Rennell, Mrs. Leo P.....18222 Fairfield, Detroit 21
Reveno, Mrs. Wm. S.....19398 Stratford Rd., Detroit 21
Reyner, Mrs. Clarence E.....19999 Stratford Road, Detroit 21
Reynolds, Mrs. R. P.....17521 Hamilton Drive, Detroit 3
Rhoades, Mrs. Francis P.....272 Ashland, Detroit 15
Rice, Mrs. H. R.....20420 Briarcliff, Detroit 21
Robb, Mrs. Milton....315 Lakeland, Grosse Pointe 30
Robinson, Mrs. Frederic L.....100 S. Waverly, Dearborn
Roman, Mrs. S. J.....25531 Avondale, Inkster
Ronayne, Mrs. John J.....189 Richton, Detroit 3
Ross, Mrs. Donald G.....617 Neff, Grosse Pointe 30
Rowda, Mrs. Michael S.....7 Cambridge Rd., Pleasant Ridge
Ruedemann, Mrs. Albert D.....1018 Three Mile Dr., Grosse Pointe 30
Ruedemann, Mrs. A. D. Jr.....242 Lewiston, Grosse Pointe 36
Runge, Mrs. E. F.....25549 Rogue River Drive., Detroit
Rupp, Mrs. Jacob R.....5538 Cass Ave., Detroit 2
Sadler, Mrs. Henry, Jr.....
502 Lincoln Rd., Grosse Pointe 30
Sage, Mrs. Thomas.....379 St. Clair, Grosse Pointe 30
Sapala, Mrs. Andrew..13021 Mackenzie Ave., Detroit 28
St. Louis, Mrs. R. J.....
10909 W. Jefferson Ave., River Rouge
Sawyer, Mrs. Harold F.....
22 Cambridge Blvd., Pleasant Ridge
Scarney, Mrs. Herman D.....
5400 Pontiac Trail, R 5, Pontiac
Schillinger, Mrs. Harold K.....4838 Nickel, Dearborn
Schimek, Mrs. Robert A.....40 California, Detroit 3
Schlafer, Mrs. Nathan H.....18420 Wildemere, Detroit 21
Schmaltz, Mrs. John D.....17656 Grandville, Detroit 19
Schmidt, Mrs. Werner F.....
411 Roland Ct., Grosse Pointe 36
Schneck, Mrs. Robert J.....2129 Iroquis, Detroit 14
Schuknecht, Mrs. Harold F.....
500 Neff Rd., Grosse Pointe 30
Schulte, Mrs. Carl H.....20171 Renfrew, Detroit 21
Schweigert, Mrs. C. F.....12185 E. Outer Dr., Detroit 24
Seeley, Mrs. J. B.....7870 Oakman Blvd., Dearborn
Segar, Mrs. Lawrence F.....19000 Birchcrest, Detroit 21
Sellers, Mrs. Chas. W. ....2051 Chicago Blvd., Detroit 6
Sellers, Mrs. Graham.....3371 Sherbourne Rd., Detroit 21
Sewell, Mrs. George.....4365 Clements, Detroit 4
Sewell, Mrs. George R.....350 Elmhurst, Higland Park 3
Sharp, Mrs. Elwood A...635 Neff Rd., Grosse Pointe 30
Sharrer, Mrs. Chas. H.....
1133 Grayton Rd., Grosse Pointe 30
Sherman, Mrs. William L...201 E. Kirby Ave., Detroit 2
Sherrin, Mrs. Edgar.....
32 Oakland Park Blvd., Pleasant Ridge
Shreve, Mrs. Alfred J.....7 Amherst Lane, Dearborn
Shumaker, Mrs. Ed J.....17606 Wildemere, Detroit 21
Sieber, Mrs. Edward H.....5 Byfield Lane, Dearborn
Siefert, Mrs. Wm. A...15920 Glastonbury Rd., Detroit 23
Sigler, Mrs. John W.....1356 Greenlawn, Birmingham
Sinclair, Mrs. James W.....
21806 Moross Rd., Grosse Pointe 36
Singer, Mrs. Floyd W.....24441 Emerson, Dearborn
Sippola, Mrs. Geo. W.....13603 LaSalle Blvd., Detroit 38
Slaugenhaupt, Mrs. J. G.....16887 Lawton, Detroit 21
Slevin, Mrs. John G., Jr.....
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Sly, Mrs. Robert F.....22213 Tenny St., Dearborn 8
Smith, Mrs. F. Janney.....2405 Burns, Detroit 14
Smith, Mrs. J. A.....
U.S.P.H.S. Hospital, Windmill Pte. Dr., Detroit 15
Somers, Mrs. Donald C.....
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Spademan, Mrs. L. C.....484 Warren Court, Birmingham
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214 Cloverly Rd., Grosse Pointe 36
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201 E. Kirby, Apt. 404, Detroit 2
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Stefani, Mrs. E. L.....18600 Birchcrest Dr., Detroit 21
Steinbach, Mrs. Albert L.....19335 Pinehurst, Detroit 21
Steinbach, Mrs. Henry B.....
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Stellhorn, Mrs. C. E.....16589 Warwich Ave., Detroit 19
Sterling, Mrs. R. R.....52 Oxford Rd., Pleasant Ridge
Stevens, Mrs. Charles H.....15422 Manor, Detroit 38
Stirling, Mrs. Alexander M.....
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Stockwell, Mrs. Benjamin W.....
192 Lothrop Rd., Grosse Pointe Farms 36
Stockwell, Mrs. Glen W.....
10210 Second Blvd., Apt. D-2, Detroit 3
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Stone, Mrs. Dayton.....641 Covington Rd., Detroit 3
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Straith, Mrs. Richard.....38 Oxford Rd., Pleasant Ridge
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Summers, Mrs. Wm. S.....18456 Wildemere, Detroit 21
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Swift, Mrs. Karl L.....
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Texter, Mrs. E. C.....2990 Seminole Ave., Detroit 14
Thumann, Mrs. Robert C.....
666 Washington Rd., Grosse Pointe 30
Townsend, Mrs. Frank M.....
15231 Windmill Pointe Dr., Grosse Pointe 30
Trafas, Mrs. Peter C...7475 Woodrow Wilson, Detroit 6
Tremain, Mrs. Harold.....19700 Steel Ave., Detroit 35
Turcotte, Mrs. Vincent J.....
545 Lakeland, Grosse Pointe 30

Tuynman, Mrs. Peter E.....
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Watts, Mrs. Joseph.....12944 Archdale, Detroit 27
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Weaver, Mrs. Delmar F.....
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17452 Third Ave., Apt. 201, Detroit 3
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4833 Mayflower Ct., Bloomfield Hills
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Lommen, Mrs. Ralph.....Manton
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Moore, Mrs. Gregory.....734 E. Division, Cadillac
Murphy, Mrs. Michael.....213 Prospect, Cadillac
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Michigan State Medical Assistants' Society

Roster, 1955

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Coakes, Rose Mary.....Jack E. Coakes, M.D.
112 W. Mansion, Marshall
Dart, Jean.....Drs. Geo. Slade & Robt. Brown
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408 Capital S. W., Battle Creek
Doane, Kay.....Francis L. Lam, M.D.,
408 Capital Ave., S.W., Battle Creek
Griffin, Donna.....Drs. Slagle & Brown
140 N.E. Capital Ave., Battle Creek
Grodi, Ruth.....R. K. Curry, M.D.,
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Jones, Marian.....Tyre K. Jones, M.D.,
118 W. Green, Marshall
Miller, Thelma.....S. Fairbanks, M.D.,
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Moffitt, H. Irene.....Leland P. Shipp, M.D.,
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North, Mary....Drs. Mustard, Stiekl, Huby and Chandler
1407 Security Bank, Battle Creek
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4662 Flushing Rd., Flint
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210 E. Court St., Flint
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Hallstrand, Helen.....Merald G. Turner, M.D.,
Hardenbrook, Eleanor.....Geo. V. Conover, M.D.,
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Johnson, Frances.....Russel M. Ragan, M.D.,
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Kile, Julia.....Edward Kaleta, M.D.,
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Weigandt, Virginia.....Frederick V. Hauser, M.D.,
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Wilcox, Beatrice.....Robert M. Michek, M.D.,
409 N. McKinley Rd., Flushing
Yerkey, Donna.....Wm. H. Morrison, M.D.,
205 Parry Rd., Grand Blanc

HILLSDALE COUNTY

Burnett, Ellen.....Ira Woodrow Wiggins, M.D.,
214 South St., Jonesville
Sterling, Mary.....Luther W. Day, M.D.,
112 E. Chicago, Jonesville

INGHAM COUNTY

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Okemos
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110 W. Hillsdale, Lansing
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624 N. Capitol Ave., Lansing
Byers, Norma.....Lansing
Claflin, Mildred.....H. L. French, M.D.,
301 Seymour, Lansing
Crossley, Mary Lou.....Lansing
Dow, Thelma.....F. Mansel Dunn, M.D.,
301 Seymour, Lansing
England, Helen .....Drs. LeVett & Sleight
117½ Shiawassee, Lansing
Grams, Carol.....Lansing
Heil, Marion.....R. J. Himmelberger, M.D.
320 Townsend, Lansing
Jarrad, Doris.....F. Mansel Dunn, M.D.,
301 Seymour, Lansing
Kratzer, Patricia.....John M. Wellman, M.D.,
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252 E. Lovell St., Kalamazoo
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Brady, Patricia.....Borgess Hospital, Kalamazoo
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McPherson, Anna.....Nurses Registry
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Moore, Janet.....Robert Grekon, M.D.
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Snow, Laura.....Drs. Heersma & Dew
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420 John St., Kalamazoo
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102 Pratt Bldg., Kalamazoo
Wolfe, Elizabeth.....Drs. Flunt, Jennings & Smith
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315 Bronson Medical Center, Kalamazoo
Wykkel, Emily.....W. A. Scott, M.D.
208 Bronson Medical Center, Kalamazoo

KENT COUNTY

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Benzon, Frances.....Eugene Sevensma, M.D.
1318 McKay Tower, Grand Rapids
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833 Lake Drive, Grand Rapids
Boluyt, Marie.....Austin Lamberts, M.D.
68 Ransom, Grand Rapids
Bomers, Gladys.....Drs. K. Fellows & Moore
529 Metz Bldg., Grand Rapids
Borek, Celilia.....Drs. K. Fellows & Moore
529 Metz Bldg., Grand Rapids
Boyd, Alma.....Wm. Reus, M.D.
24 Burton, Grand Rapids
Brechting, Matilda.....Drs. Truag & Van Zwalenberg
201 Metz Bldg., Grand Rapids
Browing, Shelley.....Eugene Browning, M.D.
203 Keith Theater, Grand Rapids
Burgess, Lorraine.....Drs. Aitken & MacDonell
520 Kendall Professional Bldg., Grand Rapids
Collins, Margaret.....Drs. Sanders & Bonzelaar
226 Medical Arts Bldg., Grand Rapids
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1580 Water, Marne
Davis, Ann.....Sunshine Hospital
700 Fuller, Grand Rapids
DeGroot, Thelma.....Sunshine Hospital
700 Fuller, Grand Rapids
Dertein, Jean.....Sunshine Hospital
700 Fuller, Grand Rapids
DeYoung, Toni.....J. D. Miller, M.D.
604 Metz Bldg. Grand Rapids
Dippel, Mildred.....Drs. Laird & Gilbert
504 Metz Bldg. Grand Rapids
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Feeny, Shirley.....G. W. Deboer, M.D.
516 Medical Arts Bldg., Grand Rapids
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226 Medical Arts Bldg., Grand Rapids
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Grand Rapids
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125 Fountain, Grand Rapids
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700 Fuller, Grand Rapids
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Wirth, Marie.....Drs. Ferguson, Droste & Ferguson
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203 Panyard Bldg., Muskegon
DeMarr, Lois.....Drs. J. K. Hill & L. C. Paterson
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Frankenmuth
Maurer, Jean Ann.....St. Luke's Hospital, Saginaw
Meyer, Arlene.....B. M. Bullington, M.D.
213 Bearinger Bldg., Saginaw
Miller, Madeline.....H. E. Mayne, M.D.
305 Graevner, Saginaw
Moskal, Barbara.....V.A. Hospital, Saginaw
Mutscheller, Meta.....Saginaw
Nuechterlein, Lorine.....D. V. Sargent, M.D.
1703 N. Michigan, Saginaw
Parent, Helen.....Saginaw General Hospital, Saginaw
Pavelich, Loretta.....Saginaw County Hospital, Saginaw
Poineau, Dona Mae.....Saginaw
Porath, Beverly.....R. F. Powers, M.D.
529 W. Genesse, Saginaw
Razenberger, Rosalind.....Saginaw
Reynolds, Dorthea.....Saginaw
Rochrig, Eleanor.....Saginaw General Hospital, Saginaw
Roseberry, Evelyn.....B. M. Bullington, M.D.
213 Bearinger Bldg., Saginaw
Ross, Betty.....T. E. Fleschner, M.D.
Birch Run
Russell, Ruth.....Saginaw General Hospital, Saginaw
Rutzen, Audrey.....H. E. Mayne, M.D.
305 Graebner, Saginaw
Schnedier, Margaret.....I. G. Roggen, Saginaw
Schroyer, Elizabeth.....St. Mary's Hospital, Saginaw
Seabrook, Muril.....E. F. Kickham, M.D.
309 E. Jefferson, Saginaw
Smith, Yvonne.....E. G. Hester, M.D.
2031 N. Michigan, Saginaw
Stone, Marion.....Saginaw General Hospital, Saginaw
Swift, Marian.....E. Hand, M.D.
211 Bearinger Bldg., Saginaw
Tedhams, Phyllis.....T. V. Kretschmer, M.D.
304 Weichman Bldg., Saginaw
Tachebury, Aletha.....Thomas Fleschner, M.D.
Birch Run
Tenney, Patricia.....R. G. App, M.D.
520 W. Genesee, Saginaw
Thompson, Margaret.....S. Yntema, M.D.
333 S. Jefferson, Saginaw
Urban, Betty.....Drs. Sargent & Bruggers
1703 N. Michigan, Saginaw
Wahowski, Virginia.....F. Sullivan, M.D.
1213 N. Michigan, Saginaw
Wahl, Harriet.....F. J. Busch, M.D.
1731 N. Michigan, Saginaw
Walderzak, Elizabeth.....Saginaw
Walther, Josephine.....Saginaw
Ward, Betty.....O. R. Murray, M.D.
1827 N. Michigan, Saginaw
Wier, Nona.....E. C. Galsterer, M.D.
124 S. Jefferson, Saginaw
Wilkins, Ila.....Saginaw General Hospital, Saginaw
Willert, Dorothy.....H. C. Matthews, M.D.
1227 N. Michigan, Saginaw
Williams, Donna.....F. M. Sullivan, M.D.
1213 N. Michigan, Saginaw
Witherspoon, Jean.....Arno Weiss, M.D.
308 Eddy Bldg., Saginaw
Wood, Shirley.....St. Luke's Hospital, Saginaw
Wotton, Lucille.....Caro State Hospital, Caro
Zuehlke, Aldean.....St. Mary's Hospital, Saginaw

ST. CLAIR COUNTY

Bettinger, Shirley.....Wm. S. Bowden. M.D.
137 S. Water St., Marine City
Erdbecker, Vida.....Wm. S. Bowden, M.D.
137 S. Water St., Marine City

VAN BUREN COUNTY

Brown, Kathryn.....Drs. A. J. Steele & T. J. Dillon
221 Oak St., Paw Paw
Dannison, Cecile.....Bert Diephus, M.D.
779½ Phoenix St., South Haven
Frost, Hildred.....Charles TenHouten, M.D.
215 N. Kalamazoo, Paw Paw
Gottman, Ruth.....Evan Copeland, M.D.
300 N. Phelps, Decatur
Huey, Grace.....Charles Tenhouten, M.D.
215 N. Kalamazoo, Paw Paw
Jensen, Eleanor.....M. W. Buckborough, M.D.
Medical Bldg., South Haven
Jewett, Maxine.....T. J. Dillon, M.D.
221 Oak St., Paw Paw
Lamoreaux, Meta.....F. J. Loomis, M.D.
112 N. Miles, Paw Paw
McCone, Norma.....Bert Diephus, M.D.
779½ Phoenix St., South Haven
Novey, Ethel.....Drs. Itzen & Kleber
South Haven
Post, Kathleen.....Martin J. Urist, M.D.
432½ Phoenix, South Haven
Reynolds, Lucille.....Wm. Rae Young, M.D.
North Main St., Lawton
Rose, Velma.....Evan Copeland, M.D.
300 N. Phelps, Decatur
Stafford, Kathleen.....Evan Copeland, M.D.
300 N. Phelps, Decatur
Wagner, Barbara.....T. J. Dillon, M.D.
221 Oak St., Paw Paw
Warmbold, Alberta.....Charles Ten Houten, M.D.
215 N. Kalamazoo, Paw Paw

WASHTENAW COUNTY

Clark, Jessie.....F. B. Williamson, M.D.
319 W. Michigan Ave., Ypsilanti
Sanders, Elizabeth.....S. Philip Grillo, M.D.
265 Main St., Belleville

WAYNE COUNTY

Anderson, Edna.....Melvin E. Fowler, M.D.
247 E. Warren, Detroit
Anderson, Mabel B.....John G. Lumpkin, M.D.
243 E. Warren, Detroit
Anderson, Wilma.....Drs. J. G. Reid & J. J. Horvath
1337 David Whitney Bldg., Detroit
Bachman, Theresa.....Wm. A. Summers, M.D.
1613 David Whitney Bldg., Detroit
Badowski, Cecelia.....C. S. Waggoner, M.D.
541 David Whitney Bldg., Detroit
Ball, Babs S.....Doctors Group
2336 Van Alstyne, Wyandotte
Barbaglia, Regina.....
Drs. E. C. Baumgarten & T. W. Baumgarten
8045 E. Jefferson, Detroit
Bartlett, Esther.....R. L. Novy, M.D.
858 Fisher Bldg., Detroit
Bartus, Mary.....Luther R. Leader, M.D.
1129 David Whitney Bldg., Detroit
Bassett, Margaret.....Joseph F. Beer, M.D.
.... 104 N. Riverside, St. Clair
Belasco, Velam.....
Drs. Copuzzi, Atchison & Wetterstrom
501 W. Dunlop, Northville
Bell, Dorothy.....Private Duty
3020 Tuxedo, Detroit
Buehring, Lelila.....H. L. Feldman, M.D.
11420 Mack, Detroit
Cadieux, Luella.....Harry E. Schmidt, M.D.
666 Fisher Bldg., Detroit
Capshaw, Alice.....Roy Tupper, M.D.
15105 W. 7 Mile Rd., Detroit
Ceaser, Ruth.....C. W. Lepard, M.D.
1025 David Whitney Bldg., Detroit
Clinton, Patricia.....Marvin B. Levy, M.D.
13906 Woodward, Detroit
Coffman, Sara.....E. Osius, M.D.
901 David Whitney Bldg., Detroit
Coleman, Geraldine.....Drs. Tanner & Cain
8033 12th St., Detroit
Cousineau, Thelma.....Charles Gitlin, M.D.
1610 Glendale, Detroit
Cross, Rae.....Drs. E. H. Sieber & J. W. Pichette
15112 Michigan, Dearborn
Currier, Mildred.....F. B. Wight, M.D.
1052 David Whitney Bldg., Detroit
Davidovich, Nada.....S. W. Trythall, M.D.
13300 Livernois, Detroit
Davis, Leonora.....J. Stewart Hudson, M.D.
17443 E. Jefferson, Detroit
Drake, Margaret.....E. A. Hoffman, M.D.
7615 Vernor Highway, Detroit
Folgman, Millicent.....Lincoln Clinic
275 W. Grand River, Detroit
French, Adeline N.....Robert W. Parr, M.D.
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33220 W. 7 Mile Rd., Livonia
Graham, Ruth.....Howard G. West, M.D.
12730 Puritan, Detroit
Gustaf, Barbara K.....M. S. Brent, M.D.
13503 Northlawn, Detroit
Hasler, L. Dorothy.....Thomas Miller, M.D.
1301 David Whitney Bldg., Detroit
Heidelberger, Freda.....Harper Hospital
3825 Brush St., Detroit
Johnson, Joyce.....Drs. N. L. Feldman & M. S. Brent
11420 Mack, Detroit
Kempf, Eugene, Jr.....Aram Ignatius, M.D.
1915 E. Nine Mile, Ferndale
Kotsch, Elsie.....Walter L. Anderson, M.D.
5902 Jos. Campau, Detroit
Kuhn, Gaige.....Russell M. Atchison, M.D.
501 W. Dunlop, Northville
Larry, Joan.....Francis B. Macmillan, M.D.
920 David Whitney Bldg., Detroit
Lojowski, Lydia A.....Robert J. Elvidge, M.D.
2900 W. Grand Blvd., Detroit
McLellan, Margaret....Drs. C. G. Weltman & L. W. Hull
1701 David Whitney Bldg., Detroit
McMahon, Jeanne.....2978 Lakeview, Detroit
Mahon, Mae.....Detroit Admitting Office
Grace Hospital, Detroit
Malkey, Grace.....Royce R. Shafter, M.D.
655 Fisher Bldg. Detroit
Marsh, Mabel.....Nathan Levitt, M.D.
697 Kales Bldg., Detroit
Miller, Katherine.....B. F. Seabrook, M.D.
9136 Oakland, Detroit
Navin, Mary.....E. A. Hoffman, M.D.
7615 Vernor Highway, Detroit
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15315 E. Jefferson, Detroit
Nottingham, Helen.....Memorial Hospital Clinic
2700 Van Dyke, Van Dyke

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1301 David Whitney Bldg., Detroit

Redman, Marlouise.....
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541 David Whitney Bldg., Detroit

Runde, Emily.....J. T. Harper, M.D.
1252 David Whitney Bldg., Detroit

Schneider, Loretta.....J. M. Robbs, M.D.
1553 Woodward, Detroit

Schultz, Margaret.....Harther L. Keim, M.D.
1110 David Broderick Tower, Detroit

Smith, Sadie.....Eugene Osius, M.D.
901 David Whitney Bldg., Detroit

Sper, Louise.....Wm. M. Tuttle, M.D.
1151 Taylor, Detroit

Steckel, Cora.....Drs. Brent & Feldman
11420 Mack, Detroit

Surgeoner, Beth.....B. C. Lockwood, M.E.
723 David Whitney Bldg., Detroit

Sweet, Lily M.....Albert Catherwood, M.E.
1337 David Whitney Bldg., Detroit

Taylor, Ferne.....John B. Rieger, M.D.
1261 David Whitney Bldg., Detroit

Warber, Esther.....441 E. Jefferson, Detroit

Weaver, Shirley.....1403 No. Campbell, Detroit

Weatherwax, M. Marie.....
Drs. Fralick, Falls & Henderson
Out-Patient Bldg., University Hospital, Ann Arbor

Webster, Sarah....Drs. Hugh A. Sullivan & H. C. Mortiz
1053 David Whitney Bldg., Detroit

Zack, Maxine.....Theo. I. Bergman, M.D.
16455 Woodward, Detroit

Zelle, Elizabeth.....Drs. Trythall & Jeremis
13300 Livernois, Detroit

Zieleniewski, Helen.....14100 Mendota, Detroit

WEXFORD COUNTY

Brown, Marion.....Dean Seger, M.D.
Lake City

Michigan State Medical Society

Constitution

ARTICLE I—NAME

Section 1. The name of this organization shall be The Michigan State Medical Society.

ARTICLE II—COMPONENT COUNTY SOCIETIES

Section 1.—Component County Societies.

Component County Societies shall consist of those County Medical Societies which hold charters from this State Medical Society.

Sec. 2.—Geographical Scope.

Only one component County Society shall be chartered in any one county of the State; provided, however, when in the judgment of the House of Delegates it is deemed to be to the best interests of this Society, a charter may be granted to a component County Society comprising two or more counties.

ARTICLE III—PURPOSES

Section 1. To bring into one organization the Doctors of Medicine of this State of Michigan, and through it and other similar societies of other states to form and maintain the American Medical Association.

Sec. 2. To maintain a program of educational service to the public on matters of health and hygiene.

Sec. 3. To encourage among members of the medical profession the interchange of views on all phases of professional advancement and thus better to equip each member of the profession to serve society and promote the public health.

Sec. 4. To maintain a program of scientific education for the members of The Society keyed to the constantly developing discoveries in the field of medicine; and to foster, encourage and co-ordinate postgraduate facilities for the medical profession as a whole.

Sec. 5. To disseminate advances in medical research among the profession generally, by the issuance of scientific publications.

Sec. 6. To maintain and to advance the standards of medical practice in this State with respect to the highest concepts of ethics.

Sec. 7. To acquire and hold such real and personal property as may be necessary for the full and proper execution of the corporate purposes as detailed herein.

Sec. 8. To carry on such organization, functions and activities as are deemed necessary to accomplish effectively the above purposes; provided, however, that the Society shall engage in no activities that cannot be construed as relevant, incidental or necessary to its charitable, educational and scientific purposes.

ARTICLE IV—DIVISIONS

Section 1. This Society as a State unit of the American Medical Association, and as the State expression of the County Societies of Michigan, shall have three major divisions.

1. The Society as a whole, as when it meets in Annual Session.
2. The Scientific Assembly with its subordinate or related bodies.
3. The House of Delegates with its subordinate or related bodies.

ARTICLE V—THE SOCIETY AS A WHOLE

Section 1. The Society as a whole shall hold an Annual Session at such time and place and of such duration as the House of Delegates may determine. This power may be delegated to The Council or to the Executive Committee of The Council by the House of Delegates.

ARTICLE VI—SCIENTIFIC ASSEMBLY

Section 1. The Scientific Assembly of this Society is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine, its allied specialties and the problems of public health conservation.

ARTICLE VII—HOUSE OF DELEGATES

Section 1. The House of Delegates shall be the legistive body of the Michigan State Medical Society and shall consist of Delegates elected by component County Societies and Delegates-at-Large, as prescribed by the By-Laws.

ARTICLE VIII—MEMBERS

Section 1. This Society shall consist of active members, honorary members, associate members, retired members, life members and military members, elected in accordance with the By-Laws.

ARTICLE IX—OFFICERS AND ELECTED REPRESENTATIVES

Section 1. The officers of this Society shall be a President; a President-Elect; a Treasurer; a Secretary; a Speaker and a Vice Speaker of The House of Delegates; and Councilors.

Sec. 2. The elected representatives of this Society shall be the Delegates and the Alternate Delegates to the House of Delegates of the American Medical Association.

ARTICLE X—THE COUNCIL

Section 1. The Council shall be the Executive Body of the Society. It shall consist of one Councilor from each Councilor District, the President, President-Elect, immediate Past President, Speaker of the House of Delegates, with the Secretary and the Treasurer, the last two being elected by the foregoing. It shall have the custody and entire control of all funds and property of the Society and shall act for the Society as a Whole and for The House of Delegates between sessions.

Sec. 2. The Executive Committee of The Council shall consist of its Chairman, Vice Chairman, Chairman of the Finance Committee, Chairman of the County Societies Committee, Chairman of the Publication Committee, President, President-Elect, Secretary, Treasurer and the Speaker of the House of Delegates. It shall act for the Society as a whole and for the House of Delegates between sessions of The Council, except that a policy established by the House of Delegates or by The Council shall not be changed.

Sec. 3. The Vice Speaker shall be a member of The Council and the Executive Committee without vote except in the absence of the Speaker.

ARTICLE XI—FUNDS AND EXPENSES

Section 1. Funds for meeting the expenses of the Society shall be raised by annual dues, special assessments and voluntary contributions.

Sec. 2. Annual membership dues and assessments shall be fixed by the House of Delegates.

ARTICLE XII—AMENDMENTS

Section 1. The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates seated at any Annual Session, provided that

such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been published at least once during the year in THE JOURNAL of the Society, or sent officially to each component County Society at least two months before the meeting at which final action is to be taken.

Sec. 2. This Constitution or any amendment thereto shall become effective immediately upon its adoption.

By-Laws

CHAPTER 1—COMPONENT COUNTY SOCIETIES

Section 1. The charter of each component County Society shall require that each of the provisions of the Constitution and By-Laws of the Michigan State Medical Society, together with each amendment to either thereof, hereafter adopted, in so far as the same is applicable, shall be an integral part of the Constitution and By-Laws of the component County Society to which a charter is issued and shall in no way be inconsistent with the Constitution and By-Laws of the Michigan State Medical Society. Each charter shall be authorized by the House of Delegates and signed by the President and the Secretary of this Michigan State Medical Society.

Sec. 2. The House of Delegates is empowered to revoke the charter of any Component County Society whenever it finds that such Society has materially breached any of the provisions of the Constitution or By-Laws of this State Society or has failed to function within the expressed spirit and purpose of this State Society to such an extent that revocation of charter is compatible with the best interests of this State Society. Petition for the revocation of charter of any component County Society may be filed with The Council by a Councilor of the district within which each Society is located, or by any three members of The Council of this State Society or by the President of this State Society. Such petition shall be in writing and set forth with reasonable particularity the matters complained of and upon which the petition is founded. A copy of such petition together with written notice of the time and place of hearing on the petition shall be served on the affected component County Society by registered mail, return receipt requested, not less than 60 days before the date of such hearing. The affected component County Society may, within 30 days after service upon it of copy of the petition, file with The Council by registered mail, return receipt requested, a written answer thereto. The Council shall afford the affected component County Society a fair hearing of the matters complained of and a suitable opportunity to present its defense. The component County Society may be represented by legal counsel. Written arguments may be filed on behalf of the affected component County Society and by the petitioner. Stenographic notes shall be made of the entire proceedings on such hearing and a complete record shall be prepared, which record shall consist of the petition, answer, testimony, exhibits, written arguments and other pertinent matter. The Council shall make its decision based on the records, setting forth in writing its finding of facts, conclusions and reasons therefor. If two-thirds of the members of The Council do not concur in the conclusion that the charter of the affected component County Society should be revoked, the petition shall be deemed dismissed and the proceedings ended. If two-thirds of the members of The Council concur in the conclusion that the charter of the affected component County Society should be revoked, the Chairman of The Council shall transmit to the House of Delegates a report, consisting of the decision of The Council with all records annexed, and shall serve a copy thereof on the affected component County Society. The House of Delegates shall at the next regular or special session thereof following the transmittal of such report, consider and take such action on the report as it may deem proper. In case the House of Delegates desires further proofs in relation to the issues involved, it may remand the matter to The Council for further hearing and report. The action of the House of Delegates on the report of The Council shall be the final decision with reference to the revocation of the charter of a component County Society. Provided, that the component County Society, if it feels aggrieved by the decision of the House of Delegates, may, within six months, appeal to the Judicial Council of the American Medical Association, whose opinion shall be final.

CHAPTER 2—REGULATION OF MEMBERSHIP

Section 1. Each component County Society shall be the judge of the qualifications of its own members; but, as such societies are the only portals to this State Society and the American Medical Association, each reputable practitioner of medicine who meets the requirements specified in the By-Laws, Chapter V, shall be eligible to active membership.

Sec. 2. A Doctor of Medicine whose principal location of practice is near a county line may hold his membership in that component County Society most convenient for him to attend, on permission of The Council of the Michigan State Medical Society.

Sec. 3. Each component County Society shall have general direction of the affairs of the profession in the county, and its influence shall be exerted constantly for bettering the scientific, the moral and material conditions of every Doctor of Medicine in the county; systematic effort shall be made by each member and by the component County Society as a whole to increase the membership until it embraces every eligible Doctor of Medicine in the county.

Sec. 4. The Secretary of each component County Society shall keep a roster of its members and if practicable a list of non-affiliated Doctors of Medicine in the county, and other Doctors of Medicine, such as commissioned officers of the Navy, Army, and Public Health Service, in which shall be shown the full name, the address, the college and date of graduation, the date of license to practice in this State, and such other information as may be deemed necessary.

Sec. 5. Each member of a component County Society, who is in good standing, shall be privileged to attend each meeting and take part in all the proceedings and shall be eligible to any office within the gift of the Society except as otherwise provided.

Sec. 6. In addition to the qualifications specified in their respective Constitution and By-Laws, County Societies shall exact as qualifications for membership and its continued tenure, the acceptance and adherence to the Principles of Medical Ethics of the American Medical Association in accordance with the interpretation thereof by the Judicial Council of the American Medical Association, and such other qualifications as may be provided by this Constitution and By-Laws.

Sec. 7. No member who is under sentence of suspension or expulsion from any component County Society of

this State Society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this State Society.

CHAPTER 3—ARREARS IN DUES

Section 1. Any member in arrears for dues in the amount for one year may regain membership by paying up all back dues. Any member in arrears for more than one year may regain membership by paying all back dues or by being elected again to membership, at the option of the Component County Society.

Sec. 2. For the purpose of determining the dues for new members only, the fiscal year of the Michigan State Medical Society shall be divided into four three-month periods. New members shall pay adjusted annual dues and assessments for the unexpired quarterly periods of that year. Such new members shall not be entitled to membership benefits until their election to membership has been duly reported to the Secretary of the State Society and such benefits shall not cover any period prior to their becoming members in good standing.

CHAPTER 4—TRANSFER OF MEMBERSHIP

Section 1. Transfer of membership from one component County Society to another, occasioned by a change in location, shall be effectuated in the following manner: The member who wishes such transfer shall make application to the County Society which he wishes to join, and tendering payment of dues for the remainder of the current year, calculated to the nearest quarter.

Sec. 2. The Secretary of the component County Society to which application is made shall request certification of standing from the component County Society in which membership is held. Upon receiving such request, The Secretary of the latter society shall supply certification of good standing, provided the following requirements have been met:

(a) All component County Society dues and assessments shall have been paid for the calendar year previous to the year in which application for transfer is made.

(b) Full State Society dues and assessments shall have been paid for the year in which application for transfer is made.

(c) Component County Society dues and assessments shall have been paid to cover that portion of the year in which application for transfer is made, the time being calculated to the nearest quarter.

(d) The member shall not be under suspension or facing charges of unethical conduct.

Section 3. (a) In case the component County Society dues have been paid in full for the year, and certification of good standing is being issued, the Secretary of that component County Society shall refund component County Society dues represented by the unexpired portion of the year, calculated to the nearest quarter.

(b) Upon receipt of certification of good standing, and favorable action by the component County Society to which application has been made, the transfer of membership shall be in effect.

Sec. 4. Resignation for transfer of membership to another State Society shall be effectuated in the following manner:

Any member in good standing, not facing charges of unethical conduct, whose State and component County Society dues and assessments are not in arrears, and who has moved his principal location to another State, may tender his resignation, which shall be effective at the beginning of the next quarter. Such resignation shall be transmitted to the Secretary of the Michigan State Medical Society, who shall give the departing member certification of good standing.

Provided the portion of the calendar year following such resignation is not less than one-quarter, the Secretaries of the State and component County Societies shall refund any dues and assessments already paid for the remainder of the year, calculated to the nearest quarter.

CHAPTER 5—MEMBERSHIP AND CLASSIFICATION OF MEMBERSHIP

Section 1. Active Member—Active Members shall comprise all the active members of component County Societies. To be eligible for active membership in any component County Society, a Doctor of Medicine must hold an unrevoked license to practice medicine, surgery and midwifery by authority of the Michigan State Board of Registration in Medicine, and comply with all other provisions of this Constitution and By-Laws.

Sec. 2. Honorary Member—Component County Societies may elect as an Honorary Member any person distinguished for his services or attainments in medicine or the allied sciences, or who has rendered other services of unusual value to organized medicine or the medical profession. Upon recommendation of a component County Society, the House of Delegates may elect such a person as Honorary Member of the State Society. An Honorary Member shall pay no dues to the State Society and shall be without right to vote or hold office in either component County or State Society.

Sec. 3. Associate Member—Component County Societies may elect as an Associate Member:

(a) Any person not a member of the profession but engaged in scientific or professional pursuits whose principles and ethics are consonant with those of this State Society.

(b) An intern serving the first year in any approved hospital, an intern of longer standing, a resident physician in training, and a teaching fellow not engaged in private practice, but not after six years from the receipt of first medical degree (M.D. or M.B.): provided his training has not been interrupted by exigencies of War Service or by totally incapacitating illness. Such intern, resident or teaching fellow may become an Associate Member of the Michigan State Medical Society without action of the House of Delegates provided he has been certified to the Michigan State Medical Society through formal application to the Michigan State Medical Society Secretary by his component County Medical Society.

(c) A Doctor of Medicine, resident of the State of Michigan, for the period of time he is in active Military Service of the United States previous to his engaging in active practice.

(d) A Doctor of Medicine not engaging in any phase of medical practice.

(e) A commissioned medical officer of the United States Army, Navy, Public Health Service or physician employed by the Veterans Administration on duty in this State, who is not engaged in private practice of medicine. not to exceed two years.

(f) An Active Member, by transfer, for the period of time he is temporarily out of active practice on account of protracted illness, provided his dues are paid for the year previous to the onset of illness.

(g) An Active Member, by transfer, for the period of one year while he is temporarily out of practice on account of postgraduate medical studies, provided his membership dues are paid to the end of the preceding calendar year. This may be renewed upon petition to The Council at its discretion.

Upon recommendation of a component County Society, the House of Delegates may elect such a person as an Associate Member of this State Society. An Associate Member shall not pay dues to this State Society and shall not have the right to vote, nor hold office in either component County or State Society. Component County Societies may require any Associate Member to pay certain local dues, out of which THE JOURNAL of the Michigan State Medical Society subscription is to be paid to the State Society for which each such Associate Member shall receive THE JOURNAL of the Michigan State Medical Society.

Sec. 4. Retired Member—A member who has maintained membership in a component County Society of this State Society for a period of ten or more years, and having retired from practice, may be transferred to the retired member's roster, provided his membership dues are paid to the end of the preceding calendar year. He shall be entitled to receive THE JOURNAL of the Michigan State Medical Society at such rates as The Council may determine. He shall have the right to vote and hold office.

Sec. 5. Non-Resident Member—Component County Societies may elect as a Non-Resident Member any Doctor of Medicine residing and practicing outside of The County who is a member in good standing of his own component County Society. A Non-Resident Member shall not have the right to vote or hold office.

Sec. 6. Life Member—A Doctor of Medicine who has attained the age of seventy years or has been in practice fifty years and has maintained an active membership in good standing for twenty-five years in any constituent state society with dues paid for the previous calendar year may, upon his application, and recommendation of his component County Society, be transferred to the Life Members' Roster. He shall have the right to vote and hold office but shall pay no dues to the State Society. Requests for such transfer shall be accompanied by certification of the Secretary of the State Society as to years of membership in good standing. He shall be entitled to receive THE JOURNAL of the Michigan State Medical Society at such rates as The Council may determine.

Sec. 7. Military Members. Any active member in good standing who serves on active duty in the military forces of the United States during a war or similar national emergency may be transferred to the Military Membership roster for the period of time he is in Service. A Military Member shall not be required to pay state dues and assessments during the period of his Service and for the balance of the year in which he is separated from Military Service provided that this remission of postservice dues and assessments shall not be less than six months, or during the years he may be totally disabled immediately following such duty.

Sec. 8. For Retired, or Life Membership, the Component County Society of such members shall make request for certification, in writing, to the Secretary of the State Society thirty days in advance of an Annual Session of The House of Delegates. Requests for transfer shall be accompanied by certification of the Secretary of the State Society, as to years of practice and years of membership in good standing. Transfers shall be by election in the House of Delegates.

Sec. 9. Any change in membership status shall be effected by resolution presented in triplicate before the annual session of the House of Delegates after previous certification by the secretaries of the county and state societies.

CHAPTER 6—DISCIPLINE OF MEMBERSHIP

Section 1. A component County Society may expel, suspend or otherwise discipline any of its members in accordance with the provisions of its constitution and by-laws; provided, however, that any member against whom such action is proposed shall be accorded the benefit of the following procedures:

Sec. 2. Efforts at conciliation and adjustment of differences shall precede formal complaint against a member sought to be disciplined.

Sec. 3. Petition for expulsion, suspension or other discipline of a member shall be in writing, signed by the majority of the Ethics Committee of his component County Society or by not less than 10 per cent of the members of the Society, and shall set forth with reasonable particularity the matters complained of.

Sec. 4. A copy of the petition, together with notice of the time and place of hearing shall be served on the affected member not less than 30 days prior to the date of hearing. This notice is to be sent by registered mail, return receipt requested.

Sec. 5. The affected member may file with his component County Society, or a suitable committee thereof, a written answer within fifteen days after service upon him of a copy of such petition. He shall be accorded a fair hearing of the matters complained of before the Ethics Committee of his component County Society and afforded an opportunity to present his defense, either in person or by counsel.

Sec. 6. In the event that a hearing shall have been had before an appropriate committee of a component County Society as provided in Section 5, Chapter 6 of these By-Laws, such committee promptly after the conclusion of said hearing shall make a report in writing to the component County Society, setting forth its finding of facts, conclusions and reasons therefor, as well as its recommendations for an appropriate order to be made by the component County Society in relation to the matter heard by such committee.

Sec. 7. A stenographic record shall be made of the proceedings at the hearing, and in case an appeal is taken by such member, a transcript thereof shall be prepared at the expense of the component County Society for transmittal, if required, to the State Society. In such case, a copy of the transcript shall be furnished to the appellant as soon as may be.

Sec. 8. Any order of a component County Society for expulsion, suspension or other discipline of a member shall be in writing, and shall set forth findings of fact, conclusions and reasons therefor. A copy of such order shall be served on the affected member as soon as may be.

Sec. 9. The Ethics Committee may reprimand or counsel a member; however, discipline must be meted out by the Society as a whole or its Council. A two-thirds vote of the members present of the component County Society or its Council, due notice having been given, is necessary for expulsion or suspension of a member.

Sec. 10. The affected member shall have an opportunity to avail himself of his rights of further appeal according to the following procedure: Appeal to The Council of this State Medical Society; appeal to the House of Delegates of this State Medical Society; and final appeal to the Judicial Council of the American Medical Association. A member deeming himself aggrieved by an order of expulsion, suspension or other discipline made by a component County Society Council may appeal to his component County Society.

Sec. 11. Notice of appeal to The Council of the Michigan State Medical Society shall be in writing and set forth the specific reasons for such appeal. The notice shall be filed with said Council and a copy thereof served on the member's component County Society. Unless such appeal is taken within 30 days after service by registered mail, return receipt requested, of the copy of the order of discipline on the affected member, such order shall be final and effective. As soon as practicable after receiving copy of notice of appeal, the component County Society shall forward to The Council of the Michigan State Medical Society a complete record of the case, which record shall consist of the petition, answer, testimony, order

appealed from, and all other pertinent writings and exhibits. The Council shall thereon transmit such record together with the notice of appeal to the Committee on Ethics of this State Society for review. The Committee on Ethics shall promptly review the record and may request the component County Society or the affected member to furnish each further proof in writing as the Committee deems necessary for the proper and full review of the matter. Written arguments may be filed by the component County Society and the affected member within such time as may be designated by the Committee on Ethics. The Committee on Ethics shall make its findings and recommendations in writing and report the same to The Council of the Michigan State Medical Society. The Council shall thereupon, after careful hearing, orally and/or in writing, and consideration of facts and exhibits, affirm, reverse or modify the order appealed from by written decision, a copy whereof shall be served on the component County Society and the affected member. Unless, within 60 days of the service upon him and his component County Society by registered mail of copy of such decision, the member or the component County Society takes a final appeal to the Judicial Council of the American Medical Association, the decision of The Council of the Michigan State Medical Society shall be final and effective.

Sec. 12. A member of a component County Society whose license to practice medicine in this State has been revoked shall be dropped from membership automatically as of the date of revocation.

CHAPTER 7—GENERAL MEETINGS

Section 1. During each Annual Session the Society shall hold one or more General Meetings. The number and time of these General Meetings shall be determined by The Council of the Michigan State Medical Society. Such General Meetings shall be presided over by the President or in his absence the President-Elect or the Chairman of The Council. One such meeting shall be called "Officers Night." At this meeting called "Officers Night," the report of the House of Delegates shall be rendered.

Sec. 2. The following shall be the items of business:

1. Call to Order.
2. Announcements and reports of the House of Delegates.
3. Retiring President's annual address.
4. Induction into office of incoming President.
5. Introduction of newly elected officers and elected representatives.
6. Special addresses.
7. Resolutions and motions.

Sec. 3. Each registered member at an Annual Session shall have an equal right to participate in the deliberations of a General Meeting and each Active Member, and Life Member so registered shall have the right to vote on pending questions before the General Meeting.

Sec. 4. At any General Session or at any Section Meeting of this State Society, there may be recommended to the House of Delegates or to The Council the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and the public. Such investigations and reports shall not become official action or expression of this State Society until approved by the House of Delegates or The Council.

CHAPTER 8—HOUSE OF DELEGATES

Section 1. Composition—The House of Delegates shall be composed of Members elected by the Component County Societies. Reports having been properly filed with the Secretary of this Society, each component County Society shall be entitled to send to the House of Delegates each year one delegate for each fifty voting members, active, life and retired, and one delegate for each additional major fraction thereof. Any component County Society having less than fifty members shall be entitled to send one delegate.

Sec. 2. Officers of this State Society and members of The Council shall be ex-officio members of The House of Delegates, and, with the exception of the Speaker and Vice Speaker of The House of Delegates, shall be without power to vote in The House of Delegates. The Past President shall be a member at large of The House of Delegates during the first year of Past-Presidency with right to vote and hold office. All other Past-Presidents shall have the privilege of the floor, without the right to vote.

Sec. 3. The House of Delegates shall transact all of the business of this State Society not otherwise specifically provided for; it shall adopt rules and regulations for its own government and for the administration of the affairs of The Society; it shall provide for the organization of Councilor Districts.

Section 4. The House of Delegates shall meet annually at the time and place of the meeting of this State Society as a whole, as when it meets in General Session, and may hold such number of meetings as the House may determine or its business require, recessing from day to day as may be necessary to complete its business and specifying its own time for the holding of its meetings. The House of Delegates may also be called into session at any time by the Speaker upon a two-thirds vote of The Council, or on petition of twenty-five per cent of the delegates. The purpose of such special sessions shall be stated in the notice to call.

Sec. 5. A Delegate must have been a qualified member of this State Society for at least two years preceding election.

Sec. 6. A Delegate once seated shall remain a Delegate throughout the entire session and for one year thereafter until the next Session of this House of Delegates, and his place shall not be taken by any other Delegate or Alternate, provided that in case of emergency the House of Delegates may seat a duly accredited Alternate from his component County Society. Any Delegate-Elect not present to be seated at the hour of call of the first meeting may be replaced by the accredited Alternate next on the list as certified by the Secretary of the component County Society involved.

Sec. 7. The Secretary of component County Societies shall certify to the Secretary of this State Society the names of Delegates and Alternates who shall represent them at any Annual or Special Session. Each component County Society shall elect Alternate Delegates in equal number to the number of Delegates and designate their seniority.

Sec. 8. A quorum of the House of Delegates shall be constituted by not less than 40 per cent of the accredited Delegates, providing that a majority of such quorum shall not come from any one component County Society.

Sec. 9. The officers of the House of Delegates shall be a Speaker and Vice Speaker. The Secretary of this State Society, elected by The Council, shall be the Secretary of the House of Delegates. The Speaker and Vice Speaker shall be elected by the House of Delegates at the Annual Session. The Speaker of the House of Delegates shall be a member of The Council and of its Executive Committee with right to vote.

Sec. 10 (a) The House of Delegates is the legislative body of this State Society, and shall have authority to adopt and institute such methods and measures as it

may deem most sufficient for the upbuilding and establishing of the interest of the profession in Michigan.

(b) It shall concern itself with and advise as to the interests of the profession and of the public in those matters of legislation pertaining to medical education, medical registration, medical laws and public health.

(c) It shall be active in the education of the public in regard to medical research and scientific medicine.

(d) Delegates and Alternate Delegates to the American Medical Association shall be elected in accordance with the regulations of that parent organization and as hereinafter provided. They shall hold office for two years.

At each annual election, candidates for Delegates to the House of Delegates of the American Medical Association shall be nominated in number equal to or greater than the number to be elected that year. Election shall be by ballot. The required number of high candidates shall be declared elected.

In case of a tie vote of high candidates, the winner, or winners, shall be decided by drawing lots; supervised by the Speaker of the House of Delegates; provided, however, that any candidate thus tied shall have the right to a decision by ballot if he requests same.

The number of Alternate Delegates shall equal the number of Delegates. They shall be elected in exactly the same manner after all Delegates have been elected.

Alternate Delegates shall have relative seniority according to the respective number of votes received by them, and such seniority shall be designated at the time of election. Alternate Delegates serving their second year shall hold seniority over those Alternate Delegates serving their first year in office.

Any vacancies caused by failure or inability of any Delegates to attend shall be assigned to Alternate Delegates in order of their seniority as defined in this section.

(e) It shall have the authority to appoint committees, standing or special, from among its members or other doctors not members of the House of Delegates. Such committees will report to the House of Delegates and their members may participate in the debate upon their committees' report, regardless of membership in the House of Delegates.

(f) It shall approve each action and resolution in the name of this State Society before the same shall become effective. Provided, that in the interim, in the presence of necessity for prompt action, The Council or the Executive Committee of The Council is empowered to act on behalf of this State Society.

(g) It shall elect the Councilors upon the nomination of the Delegates of the Councilor District whose Councilor's term expires, as hereinafter provided.

Component county societies of Councilor Districts shall be notified in writing by the Secretary of the State Society 60 days in advance of the annual session when a Councilor is to be elected from their District at the expiration of the usual term.

If a vacancy in The Council occurs during an annual session of the Michigan State Medical Society the delegates of the component county societies will be given time in which to conduct a caucus in order to consider nomination(s) for the vacancy.

(h) The House of Delegates shall provide for the division of the scientific work of the Society into appropriate sections adding new and discontinuing old sections. It shall prescribe the rules governing the meetings of these sections and the election of officers.

(i) It shall present a summary of its proceedings at a General Meeting of the Society and publish its minutes in The Journal of the Michigan State Medical Society.

(j) It may have the following reference committees, together with Tellers and Sergeant-at-Arms, appointed by the Speaker of the House and approved by the House of Delegates, and such other reference committees as may be necessary from time to time:

1. Credentials.
2. Reports of Council.
3. Reports of Officers.
4. Reports of Standing Committees.
5. Reports of Special Committees.
6. Constitution and By-Laws.
7. Resolutions.
8. Rules and Order of Business.
9. Legislation and Public Relations.
10. Hygiene and Public Health.
11. Executive Session.
12. Medical Service and Prepayment Insurance.
13. Emergency Medical Service.
14. Miscellaneous Business:

    Tellers
    Sergeant-at-Arms

(k) No new business shall be introduced in the last meeting of the House of Delegates without unanimous consent of the Delegates except when presented by The Council. All new business so presented shall require three-fourths affirmative vote for adoption.

(l) Election of officers shall be held at the last meeting of the House of Delegates at the Annual Session. Each nomination shall be made from the floor of the House. In the event of having only one nominee, the candidate may be elected by a viva voce vote. Members elected to office shall take office with the induction of the Incoming President, as provided in this Constitution and By-Laws.

(m) Each resolution introduced into the House of Delegates shall be in writing and presented in triplicate to the Secretary, immediately after the Delegate has read the same, and shall be referred to the proper reference committee by the Speaker before action thereon is taken.

(n) Robert's Rules of Order, when not in conflict with this Constitution and By-Laws, shall govern the parliamentary proceedings of the House of Delegates.

CHAPTER 9—THE COUNCIL

Section 1. The Council is the Executive Body of this State Society. It shall determine its own time and place of meeting. It shall hold an Annual Meeting at which time it shall elect to serve for one year its Chairman, Vice Chairman, a Secretary, Chairman of the Finance Committee, Chairman of the County Societies Committee, and Chairman of the Publication Committee; these with the President, the President-Elect, and the Speaker of the House of Delegates shall constitute the Executive Committee of The Council.

Sec. 2. Each Councilor shall be the organizer, peace maker and censor for his District. He shall visit each component County Society in his District at least once a year and keep in touch with the activities of the societies constituting his District. He shall make such reports as the Chairman of The Council shall request concerning the condition of the profession in that District.

Sec. 3. Upon written complaint of at least half of the Delegates of the Councilor District involved, presented to the House of Delegates, in regular or special session stating that the Councilor of said District has been remiss in his duties as prescribed above, and has been notified a month previously of this proposed action, the Speaker of the House shall bring the matter before the House of Delegates for consideration. On two-thirds vote of the House of Delegates this office shall be declared vacant and a successor elected.

Sec. 4. It shall make careful inquiry into the condition of the profession in each county in the State, and shall have authority to adopt such methods as may be

deemed most efficient for building up and increasing the interest in such component County Societies as already exist. It shall especially and systematically endeavor to promote friendly intercourse between Doctors of Medicine in the same locality. It shall make every effort to bring each reputable Doctor of Medicine in the State under the Society's influence.

Sec. 5. It shall, upon application, provide and issue charters to component County Societies organized in conformity with this Constitution and By-Laws. It shall revoke such charters when deemed necessary, as provided in this Constitution and By-Laws.

Sec. 6. The Council shall direct and control the publication of THE JOURNAL of the Michigan State Medical Society.

Sec. 7. The Council shall elect an Editor of THE JOURNAL of the Michigan State Medical Society, and a Treasurer at its annual meeting. They shall take office immediately and serve for a term of one year, or until their successors are elected and have taken office.

Sec. 8. The funds of the Society shall be disbursed only by order or action of The Council. This authority may be delegated to the Executive Committee of The Council by The Council.

Sec. 9. Funds of the Society for investment shall be delivered to the custody of the Treasurer by the Secretary.

Sec. 10. The Council shall provide such headquarters for The Society as may be required to conduct its business properly.

Sec. 11. The Council shall render an Annual Report to the House of Delegates.

Sec. 12. The following County Societies shall constitute the Councilor Districts of the State. Wayne County shall constitute four Councilor Districts without permanent set boundaries within that County.

First District—Wayne

Second District—Clinton, Eaton, Hillsdale, Ingham, Jackson

Third District—Branch, Calhoun, St. Joseph

Fourth District—Allegan, Berrien, Cass, Kalamazoo, Van Buren

Fifth District—Barry, Ionia-Montcalm, Kent, Ottawa

Sixth District—Genesee, Shiawassee

Seventh District—Huron, Sanilac, Lapeer, St. Clair

Eighth District—Gratiot-Isabella-Clare, Midland, Saginaw, Tuscola

Ninth District—Grand Traverse-Leelanau-Benzie, Manistee, Northern Michigan (Antrim, Charlevoix, Chebovgan and Emmet, combined), Wexford-Missaukee

Tenth District—Alpena-Alcona-Presque Isle, Bay-Arenac-Iosco, North Central Counties (Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw, Gladwin and Kalkaska, combined).

Eleventh District—Mason, Mecosta-Osceola-Lake, Muskegon, Newaygo, Oceana

Twelfth District—Chippewa-Mackinac, Delta-Schoolcraft, Luce, Marquette-Alger.

Thirteenth District—Dickinson-Iron, Gogebic, Houghton-Baraga-Keweenaw, Menominee, Ontonagon.

Fourteenth District—Lenawee, Livingston, Monroe, Washtenaw

Fifteenth District—Macomb, Oakland

Sixteenth District—Wayne

Seventeenth District—Wayne

Eighteenth District—Wayne

CHAPTER 10—STANDING COMMITTEES

Section 1. The following Standing Committees shall be appointed by the President with the advice of The Council:

(a) Committee on Postgraduate Medical Education

(b) Committee on Preventive Medicine and its Sub-Committees

(c) Committee on Public Relations and its Sub-Committees

(d) Committee on Ethics

(e) Committee on Legislation

Sec. 2. The Committee on Postgraduate Medical Education shall consist of a Chairman and twelve members, four of whom shall be appointed each year to serve for a three-year term.

The duty of this committee shall be to supervise for the Michigan State Medical Society all postgraduate medical training in the State and, with the approval of the Executive Committee of The Council, make any changes, additions or discontinuances of present programs and initiate such new programs as they deem advisable.

Sec. 3. Committee on Preventive Medicine shall consist of its Chairman, the State Health Commissioner, and Chairmen of the following committees:

Committee on Rheumatic Fever Control

Committee on Cancer Control

Committee on Maternal Health

Committee on Venereal Disease Control

Committee on Tuberculosis Control

Committee on Industrial Health

Committee on Mental Health

Committee on Child Welfare

Committee on Geriatrics.

Committee on Postgraduate Medical Education

Such other committees as may, from time to time, be appointed to study and develop programs dealing with specific diseases.

The duty of this committee shall be to collect, analyze and distribute information on preventive medicine, and to advise medical and other groups or individuals concerning problems in preventive medicine and public health.

Sec. 4. The Committee on Public Relations shall be appointed by the President. It shall be the duty of this committee: (a) to integrate and publicize all approved plans and projects emanating from The Council, the Executive Committee, and other Standing and Special Committees of the Michigan State Medical Society; (b) to consider all plans and projects, and make suggestions and recommendations for improving or changing such plans for integration and publicizing; (c) to develop further plans for better physician-public contacts. The President shall appoint such Sub-Committees of this committee as are required in the execution of its work.

Sec. 5. The Committee on Ethics shall consist of eight members appointed by the President with the advice of The Council, each member to serve for a four-year term, so staggered that two members are selected annually. In case a vacancy occurs before the expiration of a member's term, the President shall appoint a successor to serve the unexpired portion of the term.

The Committee shall render advisory opinions on questions of ethics submitted to it by The Council.

On request of The Council it shall conduct an investigation, under rules approved by The Council, concerning the ethical conduct of a designated member of this State Society and report its findings to The Council in accordance with these By-Laws.

Sec. 6. The Committee on Legislation shall consist of a Chairman, the President-Elect of this State Medical Society and the Chairman of The Council of this State

Medical Society and members to be appointed by the President.

The Committee on Legislation shall utilize every organized influence of the profession for the promoting of such legislation as will be for the best interests of the public's health and that of scientific medicine. It shall work under the direction of the House of Delegates or The Council when the House of Delegates is not in session. No bill or proposed law or amendment shall be delivered to any member of The Michigan State Legislature for introduction in the name of this State Society or by any of its committees until such proposed legislations shall have been endorsed and approved by The Council. (Provided this latter authority may be delegated to the Executive Committee of The Council by The Council.)

It shall submit an annual report with recommendations to The House of Delegates.

CHAPTER 11—OFFICERS

Section 1. Officers shall be installed at the General Meeting at which the reports of the House of Delegates are received. They shall serve until the next Annual Session, provided that Councilors shall serve for five years, and provided further that not more than four Councilor terms shall expire normally at any Annual Session; provided further that Delegates to the American Medical Association shall serve for two years; provided further that not more than three Delegates to the American Medical Association shall be elected in any one year.

Sec. 2. Officers shall serve until their successors are elected and inducted into office.

Sec. 3. At the Annual Session of this State Society, next following his election, The President-Elect shall be installed into and assume the office of the President. He shall serve until his successor takes office. The assumption of office shall occur in a General Session of the Society as a whole, at which the report of the House of Delegates is received. If no General Meeting is held at the Annual Session, the induction into office of the Incoming President and the newly elected officers and representative officials shall be in the last meeting of the Annual Session of the House of Delegates.

Sec. 4. The President shall preside at the General Meeting of the Society at which the reports of the House of Delegates are received, and shall fill vacancies in office and committees with the advice of The Council, unless otherwise provided for; he shall appoint the members of each committee not otherwise provided for; he shall deliver the President's address; he shall have a voice in the deliberations of the House of Delegates and he shall be an ex-officio member of The Council with the right to vote.

Sec. 5. The President-Elect shall be a member of The Council and the Executive Committee of The Council ex officio, and shall have the right to vote, and shall act for the President in his absence or disability. If the office of President shall become vacant, the President-Elect shall succeed to the presidency. If the office of President shall again become vacant, The Council, at a Special Session, shall elect a President for the unexpired term.

Sec. 6. The Treasurer shall be the custodian of all the invested funds and the securities of the Society. He shall be accountable through The Council to the Society. The Council shall cause an annual audit of his accounts to be made. He shall be bonded in amount considered sufficient by The Council, the bond to be paid from the funds of the Michigan State Medical Society.

Sec. 7. The Secretary shall be an active member of the Michigan State Medical Society and shall be paid a salary to be determined by The Council. He shall be the recording officer of the House of Delegates, The Council, Scientific Assembly and Annual Session. He shall be bonded in amount considered sufficient by The Council, the bond to be paid from the funds of the Michigan State Medical Society. He shall also discharge the following duties:

(a) Collect all annual membership dues, assessments, donations and such other monies as may be due to the Society; keep membership records and issue membership certificates.

(b) He shall make all required reports to the American Medical Association. He shall make a report of the proceedings of the House of Delegates to the Annual Meeting of this State Society.

(c) He shall deposit all funds received in an approved depository and disburse them upon order of The Council. The Council may delegate the authority for disbursing funds to the Executive Committee of The Council. The Council shall cause an annual audit of his accounts by a certified public accountant. He shall render a report to The Council reviewing the Society's activities and imparting recommendations for the advancement of the Society's interests at each meeting of The Council.

(d) Under the direction of The Council and with the advice of the Editor, he shall be the business manager of The Journal of the Michigan State Medical Society.

(e) He shall superintend all arrangements for the holding of each meeting in compliance with the Constitution and By-Laws and instructions of The Council or its Executive Committee.

(f) He shall send out all official notices of meetings, committee appointments, certificates of election to office and special duties of committees.

(g) He shall receive and transmit to the House of Delegates and to The Council each committee and officer's annual report.

(h) He shall institute and correlate each new activity under the supervision of The Council or its Executive Committee, and shall work on component County Society integration and furnish information to the public concerning health matters as directed by the President and The Council.

Sec. 8. There shall be an Executive Director, not necessarily a Doctor of Medicine or a member of the Michigan State Medical Society, who shall be appointed by The Council at its Annual Meeting and shall be remunerated by a salary which shall be fixed by The Council.

The Secretary shall, with the approval of The Council, assign duties to the Executive Director as he deems advisable.

Sec. 9. The Speaker of the House of Delegates shall preside at sessions of the House of Delegates. He shall, with the approval of the President, appoint all committees created by the House of Delegates, unless otherwise provided, and shall perform such duties as custom and parliamentary usage require. He shall be a member of The Council and of its Executive Committee with the power to vote.

Sec. 10. The Vice Speaker shall assume the Speaker's duties in the Speaker's absence in the House of Delegates and such other times as the House of Delegates or The Council shall determine.

CHAPTER 12—REFERENDUM

Section 1. At any General or Special Session of this State Society as a whole, as when it meets in General Session, it may by a two-thirds vote order a general referendum upon any question pertinent to the purposes and objects of the Michigan State Medical Society, organized medicine, or health of the public; provided, however, that a quorum at such General or Special Meet-

ing shall consist of 300 members of the Michigan State Medical Society who are in good standing.

Sec. 2. The House of Delegates, by a majority vote may submit any question pertinent to the community and organized medicine to the membership of the Society for its vote, such vote to be taken by County Societies and certified by their secretaries to the State Society Secretary. Two-thirds of the vote cast shall be required to carry the question.

CHAPTER 13—SEAL

Section 1. The Society shall have a common SEAL. The power to change or renew the seal shall rest with The Council.

CHAPTER 14—EMERGENCY

Section 1. When prompt speech and action are imperative, authority to speak and act in the name of this State Society is vested in The Council or the Executive Committee of The Council of this State Society.

CHAPTER 15—DUES

Section 1. The Secretary of each component County Society shall collect and forward the dues and assessments to the Secretary of the Michigan State Medical Society on or before April first of each year.

Sec. 2. Any member in arrears after April 1 of each official year shall stand suspended until his name is properly recorded and his dues and assessments for the current year properly remitted, unless his name is to be submitted for election to one of the special memberships listed in Chapter 5 at the next succeeding Annual Session of the House of Delegates.

Sec. 3. Any component County Society which fails to make the reports required at least thirty days before the Annual Session of this State Society shall be held suspended and none of its members or Delegates shall be permitted to participate in any of the proceedings of the Society or of the House of Delegates.

CHAPTER 16—ELECTION—COMPONENT COUNTY SOCIETIES

Section 1. At the Annual Meeting of each component County Society or at a designated meeting of which ample notice has been given, each component County Society shall elect Delegates and Alternate Delegates in conformity with the provisions of this Constitution and By-Laws to represent the component County Society in the House of Delegates of this State Society. The Secretary of the component County Society shall immediately send a list of its Delegates and Alternate Delegates to the Secretary of this State Society.

A Delegate, or in his absence, the Alternate Delegate, becomes a member of the House of Delegates when properly registered and seated at the Annual or Special Session following his election by the component County Society.

CHAPTER 17—DEFINITION OF SESSION AND MEETING

Section 1. A session shall mean all meetings at any one call.

Sec. 2. A meeting shall mean each separate convention at any one session.

CHAPTER 18—AMENDMENTS

Section 1. These By-Laws may be amended by a majority vote of the Delegates seated, after the proposed amendment is laid on the table for one meeting of the House of Delegates. These By-Laws become effective immediately upon adoption.

COUNCILOR DISTRICTS

First District—Wayne

Second District—Clinton, Eaton, Hillsdale, Ingham, Jackson

Third District—Branch, Calhoun, St. Joseph

Fourth District—Allegan, Berrien, Cass, Kalamazoo, Van Buren

Fifth District—Barry, Ionia-Montcalm, Kent, Ottawa

Sixth District—Genesee, Shiawassee

Seventh District—Huron, Sanilac, Lapeer, St. Clair

Eighth District—Gratiot-Isabella-Clare, Midland, Saginaw, Tuscola

Ninth District—Grand Traverse-Leelanau-Benzie, Manistee, Northern Michigan (Antrim, Charlevoix, Cheboygan and Emmet, combined), Wexford-Missaukee.

Tenth District—Alpena-Alcona-Presque Isle, Bay Arenac-Iosco, North Central Counties (Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw, Gladwin and Kalkaska, combined)

Eleventh District—Mason, Mecosta-Osceola-Lake, Muskegon, Newaygo, Oceana

Twelfth District—Chippewa-Mackinac, Delta-Schoolcraft, Luce, Marquette-Alger

Thirteenth District—Dickinson-Iron, Gogebic, Houghton-Baraga-Keweenaw, Menominee, Ontonagon

Fourteenth District — Lenawee, Livingston, Monroe, Washtenaw

Fifteenth District—Macomb, Oakland

Sixteenth District—Wayne

Seventeenth District—Wayne

Eighteenth District—Wayne

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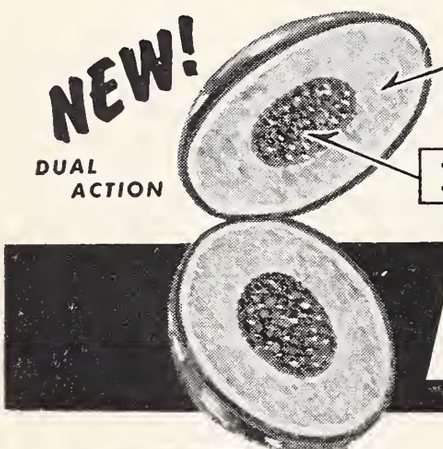
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